



...continued from Foreword

EFLM Office announces bursaries for EFLMLabX and encourages discovery of the new leaflet of the EFLM Academy. In another novelty, the EuroLabNews presents interviews with senior EFLM personalities conducted by equally prominent EFLM individuals, this time around Dr. Wim Huisman and Dr. Simone Zerah were interviewed by Florent Vanstapel and Snezana Jovicic, respectively. Note the dates for the upcoming EFLM online Postgraduate course, the AFCB-EFLM conference and WorldLab-EuroMedLab conference. Silvia Terragni from the EFLM Office announces vacancies in the EFLM WG "Laboratory Medicine Credit Points". EFLM C-C member Ales Kvasnicka summarizes the opinion paper, preanalytical quality improvement – an interdisciplinary journey, by Janne Cadamuro using EFLM C-C signature infographics. The Croatian National Society and Spanish National Society presents their latest activities. Under its regular column, the IFCC corner presents global perspectives in Laboratory Medicine. The Calendar of Events lists all major happenings. I wish you a pleasant summer reading!

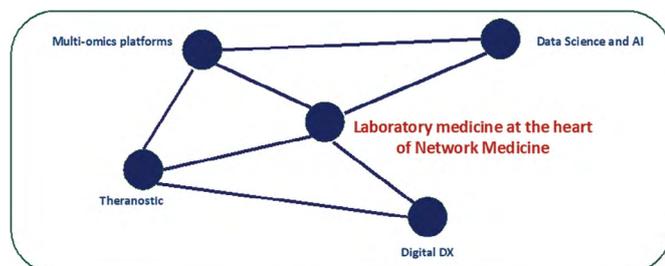
network received a lot of attention, with focus on disease mechanisms and drug discovery, and lead to the emergence of a new field called network medicine.

As emphasis by Barabási, « networks are everywhere, from the Internet to social networks, and the genetic networks that determine our biological existence ». Network is a collection of points representing genes or proteins which are joined in pairs by lines if there is a functional relationship among them. Research based on high volume of data try to catch how the universal law of networks can be translated into clinical practice and thus lead to personalized medicine.

Therefore, network medicine can be presented as a molecular-bioengineering approach linking heterogeneous omics-based findings (genome, transcriptome, proteome, epigenome, metabolome, microbiome, or exposome) with clinical data to offer both a mechanistic understanding and better classification of complex diseases

Network medicine can for example help to:

- Visualize interrelationships to construct a disease network.
- Understand the functionally relevant genetic, regulatory, metabolic, and protein-protein interactions in a cellular network playing an important role in disease pathophysiology
- Identify key molecular networks whose perturbation has desirable clinical effects
- Help to design of novel drugs able to target whole molecular networks rather than single proteins
- Participate to drug repurposing, by using in silico platforms able to predict useful drug-target interactions



Network medicine focus also on the social dimension and encompasses all human-to-human interactions (e.g., familial, friendship, sexual, and proximity-based contacts) that could play a role in the spread of pathogens and diseases.

Data science is clearly fundamental in network medicine and laboratory medicine is also ideally located at the center ecosystem (figure 1).

The European health data space

We can now, still using the reflection of data as pivotal piece, shift from networks to space. The space dimension because of the launch on 3 May 2022 by the European Commission of the proposal for the European Health Data Space (EHDS). EHDS is a legal, governance, data quality, and operability framework with the objective to facilitate access to and reuse of health data to improve health care delivery, research, and policy-making.



The aim of EHDS is to improve care delivery and management of patients by empowering EU citizens to control and use their personal health data in a private and secure environment, removing information barriers and creating a single market for digital health services, while ensuring full compliance with the EU's high data protection standards (the General Data Protection Regulation, the Data Governance Act and the Data Act). Data from laboratory medicine and imaging are of course highly concerned by EHDS.

Source: <https://cifs.health/backgrounds/european-health-data-space-explained/>

Considering the primary use of electronic health data, EU citizens will have easy and free of charge access to their own health data for data management and sharing of data with healthcare professionals in and across Member States.

A secondary use of electronic health data will boost the access to and utilization of health data for research and benefit to society in different areas such as innovation, policy-making, patient safety, personalised medicine or statistics.

However, attention is needed by all stakeholders to make EHDS as easily accessible for all, equitable, ethical, safe and secure.

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MAILS OF PHISHING: ALWAYS BE ON ALERT!

A phishing e-mail message is an effort to steal your personal information. Phishing attacks typically come in the form of fraudulent email messages that appear to have come from a legitimate source, such as, in our case, an EFLM Officer.

Phishing emails will usually trick the receiver into divulging personal information or direct request to send money to a specific account. These attacks are often designed to appear urgent and panic recipients so that they take immediate action. Awareness is the only key to protecting yourself and your private information. **So please be alerted in case you receive unusual message requests from mails that appear to have sent from EFLM Officers.**

EFLM EXECUTIVE BOARD INFORMS

Great success for the 3rd EFLM Strategic Conference!

Reported by Tomris Ozben, EFLM President and Chair of the 3rd EFLM Strategic Conference



Dear Colleagues, Dear Friends,

On behalf of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) and as the Chair of the 3rd EFLM Strategic Conference, it is a big pleasure and honor for me to witness that the 3rd EFLM Strategic Conference "**SMART and GREEN LABORATORIES. How to implement IVDR, emerging technologies and sustainable practices in medical laboratories**" was held and completed on May 25-27, 2022 successfully.

The 3rd EFLM Strategic Conference was originally planned to be held in presence, but due to the unprecedented challenges of the COVID 19 crisis, it was held fully online, using the state-of-the-art technical solutions including virtual exhibition stands allowing chat and video conferencing between the attendees and stand representatives. Every day, three scientific sessions were held from 10:30 am till 6 pm (CET) including the two virtual cutting-edge high technology exhibition visits.

More than 1000 scientists have registered to the Conference and listened 60 Speakers and Session Chairs. All the presentations, discussions, networking, and exhibition have been found by the participants

rewarding and worthwhile.

The 3rd EFLM Strategic Conference was a unique opportunity for all the stakeholders to know, to understand, to question and to participate to the orientation of Laboratory Medicine in Europe and globally.

The Conference program was designed to be interactive under virtual conditions reserving sufficient time for discussions. More in the spirit of strategic thinking: what are the problems now, what should we be aiming at in the future, where our focus should be, how we could achieve that, and how to implement revolutionary ideas to move us forward.

Preparation of the inspirational and fantastic scientific program, selection of the hot and innovative topics, selection, and invitation of the new expert Speakers all around the World took almost one year of continuous effort and time of me started as the EFLM President-Elect in cooperation with the Scientific Program Committee Members and Scientific Session Chairs. The Scientific program covered a broad range of important topics such as basic concepts, advanced diagnostics and techniques used in laboratory medicine. Distinguished eminent expert speakers, and global key opinion leaders from the field of laboratory medicine, In Vitro Diagnostics (IVD) Industry, Digital Health, Medical Devices and Representatives from MedTech Europe joined the conference to deliver the latest innovations in laboratory medicine, in healthcare, latest diagnostic technologies and scientific advances in all disciplines pertinent to laboratory medicine.

In all sessions, speakers from the IVD industry were included in the program as an important Strategy to emphasize the importance of the Partnership Model with IVD Industry for efficient integration and adoption of innovations and emerging technologies (Artificial Intelligence, Machine Learning, Advanced and Integrative Diagnostics, Digital Transformation, Big Data) in the IVD landscape into



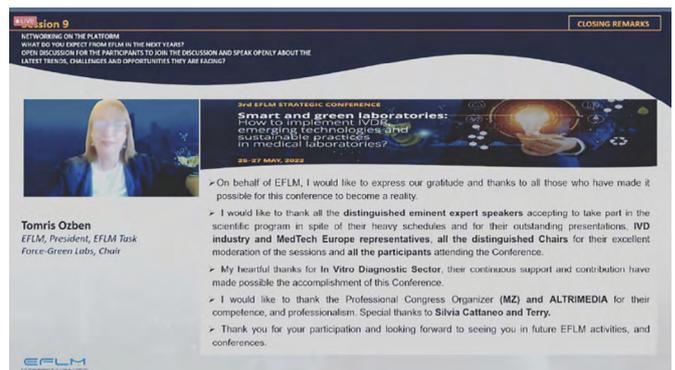
the aims of the Strategic Conference and express our deepest thanks for your contributions and enthusiastic participation. All the sessions of the Conference were recorded and are available for one year at the Conference website **“On Demand”** for the colleagues unable to attend it. So that the benefits of the Conference can be extended to scientists who did not have the opportunity to participate in the Conference.

<https://eflmstrategicconference.org/index.php>

Lectures and contributions presented at the Conference will be published in a special issue of the official EFLM Scientific Journal (CCLM).

On behalf of EFLM, I would like to express our gratitude and thanks to all those who have made it possible for this conference to become a reality.

I would like to thank all the distinguished eminent expert speakers accepting to take part in the scientific program despite their heavy schedules and for their outstanding presentations, IVD industry and MedTech Europe representatives, Scientific program Committee members, all the distinguished Session Chairs moderating the sessions and all the participants attending the Conference.



My heartfelt thanks for In Vitro Diagnostic Sector for their high technology exhibitions, their continuous support and contribution have made possible the accomplishment of this Conference.

I would like to thank the Professional Congress Organizer (MZ) and ALTRIMEDIA for their competence, and professionalism. Special thanks to Silvia Cattaneo and Silvia Terragni.

Thank you for your participation and looking forward to seeing you in future EFLM activities, and conferences.

Medical Laboratories, to implement revolutionary ideas to move us forward, to develop a Strategic Vision for Cost-effective and Clinically-effective Laboratory Services that add value, to develop an efficient collaboration with MedTech Europe for the EC IVD Regulations, switching Medical Laboratories to Sustainable Green Labs, Digital Twins, Novel Technologies and Clinical Research in enabling Precise Predictive, Preventive and Personalised Medicine, Direct to Consumer Testing, trends, opportunities, and challenges.

A panel of experts discussed what is needed to succeed in this changing environment and the role

of collaborations between industry, public, private, and academic drivers of innovation. Their feedback, participation, and engagement during the open discussion platform at the Strategic Conference were important and will be taken into consideration to steer laboratory medicine forward and to shape the future of our profession.

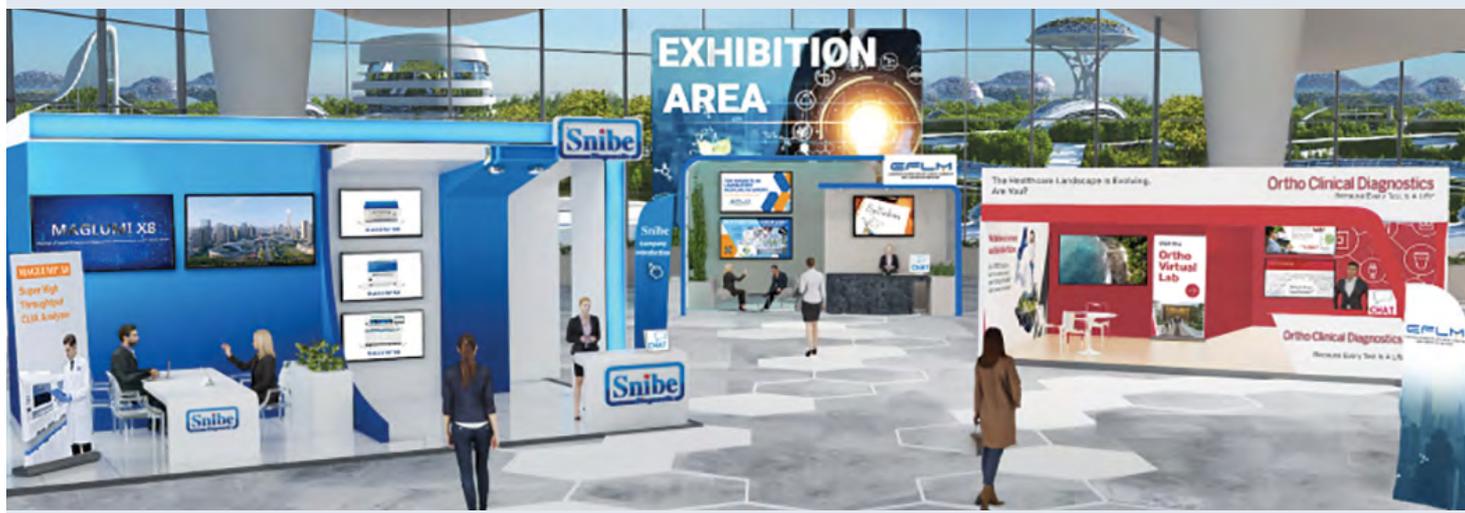
The aim of the 3rd EFLM Strategic Conference was to address and discuss recent developments and challenges in our field of profession focusing on important aspects in Laboratory Medicine in which some strategic actions/measures should be taken.

An outcome of the Strategic Conference is the creation of EFLM Task Forces (TFs) and Working Groups (WGs) dealing with the main topics of the Conference. We are confident to reach all



Comments of the Participants about the Conference:

- Congratulations on the content and delivery of the congress. It is clear that you put in a huge amount of work to provide an excellent, forward-looking conference, which involved several speakers from outside the traditional laboratory medicine community. EFLM will have many options for developing these themes further.
- Well done and thanks for the opportunity. Assume you and the board now develop an operational plan with priorities for the next few years as a result of this meeting.
- A meeting in which every topic was well covered and presented. There was a good balance between the academic, industry and the clinical applications of lab medicine in improving patient care.
- In my opinion and I am sure that others will agree that this conference was one of the most impressive and focused in recent times. All the presentations I listened to were of a high standard and it was easy to understand what was being spoken about.
- The conference itself had very few glitches and many of the issues associated with virtual presentations seem to have been sorted out so many congratulations to MZ and the technical team.
- Many thanks to your leadership and the good communication between the various committees of EFLM. There is no doubt that good and effective communication is critical to the success of any organization and you have been able to build upon this. Congratulations
- Congratulations Tomris Ozben & team for the impressive organization.
- I found the conference very well organized, and the virtual environment run very smoothly.
- Just wanted to thank you for the complimentary registration and access to the conference. It was very informative!
- I would like to thank you for your great effort to successfully complete our society's third strategic conference!
- Great presentations! Thank you to all speakers!
- Thank you for the excellent presentations
- Thank you. excellent ideas
- Thank you and congratulations for the excellent conference!!
- I would like to thank all the speakers for the wonderful and very interesting lectures and especially the EFLM President Tomris Ozben for the possibility of free participation for EFLM Academy members at this conference.



EFLM EXECUTIVE BOARD INFORMS

The importance of a multidisciplinary integrated diagnostic approach to therapy guidance

Reported by Tomris Ozben, EFLM President

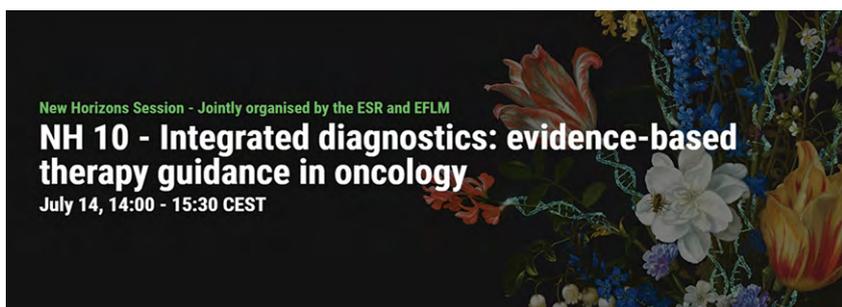


In 2019 EFLM has signed a Memorandum of Understanding with the European Society of Radiology (ESR) with the aim to strengthen the cooperation in areas of joint interest, in particular interdisciplinary scientific collaboration and to explore opportunities for integrative diagnostics. In this agreement, ESR and EFLM also agreed to organise joint sessions at each

other's congresses as part of the scientific programme.

On July 14, on occasion of the European Congress of Radiology (ECR) in Vienne, in my role as EFLM President, I took part, as moderator and speaker, at the joint ESR-EFLM session titled **"Integrated diagnostics: evidence-based therapy guidance in oncology"**. See below the detailed programme.

The theme of the ECR 2022 was "Building Bridges" with the specific goal to assign a central role to the multidisciplinary education and to expand new point of view, perspectives, strategies and insights that will ultimately result into an improvement of diagnostic quality.





NEW EFLM FUNCTIONAL UNIT

New EFLM functional unit under the Science Committee: the EFLM Task Group on Chronic Kidney Diseases

Reported by Etienne Cavalier,
Chair of the EFLM Task Group on Chronic Kidney Diseases



A very important and strong connexion exists between Nephrology and Laboratory Medicine. Indeed, renal diseases are not frequently symptomatic and Nephrologists rely most of the time on laboratory results to diagnose or monitor patients suffering from kidney diseases. Chronic Kidney Diseases (CKD)

represent a significant burden for the society since it is estimated that around 10% of the adult population is affected. Hence, early diagnostic is of paramount importance and the detection (and quantification) of proteinuria and the estimation of the glomerular filtration rate (eGFR) are two strategic pillars of the KDIGO Guidelines. Yet, such Guidelines are often based on the assumption that results provided by clinical laboratories in the world are comparable. Important efforts of standardization have been made these last years, especially for serum creatinine and cystatin C. The field is however rapidly evolving and since the last inquiry in 2019 on the state of the art of laboratory clinical practice for the measurement of creatinine, cystatin C, the use of formulas and the measurement of GFR, new equations have been published and the interest in iohexol clearance for the measurement of GFR is increasing. Among the "new" equations, the CKD-EPI has proposed a "race-free" equation which is giving questionable result, especially from an European perspective. The European Kidney Function Consortium (EKFC) has also proposed new equations, based on European cohorts and on the usage of the "Q value", defined as the median serum creatinine concentration in the population for which it is used. This

ESR-EFLM Joint Session:

Integrated diagnostics: evidence-based therapy guidance in oncology - Chairperson's introduction - Daniele Regge (IT), Tomris Ozben (TR)

From traditional tumour markers to liquid biopsy - Tomris Ozben (TR)

Educational goals: to give an overview of the different circulating tumour markers available for cancer care, to summarize the role of tumour markers in detecting cancer, assessing response to cancer therapy and identifying residual disease and to review the present and future role of liquid biopsy in cancer therapy guidance.

Imaging cancer at a cellular and sub-cellular resolution - Reinhard Büttner (DE)

Educational goals: to gain insight on the wealth of data coming from tissue sample analysis: morphology, immunohistochemistry, and molecular pathology, to understand the value of emerging tissue biomarkers in oncology and to describe how digital pathology and artificial intelligence will enhance precision in cancer therapy guidance.

Oncologic decision support systems from a radiologist's perspective - Luis Marti-Bonmati (ES)

Educational goals: to describe the role of diagnostic imaging in guiding the cancer treatment decision-making process, to summarize the importance of integrating imaging biomarkers with other tumour biomarkers for therapy guidance and to review state of the art of oncologic clinical support systems that integrate imaging information.

Precision cancer therapy: making the sense of it all - Silvia Marsoni (IT)

Educational goals: to learn that precision oncology is not just = targeted therapy, to appreciate the potentiality of a precision oncology approach in cancer research and in clinical practice and to understand the power of integrated diagnostic for patient selection.

Panel discussion: Sharing clinical decisions in cancer care - Cases have been presented involving the following three clinical scenarios: 1) locally advanced cancer, 2) adjuvant therapy, 3) palliation. Speakers discussed on the importance of a multidisciplinary integrated diagnostic approach to therapy guidance

equation is also valid from infants (>2 years) to the older old. Other European equations, like the Revised Lund-Malmö equation, are also available. Determination of iohexol clearance by HPLC-UV or LCMS-MS to measure the glomerular filtration rate is now recommended in various clinical settings, like in kidney donors, children undergoing chemotherapy, extreme body mass (low and high) and in any situation where creatinine or cystatin C are simply inaccurate to reflect kidney function.

For all these reasons, the EFLM Executive Board has decided to create the **EFLM Task Group on Chronic Kidney Diseases** which will aim at promoting the GFR measurement and the use of the European population-based equations in Europe. To know more: [click here for the dedicated page in the EFLM website.](#)

NEWS FROM EFLM FUNCTIONAL UNITS

New EFLM functional unit under the Science Committee: the EFLM Working Group on Artificial Intelligence

Reported by Michel Langlois, Chair of the EFLM Science Committee, and Andrea Padoan, Chair of the EFLM Working Group on Artificial Intelligence



The EFLM has initiated the creation of new Working Group on Artificial Intelligence (AI) under the Science Committee. This decision was made after the 3rd EFLM Strategic Conference on May 25-27, 2022, which dealt with this topic. AI is an important emerging technology, and in the future, it is likely that it will become integrated in many applications of laboratory medicine. Machine learning (ML), a methodological approach developed within the field of AI aimed at developing algorithms and models by which to make classifications and predictions based on large amounts of data, has gained a place in medicine and increasingly also in laboratory medicine for evaluating and interpreting biochemical data, although the application of ML in clinical laboratories still appears to be an unexpectedly slow process. Indeed, it has been proven that laboratory results were often used in AI application, but medical specialties like intensive care, infectiology and others have used these data more

efficiently than laboratory medicine in 2020.

The difficulty is due to several factors, including the features of laboratory results such as the characterization of the laboratory data (unit of measurement/analytical principle/population description), cannot be reproducible in others setting, and, therefore the effort to develop tools based by ML appears as aesthetic operation of little significance.

Hence the necessity of creating a WG on this important topic. The EFLM has appointed Dr. Andrea Padoan from the University of Padova, Italy, as Chair of the WG.

The aims of the WG are:

1. to establish the guideline for the use of laboratory data in ML;
2. to evaluate the suitable application of the ML approach in laboratory medicine;
3. to publish studies where ML algorithms are applied to well characterized laboratory data collected from different European laboratories for meaningful and appropriate tasks;
4. to define interdisciplinary lectures and courses on AI topics.

The EFLM has therefore recently launched a call for nominations to the National Societies, specifically indicating the requirements for the available positions as Full Member and Young Scientist-Full Member in this WG. The EFLM Science Committee will select among the nominated persons, authorities in the field of ML and AI in laboratory medicine, and not in general, and preferably experts who have personally built ML models or contributed to them. In addition, EFLM will appoint also some Experts/Consultants in this WG directly by invitation. The relevant IVD industry representatives will be invited also, as well as representatives from associations dealing with AI/ML such as European Association for Artificial Intelligence (EURAI). Moreover, in order to find additional authorities, in the call for nominations letter the National Societies are invited to indicate if there are local Universities or Research Centers specialised on AI.



NEWS FROM EFLM FUNCTIONAL UNITS

New release of the EFLM Biological Variation Database Website

Reported by Aasne K. Aarsand, Chair of the EFLM Working Group Biological Variation and Sverre Sandberg, Chair of the EFLM Task Group: Biological Variation Database



EFLM Biological Variation Database

Meta - Analysis	List of all BV Estimates	Measurands
List of BV estimates for all measurands <input type="button" value="Go"/>	View individual BV estimates <input type="button" value="Go"/>	Show all Measurands <input type="button" value="Go"/>
Overview of meta-analysis derived BV estimates with APS and RCV calculation	Overview of all BV records with publication details	Overview of BV data sets for each measurand
Number of Meta-Analysis in Database 132	Number of Biological Variation Records 2425	Number of Papers Referenced 554

The EFLM is happy to announce a new release of the EFLM Biological Variation Database. The database has a new, more user-friendly design and includes new functionality, such as automatic calculation of analytical performance specifications including measurement uncertainty and reference change values applications.

The EFLM Biological Variation Database delivers updated, evidence-based biological variation (BV) estimates to users worldwide and is freely available via the EFLM homepage and at <https://biologicalvariation.eu/>. Data can be accessed either by exploring the global meta-analysis derived biological variation (BV) estimates, by listing the more than 2400 individual BV datasets and by reviewing BV data registered for the different measurands. For all global BV estimates, automatic calculation of analytical performance specifications for imprecision, bias, total error and measurement uncertainty with recommendations on their use are provided, as well as reference change values and other tools for assessing changes in consecutive test results in the same patient.

BV data have many important applications in laboratory medicine. The literature describing studies of BV stretches back over 45 years and widely varying estimates are observed for many measurands. The EFLM Task Group for the Biological Variation Database reviews and records all published BV studies into the EFLM Biological Variation Database. In this process, all studies are appraised by the Biological Variation Data Critical Appraisal Checklist (BIVAC) and the BIVAC scores as well as a detailed minimum data set including information on the study design, study population, analytical method etc. are registered in the database. Based on these, real-time, updated global BV estimates are provided, derived from meta-analysis of BIVAC-compliant studies with similar study characteristics. Presently, over 2400 BV data sets and 550 publications are included in the database and global BV estimates are available for 132 measurands. Appraisal of not yet included measurands is continuously ongoing and data will be published as they are complete. The present release of the EFLM Biological Variation Database offers new functionality for users to review and apply the included BV data.

COFFEE WITH THE EFLM PRESIDENT



Dear Readers,

In this edition of the EFLM eNewsletter, in the section "Coffee with the President", I present to you with great pleasure interviews with distinguished **Presidents/National Representatives of the EFLM Member Societies**.

I would like to thank my guests for being available to share their experiences, thoughts and opinions about EFLM, our profession and give

the opportunity to the large EFLM audience to get to know them and their society better. We are all very grateful for their substantial contributions to the EFLM and its mission that make EFLM what it is today. I hope you will enjoy reading these interviews with our esteemed colleagues.

Tomris Ozben
EFLM President



Could you briefly introduce your society? When was it founded, who can become a member, activities of your society, what has been done so far and future activities, projects, plans?

The historical origins of the Slovak society of clinical biochemistry date from June 12, 1958,

when the Presidency of the Czechoslovak Medical Society Jan Ev. Purkyně approved the origination of the Czechoslovak Section of Clinical Biochemistry (CSCB), which later, after a change in the statutes in 1961, was renamed the Czechoslovak Society of Clinical Biochemistry (CSCB). Based on the federal constitution of Czechoslovakia, CSCB 1969 split into the Czech Society of Clinical Biochemistry and the Slovak Society of Clinical Biochemistry (SSCB). On the last day of December 1992, Czechoslovakia disappeared, and on January 1, 1993, the independent Slovak Republic began to write its history. Slovakia was recognized by neighbours and the international community. Consequently, in November 1993 at the XV IFCC Congress in Melbourne, a novel SSCB was accepted as a full member of the IFCC, and in 2014 a Full member of the EFLM. Anyone who agrees with the statutes of the Slovak Medical Association and his/ her membership is accepted by the SSCB EB can become a member of the SSCB. The specialty of Clinical Biochemistry is legislatively anchored in the Official Journal of the Ministry of Health of the Slovak Republic. In addition to its own core activity, three separate scientific sections carry out their own activities in the SSCB: 1) Section for Atherosclerosis (a member of the International Atherosclerosis Society, 2005); 2) Section for Analytics and Technology; 3) Section of Hereditary and Metabolic Disorders (in cooperation with National Institute of Children's Diseases and the Slovak Paediatric Society). SSCB is the publisher of its own official journal *Laboratórna diagnostika* (original papers, overviews, opinions, distinguished personalities, congress abstracts). The journal *Ateroskleróza*, published in cooperation with the SSCB Atherotic section and the Faculty of Medicine of the Pavol Jozef Šafárik University in Košice, publishes scientific articles from basic and applied research aimed at the study of the etiology, pathogenesis, clinic, and treatment of atherosclerosis. In the years 1996-2002, *Diagnóza*, a journal for laboratory medicine dedicated to the cooperation of clinical and laboratory specialties, was published as well. Every two years, the SSCB presents Prof. Pecháň Award to recognize individuals for their outstanding achievements and lifetime work in the field of clinical biochemistry sponsored by Roche. Even though the main objective of the SSCB is non-institutional education (biennial SSCB Congress rotating with Labkvalita Conference), SSCB participates in many activities towards the government and regulator, e.g., the categorization of laboratory diagnostic methods, interdepartmental comment procedure of new legislation in the healthcare sector, regulation of the funding of the laboratory testing by health insurance companies, classification and categorization of the lab tests. In

the past, SSCB considerably contributed to the standardization, harmonization, and quality processes of laboratory diagnostics. Currently, due to the initiative of Hedviga Pivovarnikova, NS President and a Chair of WG Preanalytics, SSCB is significantly involved in the Project Choosing Wisely dealing with the rational use of laboratory tests so lowering their overuse and inefficient use. In recent years members of WG Preanalytics have been intensively devoted to the topic of minimizing pre-analytical variability during venepuncture primarily done by the phlebotomists who serve the most vital role in assuring sample quality and integrity of the samples (EFLM Recommendation for venous blood sampling, Slovak version 2019). Chair of the WG took part in the international project "Patient's knowledge and awareness about the effect of the over-the-counter (OTC) drugs and dietary supplements on laboratory test results: a survey in 18 European countries" managed by Professor A-M Simundič. The next WG Preanalytics activities will be focused on the stability of the individual investigated parameters during sample transportation and processing and, in particular, for the education of nurses and doctors by the publishing of appropriate guidelines. In addition, at the end of 2021 SSCB started to initialize the National POCT program of regulation, competency surveillance a quality assurance, and simultaneously tries to develop cooperation with GPs in POC testing. Even if some laboratory professionals oppose the massive deployment of POCT outside the hospital and toward consumer testing it cannot be prevented.

What are your suggestions for better education? Is the current education in your country fit for the purpose? Do you have a core curriculum for the training of medical biochemistry professionals?

Unlike Western Europe, where development in clinical biochemistry proceeded continuously and in harmony with technological progress, Slovakia was one of the countries that at the turn of the millennium underwent enormous step transformational changes, not only political, and social, but economic which had a strong impact on the development of laboratory medicine as well. The era in which several phases of privatization of state clinical laboratories and consolidation of laboratory testing took place requested new approaches for education, quality assurance in medical laboratories, certification, and accreditation of workplaces, the introduction of metrological regulations, and good laboratory practice. Unfortunately, the health care sector often changed turbulently depending on political and economic changes thus signed by the departure of the best professionals from clinical laboratories. However, despite this turbulence and opposition, some individuals tried consistently to push through the new education system. Prof. Gustav Kovac, Head of the Institute of Chemistry, Clinical Biochemistry and Laboratory Medicine (ICCBLM), took an active part in European cooperation of the Common Training Framework for non-medical Specialists in Laboratory Medicine. Based on the CTF principle, ICCBLM has established a specialized study program for medical and non-medical specialists in the field of Clinical Biochemistry and Laboratory Medicine at the Slovak Medical University in Bratislava, which is able to meet the expectations of EFLM's proposed Common Training Framework. Similarly, at the



Jessenius Faculty of Medicine of Comenius University in Martin, the postgraduate study of clinical biochemistry for doctors is approachable. Both postgraduate educational bases (Bratislava and Martin) for medical biochemistry professionals follow the core curriculum, which is anchored in legislation and regulates the terms to acquire a specialization diploma in clinical biochemistry and laboratory medicine. In addition, acknowledged doctors and scientists (laboratory specialists with higher qualifications and long-term experience) teach clinical biochemistry and biochemical methods at several Medical schools for laboratory technicians whose practical training takes place at clinical laboratories. However, CTF based on an Equivalence of Standards in education, training, qualifications, knowledge, skills, competencies, and the professional conduct associated with a specialist practice is considered by some colleagues in Slovakia to be a very ambitious, challenging, and demanding path.

In what direction do you see the laboratory medicine heading? What do you think for the position of the laboratory specialist to increase their visibility within the healthcare system? What challenges do you and your colleagues face?

We cannot predict the future, but we should better prepare for it, especially by educating ourselves and our colleagues. Since the role of Laboratory Medicine is challenged by economic and new technological pressures, it is essential steadily present to the administrators and other decision-makers the full spectrum of activities and benefits that Laboratory Medicine can provide. The true impact of Laboratory Medicine can be achieved only by adding value to laboratory tests, represented by their effectiveness in influencing the management of patients. Everyone repeats the mantra of how much laboratory medicine shares in the diagnosis, monitoring, and control of treatment. But despite that, resources for laboratory medicine all over the world are continuously shrinking. Authorities and decision-makers often reduce LM to a producer of laboratory test results and they tend to “technologize” the discipline. However, laboratory medicine by adding value to test results provides wider possibilities and services. The recent Covid era which threatened public health and lives, the economy, and human social relations, though showed the importance of laboratory testing. Suddenly other medical specialties and non-medical stakeholders including the lay public became aware of its importance. Hence, laboratory medicine has not to miss this opportunity to present its own contribution and should take this challenge for its own beneficial interest. Although the patient’s

personal access to laboratory test results raises clinical and ethical questions it may increase patient engagement in better health care utilization and minimize potential problems of harmful self-interpretation of test results by patients especially based on the amount of information and misinformation available via the Internet. This puts new demands on laboratorians (physicians, scientists, technicians) who should need to find appropriate ways to explain lab test results directly to patients, verbally or by print-outs. Patients are not curious about laboratory numerical results, they do not understand them. Patients are interested in their health status and expect understandable laboratory information instead of numerical results. It is a difficult but feasible task for laboratory professionals.

Do you think medical biochemistry professionals are ready for the emerging technologies such as Digitalization, Laboratory Diagnostic Algorithms, AI, ML, Integrative Diagnostics, Big Data? Do you believe in Partnership model for efficient integration and adoption of emerging technologies and innovations?

My generation entered the clinical laboratory at a time when all tests were done manually, there were no automatic analysers, no computers, no robots. It sounds funny when I mention that the top of the computer technology was the pocket calculator. I got my first desktop computer in my forties. Nevertheless, it was exciting for us to undergo all the innovations, we learned how to march with new technologies and approaches, and helped each other but also competed with who could achieve more. That was our clinical biochemistry and the basis of our motivation. And we did it. I do not worry that the current generation of young doctors and scientists will not be able to handle the changes clinical laboratory towards which it is heading. Artificial intelligence will not replace humans, IT will be a means, not a result. The new generation of clinical biochemists will not build larger laboratories like today’s “industrial” halls full of automatons and robots. Thanks to chips, the clinical laboratory of the future will fit into the palm and move closer to the patient. But only an educated biochemist will turn numbers and texts into information and wisdom for the patient. Due to current significant geopolitical changes in Europe, it will not be easy to implement some recent strategic decisions outlined by the 3rd EFLM strategic conference. Although energy poverty will put great pressure on the development of green and smart labs, several factors will continue shaping laboratory medicine. The importance of personalized, predictive, and preventive medicine will raise. To achieve better comparability of the results obtained in different labs, by a diversified technology, and at different times more attention will be paid to the regulation, metrology, standardization, and global harmonization efforts of the IVDs. Much attention will continue to be devoted to the quality of the pre-analytical, analytical, and post-analytical phases. Scientific and technological progress cannot be stopped. Nevertheless, the sharing of new technologies in medical labs will continue to depend on resource availability. Despite huge scientific advances, emerging technologies, digitalization, and artificial intelligence systems, the human factor will always play a key role. SSCB is aware that its experts should leave the laboratories, build a

partnership, and cooperate more closely with doctors of other specialties and their nurses. Unfortunately, due to the insufficiency of professionals in our laboratories, this goal in practice seems remote at the moment.

Do you think your society members participate and/or contribute enough to EFLM activities? Do they know the advantages to be EFLM Academy membership, for example, the unique educational resource "Syllabus course", free attendance to the recently held 3rd EFLM Strategic Conference, its sessions were recorded and are available for one year?

Slovakia, a small Central European country with a young statehood and an old history, represents 1% of the European population. Slovak Society of Clinical Biochemistry is a small society (2 hundred members), with approximately 30% of members regularly actively participated in scientific events and projects. The others use the educational base and professional events by passive participation. SSCB collective membership in the EFLM Academy is represented by 10% of the SSCB members of which the majority watched online chosen (personally preferred) sections of the 3rd EFLM Strategic Conference. Some colleagues could not do full concentration on the EFLM, and/ or IFCC activities including lectures of the 3rd EFLM Strategic Conference, or at all participate in it. Considering the excellent level of the lectures, many of which were of a high educational and inspirational standard, this is a pity indeed.

The syllabus course is a unique educational opportunity, about which we communicated very intensively in various ways last year: publishing information on the homepage www.sskb.sk, online meetings, in the SSCB journal *Laboratorna diagnostika*, etc. For many colleagues, this set of knowledge and high-level papers is a complete novelty, with which they first need to familiarize themselves more thoroughly. I believe that especially young colleagues in preparation for their final qualification exams will like to reach for this unique educational aid.

My colleagues (doctors and specialists in laboratory diagnostics) cannot involve fully in the entire spectrum of clinical activities because of routine overload in lab activities. They often face a lack of resources, both human and economic, as a result of which many decisions make not for professional but economic reasons. Laboratory responsibilities take up a significant part of their working time, the lack of which they then feel in communicating with clinicians, other healthcare professionals, and patients as well as overcoming an uncommunicative attitude of some clinicians considering the laboratory just a "service" department.

What do you think about the ongoing and recent EFLM activities/initiatives? Do you have suggestions to increase communication and cooperation with EFLM? What you like and dislike about EFLM

Clinical biochemistry and laboratory medicine are moving forward thanks to several European personalities. In the past, they were distinguished scientists mainly from Western and Northern Europe, but after the fall of the Iron Curtain, new personalities from Eastern Europe appeared on the scene as well, bringing new perspectives and ideas. The significant activities of the representatives of the southern European and the Balkan states cannot be overlooked in the last years. At the recent IFCC online meeting of regional federations, Prof. A-M Simundič astonished the world audience by introducing the unique European educational platform EFLM Syllabus, which was highly appreciated by other regional

federations. An ambitious wind blew from the 3rd EFLM Strategic Conference under your leadership, at which many recognized (European) scientists presented their visions. However, the real fulfillment of these aims must be done by colleagues in the field, and it will depend a lot on how the presented goals will be managed to be implemented by National Societies in individual countries. At the moment a paraphrase of Pierre de Coubertin's statement comes to mind "it will not be important to win, it will be important to participate". EFLM should not only be a leader, but also a more encouraging and helping organization. The basic principle of free Europe is the free movement of people so healthcare, of which laboratory medicine is an integral part, should be equal in all European countries.

Dear Professor Tomris Ozben, you have a challenging task ahead of you, leading the European Federation and motivating its members to proactively act. On behalf of our society and in my own name I wish you success.

Some Personal questions...

Please introduce yourself with a few sentences.

Fifty years ago, graduated from the Slovak Technical University in Bratislava, then postgraduate studies at the Comenius University in Bratislava and followed by studies at the Masaryk University in Brno (Czech Rep). For more than 3 decades acted in the Dept of Clinical Biochemistry of the Faculty Hospital Jan Adam Reiman in Prešov, then continued another 10 years in ADLA medical laboratories. During professional career simultaneously acted as a teacher at the Secondary Medical School as well. Chaired the Steering Committee on Standardisation of Biochemical Methods for decade, and then, later, acted as an Auditor of the Slovak National Accreditation Service. Head of the only Biochemical Department of Medical Lab in central Europe reaching an accreditation of the flexible scope. Founder and co-creator of SNOLAMED (the Slovak Nomenclature and Classification System in Laboratory Medicine), which since its inception has been one of the basic documents for the categorization of laboratory methods in Slovakia. In addition, founder and for two decades co-organizer of LABKVALITA (biennial Conference with International Participation - a forum for professional exchange of knowledge related to Quality in medical laboratories, which took firm roots in non-institutional education of the SSCB until the nowadays. The author and co-author of more than 200 publications and lectures. As a SSCB member for 50 years held various positions (Vice-President, EB member, Editor of Journal "Laboratorna diagnostika", National Representative). For contribution and desert to the progress of Clinical Biochemistry in Slovakia received the Silver Medal of the Slovak Medical Association. For lifelong professional commitment in the field of quality assurance, internal quality control and external quality assessment was awarded by the P. H. Petersen Award.

In your professional career, you have served in many leading roles both in your country and internationally. What was your motivation?

I lived in a time when clinical biochemistry went through incredible changes in technology and science for half a century. Today's young colleagues may find it unbelievable that I measured with a Zeiss Pulfrich colorimeter, and performed simple photometric methods with aggressive chemical reagents (sodium hydroxide, sulfuric acid, etc.), but later, step by step I met the challenge to



introduce modern sophisticated devices and methods into routine laboratory practice. Looking back the changes that I have met in clinical biochemistry over the 50 years of my professional carrier seem incredible and all moments great.

My superiors usually put me on tasks that others didn't want to tackle. I always considered it as an opportunity and a new challenge that push me forward. If you love your work, there is no need for motivation. Luck does not come your way by a coincidence. Luck is tenacity, the more you sweat, the luckier you are. The harder you work, the luckier you are. Learn from the famous Dalai Lama quote "Remember that sometimes not getting what you want is a wonderful stroke of luck."

Could you share your way in biochemistry? Why did you choose this field? What do you like about your current job? Do you think that you chose the right job for you? If you have another chance?

To be honest, I was brought to the clinical laboratory by chance. I have been interested in instrumental analytical methods since I was young. At the time when I was active in the clinical laboratory, I did not know a personal computer, notebook, mobile, or even an automatic analyser or POC analyser. We performed all tests manually. The times when things started to change thanks to IT and semi-automated analysers excited me tremendously. It was a time when quality control made its way from Tonks' formula to Westgard rules. I was fortunate a lot to know personally Prof. Per H. Petersen and Prof. James O. Westgard and had the opportunity to discuss with them many times. I am extremely grateful to them

for everything I learned from them and tried to pass it on. In recent days, my wife and I celebrated our golden wedding, a reason to stop for a moment and recapitulate our 50-year journey together. When asked how and with whom I would like to spend my life if I could it once again, I answered without hesitation that anything and anyone, friends, or colleagues I would not change. I lived my life with a person who was a strong personality and was always great support for me. I am extremely grateful to her for it. We have two great sons together and four wonderful grandchildren that I believe in immensely. I teach them that life is beautiful, but not easy, that a person must overcome many obstacles in order to fulfil his dream and that he must never give up in the face of failure because it also moves him forward.

What would be your advice to young scientists who wish to pursue their career in laboratory medicine?

Each era writes its own stories and brings new problems, challenges and opportunities. Wherever you are and whatever you do, you always have a chance to contribute to the development of your discipline. Do not complain about limitations, about few opportunities, and many problems. Let me paraphrase a famous statement by JFK "ask not what laboratory medicine can offer for you—ask what you can do for laboratory medicine."

Do you have some hobbies? What are the things outside of your work that you are passionate about? How do you like to spend you free time?

I am interested in history. I am fascinated by how much progress our discipline has made from ancient times till today. In a wider context, I am interested in the history of our continent in the last century and I try to understand the context that dominated Europe long ago before its unification. It gives me great joy and excites me to be able to discuss these things with my grandson. If I have free time and feel physically fit, I like to go on a bike tour or nordic walking with my wife in the forests of the High Tatras. We both love the Croatian sea and visit it every year when possible. I like life.



Coffee with Dagne Gravelle, President and National Representative, The Latvian Society of Laboratory Medicine



Could you briefly introduce your society? When was it founded, who can become a member, activities of your society, what has been done so far and future activities, projects, plans?

The Latvian Society of Laboratory Medicine was founded in 1993. A laboratory doctor, a laboratory specialist and a resident in the speciality of a laboratory doctor may become a member of the association. Biomedical technicians and other medical specialties may become associate members of the association. The purpose of the activities of the association is to

promote the development of laboratory diagnostics in Latvia. To achieve this goal, the Society shall develop its activities in the following directions: submit proposals and suggestions to the authorities of the Republic of Latvia responsible for health care; develop draft standard requirements for its speciality, participate in certification, take care of the professional training of its members, organise and implement additional education activities, organise seminars, conferences, congresses and exhibitions. The association shall organise the legal defence of its members, as well as shall lay down requirements for professional competence, act deontological infringement and, in other cases, cooperate with other professional medical associations and associations. As one of the most important activities, I can refer the XV Baltic States Congress for Laboratory Medicine "BALM 2020", which took place in Latvia. This year, the BALM Congress will take place in Estonia. We, as an association, participate in its organisation.



What are your suggestions for better education? Is the current education in your country fit for the purpose? Do you have a core curriculum for the training of medical biochemistry professionals?

In Latvia, special education in the field of laboratory can be obtained in several ways. To become a laboratory doctor, 4-year post-graduate – training. This training is very close to the European post-graduate education plan “The EC4 European Syllabus for Post-Graduate Training in Clinical Chemistry and Laboratory Medicine”.

Laboratory specialists (biologists and chemists) acquire a speciality during 4 years of work, while visiting different areas of the laboratory.

Both laboratory doctors and specialists take certification exams at the end of the training. The examination programme covers all areas of post-graduate education. When successfully passing a certification exam, a doctor or specialist shall receive a certificate enabling him to work independently for the next 5 years in his sector. Every 5 years, the certificate must be renewed either by re-examination or by certifying its competence with educational records. During this period, 250 points of further education should be obtained. 1 further training point is available for 1 hour of training (workshop, congress, courses).

Collecting the required amount of education in post-graduate training is not easy. Major adjustments in this area have been introduced by the time of the Covid19 pandemic with the possibilities of remote courses and seminars. Great benefit is the EFLM Academy.

In what direction do you see the laboratory medicine heading? What do you think for the position of the laboratory specialist to increase their visibility within the healthcare system? What challenges do you and your colleagues face?

The role of the laboratory doctor and specialist in the medical process has a huge impact. Currently, laboratory examinations are needed in any medical sector, but I cannot argue that the prestige of the laboratory doctor or specialist in Latvia would be very high. A laboratory doctor does not deal with patient recruitment and treatment. There is no line of patients sitting outside the doors of the laboratory doctor, so there is an idea of a secondary profession. At times, it appears that the views of society, including other specialist colleagues, on lab medicine, come from films in which sophisticated laboratory tests are performed by sophisticated machines within minutes without showing the role of heavy laboratory processes and specialists in it. It cannot be denied, more and more sophisticated machines and new technologies

are coming into our field. It requires more and more educated employees.

However, I am an optimist and I hope that the prestigious plant for laboratory doctors and specialists in Latvia. It will certainly be facilitated by the work of multidisciplinary teams, discussions, the ability to hear each other.

Do you think medical biochemistry professionals are ready for the emerging technologies such as Digitalization, Laboratory Diagnostic Algorithms, AI, ML, Integrative Diagnostics, Big Data? Do you believe in Partnership model for efficient integration and adoption of emerging technologies and innovations?

Whether all those involved in the laboratory are prepared for these changes – the answer is most likely “no” but undeniably we are going to this. We are currently working at national level on a single electronic transfer to laboratory tests, as well as on a single laboratory result store available to both patients and healthcare professionals. In parallel to this work, we have realised that there is a need for common algorithms to diagnose infectious diseases, and maybe in other areas, but it takes time to introduce them.

Do you think your society members participate and/or contribute enough to EFLM activities? Do they know the advantages to be EFLM Academy membership, for example, the unique educational resource “Syllabus course”, free attendance to the recently held 3rd EFLM Strategic Conference, its sessions were recorded and are available for one year?

Members of our association have been informed of the new post-graduate education opportunities and benefits of the EFLM Academy. We see that membership activity is increasing, especially among young members. The COVID-19 pandemic in the field of education plays an important positive role. Currently, congresses, seminars, different courses are available in webinar, hybrid format. They have become more accessible. Time is devoted only to learning the course program itself. No time wasted to travel, no accommodation costs. Membership fees are also lower than face-to-face rates. I hope the level of education can be expected to increase with this.

What do you think about the ongoing and recent EFLM activities/initiatives? Do you have suggestions to increase communication and cooperation with EFLM? What you like and dislike about EFLM

EFLM activity has increased significantly. It must be acknowledged that the association has not been a very active member of EFLM until now. Latvia is a relatively small country. Today the total population in Latvia is less than 2 million and continues to fall. There are currently around 110 laboratory doctors in Latvia and about as many laboratory specialists. Around of these 75% are basic employees. The number of new specialists is currently very low. It also explains our low activity. But I think positive. We have engaged active members from University Hospitals in the public work of the Society and hope that our international activity will grow.

Some Personal questions...

Please introduce yourself with a few sentences.

I am currently elected Chairman of the Board of the Latvian Society of Laboratory Medicine. It's a public job. My main job is at the Children's Clinical University Hospital. I'm a head of Laboratory. I've worked in the hospital for 35 years. In order to maintain



my professional level, I participate in laboratory accreditation processes as an expert. I also participate in the educational process for young professionals.

In your professional career, you have served in many leading roles both in your country and internationally. What was your motivation?

In my professional career I have been a normal laboratory doctor, then the head of the laboratory. In public work, I was the Chair of the Board of the Society of Laboratory Medicine from 1999 to 2006. Currently, a leading association from 2019. I have been appointed chief laboratory specialist at the Ministry of Health. What was my motivation? The answer is not simple. When I started these public tasks, my motivation was the development of the Children's Hospital Laboratory. By the end of last century, the lab was at a very critical level. I had seen some foreign laboratories, and what I had seen seemed like a distant dream. For example, on a visit to a Cologne Clinic lab, the museum seemed the most familiar. In taking on these public responsibilities, I have had the opportunity to meet with many knowledgeable and inspiring specialists. They have given me confidence in the right directions of the actions launched, given me safety, confidence.

Could you share your way in biochemistry? Why did you choose this field? What do you like about your current job? Do you think that you chose the right job for you? If you have another chance?

I have graduated from the Riga Institute of Medicine and obtained the education of the doctor's pediatrician. During post-graduate education, I was very interested in neonatology, but there was no vacancy in this sector. After leaving the institute, I had been appointed to work as a pediatrician in ambulance, but this work involved many home visits, an unpredictable duration of the working day. I had 2 little children at that time. My husband was often in concert tours. When I was offered a peaceful job in the laboratory, I agreed. I think it will be only for the time being, while the children are small. So "so far" was delayed for 35 years. All these years have run at great speed. Would I like to change my profession right now? Certainly not, because I see a lot to do. Did I regret my choice? No, too. If I had a second chance, would I change my profession? This is a difficult issue. Neonatology is right very close to me. Although I'm not with patients everyday, I feel them indirectly following the dynamics of patients, their changes in analyses. I see the whole situation in the hospital, I see a variety of severe clinical conditions from the analytical side. There

might be additional psychology education in my current work, because it is sometimes psychologically not easy to manage a large collective (more than 100 people in the Laboratory, more than 200 in the Society), but I have not wanted to change the profession in the last 25 years because what has to be done. For me the development of the Children's Hospital and its laboratory is a very important.



What would be your advice to young scientists who wish to pursue their career in laboratory medicine?

Young doctors always suggest me to think about my work – encourage me to look at my work from their point of view. If the young doctor wants to link his future career to work in the lab, I'm always happy. I try to talk to the young generation and share my thoughts on huge opportunities for laboratory work, both in professional careers and in science. It may seem from the sidelines that a doctor in the laboratory lacks a connection with a patient, but in fact, it is in the laboratory that this contact is with the widest range of patients. We see all kind of symptoms, diseases, the results of the lab tests that justify or deny the doctor's thoughts. We are experiencing a lot of a non-common situation. Sometimes the work of a laboratory doctor can be compared to the work of a private investigator, where not only the vast knowledge leads to the result, but also collective thinking, careful analysis of facts, sometimes even randomness and luck.

Do you have some hobbies? What are the things outside of your work that you are



I'm a rich woman because I own this time. My wealth is not money, gold and diamonds. My fortune is my family – husband, three children and three grandchildren. I don't have too much spare time as both work and public jobs take a lot of time, but I try to spend most of my spare time with my family. While the children were small, we tried to be all together on trips through Latvia, Lithuania or Estonia. Now I



try to spend my spare time with my grandchildren. A great pleasure in my daily life is brought in by our two dogs—the Chevalier King Charles spaniels. Their love is great and true. Especially when we come home.

My hobbies are very casual and usually – I like reading books, growing roses and other plants, creating sometimes beautiful earrings or other jewelry, or embroidering some pillow in a cross stitch. Of course, I also like to travel and get to know the culture and traditions of other nations.



Coffee with Mads Nybo, the President of the Danish Society of Clinical Chemistry



Could you briefly introduce your society? When was it founded, who can become a member, activities of your society, what has been done so far and future activities, projects, plans?

Our Society was founded in October 1956 and has around 400 members. It is possible to become a member, if you are a medical biochemist or a biochemists with a natural

science degree. Furthermore, biotechnicians can become a corresponding member (i.e. without the right to vote at general assemblies) and we have also corporate members. The present plans for the Society is to update the National education program of medical biochemists, to elaborate on the cooperation with the clinicians and other laboratory specialties, and we also wish to establish networks for different biochemical subspecialties, e.g. POCT, LS-MS/MS, preanalytics etc. in order to standardize the development within these areas.

What are your suggestions for better education? Is the current education in your country fit for the purpose? Do you have a core curriculum for the training of medical biochemistry professionals?

To start with the latter, we do have a core curriculum for the training of medical biochemists, but it needs an update, which is in the making. The plan is that a part of this update will be introduction of some new areas: One of those are knowledge about IT, LIMS, algorithms and rules for automatic test result approval – and of course artificial intelligence. Another area is laboratory automation, including the understanding of the logistics behind,

the need for still maintaining manual procedures in the laboratory, risks in a total lab automation solution etc. And a final aspect is (again) the collaboration with other laboratory specialties; this is an emerging area with a growing need for understanding of each other's workflow, sample integrity, automation degree etc. All these areas are thought to be targeted more specifically in the education program and hopefully lead to a more updated version of a Danish medical biochemist.

In what direction do you see the laboratory medicine heading? What do you think for the position of the laboratory specialist to increase their visibility within the healthcare system? What challenges do you and your colleagues face?

AS we all know, the medical laboratory is being increasingly automated. It is therefore an important role for the laboratory specialist to understand these automation principles and to avoid the pitfalls that lies within such high degree of automation. Also, it is mandatory to find sub-specialties where collaboration and counseling of the clinicians is possible, e.g. hemostasis, allergies, endocrinology and drug testing. This is not only to maintain a clinical profile, but also to assure a fruitful contact with the clinicians, as they are our most important partners. I therefore find it necessary that laboratory medicine moves closer to the clinic, not only physically but also mentally – otherwise we risk being skilled lab technicians that merely assure the quality of our lab tests. An excellent example is POCT, where testing in primary care, nursing homes and recently at the patients' own home is growing rapidly: This will be a huge task for laboratory medicine in order to assure analysis quality, training, documentation of test results etc., and we must use this opportunity to make ourselves indispensable.

The major challenges we see now is that there are too many tasks and that the number of medical biochemists is at a steady state and not rising with the need for more specialists. It is therefore of the utmost importance that we recruit more medical doctors to the specialty – and in order to do so, we must be more visible and also more proud about our work: My impression is that we often are taken for granted and not are so good at promoting ourselves.

Do you think medical biochemistry professionals are ready for the emerging technologies such as Digitalization, Laboratory Diagnostic Algorithms, AI, ML, Integrative Diagnostics, Big Data? Do you believe in Partnership model for efficient integration and adoption of emerging technologies and innovations?

As already mentioned, I find that many of these tasks are necessary and actually already a part of our portfolio. But no, I don't think

that we are trained well enough to take these tasks upon us – which is why we are planning to upgrade the education. Regarding a partnership model, I think it is a necessity – but it is however important that we as medical biochemists “stay in the control center” and do not outsource responsibilities, decision-making or the opportunity to do research within these areas – I think that especially research is essential to move forward in the right direction at the right pace.





their own language. A final suggestion could be establishment of networks as I mentioned earlier we will try to facilitate in Denmark: If I should start something from scratch, it would be fantastic to find a network on EFLM's homepage with persons I could turn to, research I could address – and perhaps even laboratories I could visit.

Some Personal questions...

Please introduce yourself with a few sentences

I am leader of a biochemistry department at a University hospital in Odense, Denmark. I have for many years been heavily involved in hemostasis counselling and research, and for the last ten years also been involved in preanalytics (e.g. in the EFLM WG) and POCT testing.

In your professional career, you have served in many leading roles both in your country and internationally. What was your motivation?

My motivation has always been to raise the bar, personally as well as for the specialty. As a leader, you have far more possibilities to standardize and harmonize laboratory issues, and also to be a driving force in development and renewal. As president of our national society, this is however only possible due to the collaboration with a lot of hard-working, highly intelligent people – another thing I really like about my role.

Could you share your way in biochemistry? Why did you choose this field? What do you like about your current job? Do you think that you chose the right job for you? If you have another chance?

As many others, I started in research (on proteins in Alzheimer's disease) and ended up at the biochemistry laboratory. And I do think it is the right place, because it satisfies my need for continuous challenges, puzzles to solve, fellow clinicians to counsel - and who also can help me, when I need that. I do however still feel the need to reinvent myself on a regular basis: In the past 20 years, this has been first as a hemostasis expert, then a preanalytical expert, then more into POCT and general practitioners - and now as a laboratory leader. What will come next, I don't know – perhaps I will start all over again?

What would be your advice to young scientists who wish to pursue their career in laboratory medicine?

Find a sub-specialty, where you can be the expert. And be ready to find a new one later on. Also, always be willing to challenge the status quo – and if necessary to do the work yourself.

Do you have some hobbies? What are the things outside of your work that you are passionate about? How do you like to spend your free time?

My primary hobby is cultural stuff, i.e. books, movies, (all kinds of) music and history. The latter adds well to my other major hobby, which is historically well prepared travelling (which have always annoyed my family) and always to not-so-well-visited places, e.g. Albania, Greenland and Azerbaijan to mention a few.

Do you think your society members participate and/or contribute enough to EFLM activities? Do they know the advantages to be EFLM Academy membership, for example, the unique educational resource "Syllabus course", free attendance to the recently held 3rd EFLM Strategic Conference, its sessions were recorded and are available for one year?

As a society, we try to promote these activities, and I think that many of our members do know about the possibilities – but it is not all of them that uses those possibilities. In my opinion, this is primarily due to lack of time: There are so many new possibilities (and not only under the EFLM auspices), but as mentioned earlier, there are also many tasks to be fulfilled, and I think that many chooses to do the latter first – which I as a laboratory leader of course finds comforting. But on the other hand, it also limits our possibilities for developing the specialty, the national society and the international cooperation. I therefore see a need to more specifically address the necessity of balancing these activities – something I hope we can do this autumn.

What do you think about the ongoing and recent EFLM activities/initiatives? Do you have suggestions to increase communication and cooperation with EFLM? What you like and dislike about EFLM

I think that EFLM recently really has taken initiative in a number of areas, which is impressive and good – but as mentioned perhaps also a bit overwhelming. What I think is needed is more



communication with the national societies – not only in a yearly fashion, but at a more regular basis. A good start could perhaps be a basic introduction to EFLM – a kind of a tool box that tells you what EFLM is, how it helps and cooperates with the national societies, which initiatives that are currently going on – and how YOU as a single member can get better involved in these activities, courses and conferences. This could also be as a brief synthesis of what was achieved in the recent year – something that all national societies could bring in their national journal in



Coffee with Bernie Croal, President Elect of the Association for Clinical Biochemistry and Laboratory Medicine (ACB)

The Association for Clinical Biochemistry & Laboratory Medicine



Could you briefly introduce your society? When was it founded, who can become a member, activities of your society, what has been done so far and future activities, projects, plans?

The Association for Clinical Biochemistry and Laboratory Medicine (ACB) was formed in 1953,

when the application of chemical principles to the study of human disease – a concept with a long scientific pedigree – started to gain status in scientific medicine's armoury. We contributed to the development of Clinical Biochemistry as an established clinical and scientific discipline and continue this support via the personal contributions of our members, and through collective contributions to the establishment of high standards of education, training, and practice. We welcome medics and Clinical Scientists (all disciplines) from all major UK healthcare laboratories and individuals from academia and the commercial world involved in healthcare and Laboratory Medicine as members. The Federation of Clinical Scientists enables us to provide Trade Union

support for Clinical Scientists and doctors if they choose to join our union. Membership is open to all health professionals with an interest in Laboratory Medicine. We have fruitful links with the Clinical Diagnostics industry through our Corporate Members and industry partnerships programme.

We promote Laboratory Medicine to the wider community and support the practice of laboratory Medicine within Healthcare across the UK. Our members are involved with many aspects of patient pathways, from testing patient samples in a laboratory through to interpreting results, assisting with patient care, and monitoring. Many of our members have direct responsibilities for in-patients, out-patients and general hospital management. This includes in areas such as Lipids, nutrition, diabetes, bone metabolism and unborn errors. Our activities are co-ordinated by a dedicated team at our headquarters in central London, supported by full-time practising Clinical scientists and medics across the UK. These activities include:

- Scientific Meetings
- Training Courses
- Management and Leadership Courses
- National Audits
- Networking events
- Scientific Publishing
- Research Grants

The UK version of LabTestsOnline has been very successful with 3.75 million hits per year. In the coming year we are looking to relaunch its successor, at a time when its function is very much needed.

What are your suggestions for better education? Is the current education in your country fit for the purpose? Do you have a core curriculum for the training of medical biochemistry professionals?

Education curricula and training for Medics in Laboratory Medicine is organised by the Royal College of Pathologists (RCPATH) with input from ACB members. Training oversight is under the remit of the postgraduate Deaneries. Curricula and training for Clinical Scientists is also defined by RCPATH with training oversight from the National School of Healthcare Science.

We have recently begun developing our own online education content, called the Laboratory Medicine Learning Academy, which will also link with other UK online resources as well as those from Europe and North America.

In what direction do you see the laboratory medicine heading? What do you think for the position of the laboratory specialist to increase their visibility within the healthcare system? What challenges do you and your colleagues face?

Within the UK, healthcare has suffered very badly both because of the COVID-19 pandemic but also underlying capacity issues that had been growing for 10 years, especially around training enough workforce for the future. As a result, there are many millions of people on waiting lists for treatment. It is therefore more important than ever that Laboratory Medicine is used efficiently and appropriately, so that patient pathways are optimised. Working with clinical teams to ensure appropriate testing is adhered to is a major challenge within UK healthcare. Laboratory medicine specialists are increasingly becoming involved in direct patient facing services, such as out-patient clinics. These new roles are likely to expand in future years.

Do you think medical biochemistry professionals are ready for the emerging technologies such as Digitalization, Laboratory Diagnostic Algorithms, AI, ML, Integrative Diagnostics, Big Data? Do you believe in Partnership model for efficient integration and adoption of emerging technologies and innovations?

Digitalization, algorithms, big data opportunities, are all exciting areas of practice, however most laboratory systems across the world are limited in what they can do as a result of deficiencies in interoperability (ability to share data) and a lack of standardisation of nomenclature and coding. There are major developments in the UK to try to improve this situation, however lack of appropriate finances are limiting such projects. This will remain a major challenge going forwards but is very important for the future.

Do you think your society members participate and/or contribute enough to EFLM activities? Do they know the advantages to be EFLM Academy membership, for example, the unique educational resource "Syllabus course", free attendance to the recently held 3rd EFLM Strategic Conference, its sessions were recorded and are available for one year?

ACB members in the UK do not embrace EFLM or IFCC as much as we would like. We do however have many members populating a variety of important committees across EFLM and IFCC, including past presidents. Moving to sign up all members as EFLM Academy members will hopefully expand this collaboration with our European colleagues.



What do you think about the ongoing and recent EFLM activities/initiatives? Do you have suggestions to increase communication and cooperation with EFLM? What you like and dislike about EFLM.

The ACB has a particular interest in environmental sustainability and have just appointed some environment and sustainability champions to drive forward our activity in this area. Clearly the parallel developments in this field from within EFLM are very much welcomed and we look to closely collaborate on this.

Some Personal questions...

Please introduce yourself with a few sentences.

I am aged 54yrs and a medically trained Chemical Pathologist working both in Aberdeen, Scotland, and London. I am the current President of the ACB and have previously served as Vice-President of RCPATH, UK. My clinical area of expertise is based around intra-venous nutritional support.

In your professional career, you have served in many leading roles both in your country and internationally. What was your motivation?

Motivation to change practice for the better and improve healthcare outcomes.

Could you share your way in biochemistry? Why did you choose this field? What do you like about your current job? Do you think that you chose the right job for you? If you have another chance?

I chose a career in Clinical Biochemistry because it has allowed me to share an interest in both science and medicine – so laboratory work as well as direct clinical care with patients is important to me. It also provides a great quality of life with good work-life balance, again increasingly important to many of us.

What would be your advice to young scientists who wish to pursue their career in laboratory medicine?

Go for it! Its hard work at times but the rewards in terms of job satisfaction are worth it.

Do you have some hobbies? What are the things outside of your work that you are passionate about? How do you like to spend your free time?

Hobbies – I enjoy cycling and hillwalking but have not had much time recently to pursue this. I also enjoy long roads trips, usually across North America.



A multidisciplinary clinical nutrition team comprising of Biochemists, nurse specialists, pharmacists, dietitians and gastroenterologists. The team here are preparing for a ward round of patients



An ACB regional scientific meeting.



A UK LabTestsOnline stakeholder group



A typical laboratory in the UK



THE EFLM OFFICE INFORMS EFLM bursaries for EFLMLabX

Reported by Silvia Cattaneo, EFLM Office

The EFLM Executive Board is pleased to launch a further opportunity for EFLM Academy Members from EFLM National Societies: the EFLM bursaries for EFLMLabX!

Looking for a special training abroad but worried for the travel cost? Take advantage of an EFLM bursary!

Do not miss this special opportunity to get your training supported by EFLM! The bursary will cover travel, accommodation and a daily fee during the training up to Eur 1500.



6 EFLM bursaries are available! 2 of these specifically addressed to selected countries in the frame of the [EFLM Scholarship Programme in memory of Prof. Vic Blaton](#).

This opportunity is reserved to EFLM Academy Members (in order with the annual fee 2022) from an EFLM National Society. [Click here to know more about the EFLM Academy.](#)

Visit the EFLMLabX platform, search for your training and apply for an EFLM bursary!

To apply: fill in the form [click here to download it](#) and send it to eflm@eflm.eu within September 15, 2022

According to the EFLM Transparency Policy, all bursaries applicants' names, evaluation ranking and reasons for that ranking will be made available to every bursary applicant. [Click here to know more about the criteria of bursary selection](#)

What is EFLMLabX? EFLMLabX is the platform where you can search for training opportunities in Europe. EFLMLabX offers the possibility to search by country, institution, type of practice, period of time or methods among many institutes in Europe offering training opportunities specifically for EFLM. Agreements have been signed with institutions in: Belgium, Croatia, France, Germany, Netherlands, Poland, Portugal, Slovenia, Spain and UK. Know more about the EFLMLabX: listen at the interview to Evgenija Homsak, Chair of the EFLM Profession Committee.



Discover the EFLM Academy in the dedicated new leaflet!

Reported by Silvia Cattaneo, EFLM Office

The EFLM Academy is unique, exclusive web-based resource and communication platform through which EFLM aims to support the education, training and continuous professional development of laboratory medicine practitioners in Europe. The EFLM Academy aims to serve as an educational resource not only to Specialists in Laboratory Medicine, but also to all those interested in Laboratory Medicine.



The EFLM Academy was established to create a platform of Laboratory Medicine practitioners in Europe and to support the case for recognition of Specialists in Laboratory Medicine under the EU Commission Directive 2013/55/EU "The Recognition of Professional Qualifications" to reach the goal of the free professional migration across EU member states' borders.



Discover more in the EFLM Academy leaflet, such as:

- [WHY SHOULD YOU BECOME A MEMBER OF THE EFLM ACADEMY?](#)
- [WHAT IS EFLM ACADEMY?](#)
- [WHO IS ELIGIBLE TO BECOME A MEMBER?](#)
- [HOW TO BECOME A MEMBER?](#)
- [WHAT ARE THE BENEFITS OF THE ACADEMY?](#)
- [WHAT IS THE COST OF SUBSCRIPTION?](#)
- [EFLM ACADEMY VS. EUSPLM?](#)
- [HOW TO JOIN THE EUSPLM REGISTER?](#)

At the end of the leaflet a FAQ section is also available but if you do not find the answer to your question, the EFLM Office will be happy to assist you, write to: eflm@eflm.eu.



INTERVIEWS WITH SENIOR EFLM COLLEAGUES

Interview with Dr. Wim Huisman

Conducted by Florent Vanstapel, Chair of the EFLM Quality and Regulations Committee

In your professional career, you have served in many leading roles both in your country and internationally. What was your motivation?

I am convinced that laboratory medicine has an important role in health care. It should deliver consistent results, be patient focussed and available for consultancy about the results. The best way to assure this is not just being active in your hospital but as well in your professional organisation both nationally and if you are lucky as well internationally.

What was in it for you?

It is rewarding to work with colleagues from different countries. You will find out that most problems are internationally very similar and that together you can achieve more.

If you would need to name a role that was most rewarding to you, what would it be?

My most rewarding role was as chair in the quality management area. Because around 1990 in different countries like UK, France, The Netherlands but as well Australia activities were set up to formulate guidelines for quality management and starting accreditation, it was for the board of the Netherlands society the best moment to work together with other European countries in this area. First in the EC4 and FESC and later in the EFLM. Together we influenced strongly the first three editions of the ISO15189. We also had a role in the European Accreditation body. This was only possible by cooperating.

What were the greatest challenges during your EFLM engagement?

I have served in the predecessors of EFLM (EC4 and FESC) as member of the WG quality since around 1993 and as chair from 2002-2008. I was the chair of the EFLM quality working group from 2008-2013 and chair of the quality committee from 2014-2019. The challenges were to keep united the vision of the societies on quality management and the role of EA as the preferred accreditation body.

How do you see the future of EFLM?

The future of EFLM is to keep in close contact with the national societies and IFCC. Find out what are the most urgent needs and try to influence these together.



The EFLM functional units are composed of members voted by EFLM National societies, who come from different cultures, have different priorities, views and preferences. That is not the team you select, but you have to work with that team and manage all kinds of important projects, towards common European goals. Is it difficult to lead such a heterogeneous team? Could you describe your experience during your engagement?

Because the functional units have a specific role, the national societies nominate candidates with interest in that specific field. Although there are differences the common goal is rather obvious. Involving the members, if possible, in specific task groups makes it not too difficult to achieve your goals. Of course, some do more than others, but because they are representing their societies the results are more readily accepted.

Could you name some major achievements, milestones and future challenges in your field of expertise?

Internationally I focussed on all aspects of quality management. I already mentioned the work within ISO which resulted in ISO 15189 (quality management for medical laboratories) and ISO22367 (Risk management). Furthermore, we influenced the ISO guideline on POCT outside the medical laboratory. We were present in the EA Health Care committee and had some influence on the way accreditation was performed especially the flexible scope. We had some influence on the new IVD regulation of the EU. It is important to follow developments in ISO, CEN, EA and EU which relate to laboratory medicine. To discuss this in an early stage within the EFLM and to influence the direction it takes. In these aspects it is important to be in close contact with other European organisations of medical laboratory specialists.

Interview with Dr. Simone Zerah

Conducted by Snežana Jovičić, EFLM Executive Board Secretary

The effect of climate changes is more and more obvious. How do they relate to our profession? Is there something we should be concerned about? How can we as a profession contribute in that respect?

Part of quality management is just doing what is needed for the patient. Not doing as many tests as possible. Furthermore, it is important to be careful with waste.

How did you approach retirement? How do you like to spend your time?

Facing the obligatory age for retirement in my job in the hospital, I decided to become more active in the accreditation body in The Netherlands and to continue my activities within EFLM. This resulted in a more gradual decrease in activities.

For the end, as an expert and a senior colleague, what would be your advice to young individuals who wish to pursue their career in laboratory medicine? Is our education fit for the purpose? Is there something missing in our curriculum?

Find out what attracts you most in performing your job. For me was that the consultancy function. Setting up good cooperation with the medical staff, especially those related to your field of expertise. Take care that you stay ahead in knowledge by studying, visiting congresses and following PAOKC. You learn your job not just in your years as apprentice but mostly by performing your job.

To make sure that your job stays worthwhile become active in your hospital and society. Discussions and cooperation with others makes your job more interesting.

Find out if you are as well interested in management aspects of your laboratory. Not everyone has to become head of the laboratory.

Be aware that the curriculum is not the end of what you have to know. It is important for those who compose it to restrict to the essentials. What I have learned from my activities in relation with quality management that it is more difficult to leave out criteria than to add them. For that reason, the first EC4 publications was named "Essential Criteria for quality management".

In your professional career, you have served in many leading roles both in your country and internationally. What was your motivation?

To understand my motivation, we must begin with the little girl, born beneath a starry sky in Tunisia, in that town that was bathed in light, overwhelmed by that sun that Arthur Rimbaud described as a "home of tenderness and of life." My childhood was simple and full. I grew up amid jasmines, bougainvillea, and palms, on the vast beaches of fine sands scattered with shells coloured in a thousand shades of pink and

mother-of-pearl. But in this heavenly environment, it was unthinkable that a girl, no matter how brilliant, might continue her studies after High School, and even more unthinkable to follow a scientific discipline.

This is, alas, still the case in numerous countries where the oppression of women persists under inhuman conditions which continue to be intolerable despite the progress achieved. We must struggle to make the oppression of women disappear from our planet, as we have made smallpox disappear. So, my first motivation was to confront the heavy obstacle of social prejudice, an impassable mountain.

Firmly resolved to get a college education, I pursued my mission with a diplomacy worthy of a state department attaché, and undertook to overcome that steep mountain. One of my uncles furnished me with the rappelling ropes I would need for this scaling and helped me convince my parents and the rest of my family. After obtaining my baccalaureate, I started to have only one idea in mind: to go to Paris and France to be able to continue my studies. At the beginning of the fifties, in Tunisia, this was a heresy, a revolution. Do you think: a young girl from a "good family" leaving her native country and her family cocoon to go and venture into "lands of perdition".

To summarise my motivations, I can say that, like the little seagull, Jonathan Livingston, in the beautiful book by Richard Bach, I followed the credo: "Break through your limits, leap the barriers that constrain you, Mobilize your will, exercise freedom as your right, know what you want to be. Discover what you would like to do and do all you can possibly do to make it happen." " To fly at the speed of thought towards any possible place, you have to begin by being convinced that you have already arrived at your destination."

I arrived, at the age of 17, in Paris, the cultural heart of Europe, having, as my only baggage, one year's training in pharmacy that I was able to acquire after High School in Tunisia. I had however energy and hope and I was protected by the moral values of my educational heritage.

I did a lot of things during my studies: five years of pharmacy, four of specialization in biology and an internship in the hospitals of Paris. I obtained a degree in haematology, bacteriology, serology, andrology, medically assisted procreation and I took a diploma in radioelements at Saclay. I taught at the Faculty of Pharmacy in Paris. Medical biology, a new specialty that was starting to emerge, strongly marked and oriented my professional career.

At the same time, I participated at the highest level in several national, European and international organizations (unions, ministries, transversal organizations), bringing the best of myself: ISO/15189 standard, EC4 European Register of "Specialists in Laboratory Medicine", official European title of our profession.

At the time, there were no automatons, no computers, no automatic device. It seems





It is the specialty that underpins modern medicine's understanding of health and disease.

I have kept friendly relations with my colleagues from different countries. Like when children leave their parents to live their lives, the affective relationship remains.

When I got the European medal "The EFLM-Roche Award for Laboratory Medicine" in 2015, my whole professional family was present.



If you would need to name a role that was most rewarding to you, what would it be?

"A free will is offered to every man, said Maimonides." If chance creates our circumstances, we ourselves cut our own paths.

In 1983, I left for the United States to train in in vitro fertilization. There was no training in Europe yet. There was then only one center in the United States, in Norfolk in Virginia, 1st American center, after the center in London with Bob Edouards, (who had the Nobel Prize) where had been "conceived in vitro" Louise Brown, born in July 1978.

This American center accepted 2 students every 6 months; I was lucky to be accepted thanks to a friend (Professor Salat Baroux). This training, the experience acquired, the daily discovery of these new technologies have been a period that has counted in my life, both professionally and humanly. The exceptional cohesion of the team remains a living memory for me, especially since our friendly ties still exist.

On my return to France in 1985, I created one of the first private centers for Medical Assistance to Procreation in France, at the Clinique de la Dhuis in Bagnolet, a clinic that we had created and started with my husband. A particularly difficult adventure, but so rewarding.

In vitro fertilization has allowed a real change in society and has been a highlight of my career. Thanks to this technology, it is now accepted that infertility is not only the fact of the woman, it represents 30% of cases. The rest is due to male sterility or subfertility of the couple. Since then, the "couple" is taken care of. I remember the time when we first saw the woman who underwent all the examinations. We were able to see under the microscope, in real life, how the sperm must enter inside the oocyte so that fertilization can take place. We could speak of male sterility for men whose spermatozoa could not penetrate the oocyte. These men were able to become fathers, thanks to microinjection. Progress in Andrology has been very important at the same time. Then there was the freezing of the embryos,

unbelievable!... The progress of medical biology has been exponential: first "Technicon," first computer, and no software for laboratories. we had to get started: extended evenings, staying at work very late to deal with our many computer failures.

I had the chance to participate in this "revolution. very motivating," not so long ago...

What was in it for you?

I was passionate about the evolution of Biology and very motivated by the need to standardize training in Europe to obtain the free movement of professionals.

Remember that at the beginning, there were 6 countries in the European Union.

In France, I was in the Board of the Union of French Medical Biologists and I was appointed to represent the country, at EC4 which had just been formed. I very quickly understood the importance of standardizing in Europe this specialization which was to become fundamental.

Three professions were involved at the time and received training: Doctors, Pharmacists, and Scientists. This is the reason why we still have today this heterogeneity with 3 training possibilities: medicine (40%), chemistry (30%) and pharmacy (30%) with large national differences in relative percentages.

A very large number of tests and new technologies have emerged, supporting the assumption of an increasing role of the laboratory medicine. Laboratories have grown with the evolution of medical biology, which today has a vital role in diagnosis and monitoring in modern health systems. It is estimated that 70% of medical decisions ((prevention, diagnosis, treatment). depend on laboratory data, and it is vital to ensure acceptable quality of both professionals and laboratories,

I participated in this development and gave the laboratory, which I created in 1962 in Bagnolet (France), its impetus and reputation, gradually, until the creation of the first private Assisted Reproduction Center in France, after training in the United States.

I chaired several working groups at EC4 and EFLM and I participated to the discussions on the Directive on the recognition of professional qualifications and the drafting of the ISO 15189 Standard. This Standard, specific to medical biology laboratories, finally takes into account the fundamental pre-analytical and post-analytical phases. I was also an expert with ISO and CEN (International and European standardization organizations).

then of the oocytes. Sperm freezing already existed.

You were the Chair of the EFLM Professional Committee, member of the Working Group: Accreditation and ISO/CEN(WG-A/ISO), but your engagement at the European level is older than the EFLM. You were the member of the EC4 Foundation board and of the EC4 Register Commission (WG-EC4RC). Your term of office was from 2003 until 2013. Could you tell our young colleagues who are not familiar with the history of EFLM how did it all begin? How would you describe those early years of professional cooperation between the European countries?

In 1993, FESCC (The Forum of European Societies of Clinical Chemistry) was formally constituted at the EuroMedLab meeting in Nice on 25th April 1993. FESCC was recognized by IFCC as its Regional representative in Europe. FESCC was developed at the beginning by EU countries and was joined by non-EU European societies.

EC4, the European Communities Confederation of Clinical Chemistry and Laboratory Medicine was an autonomous group formed to co-ordinate the activities of national clinical chemistry societies affiliated to IFCC in the European Union (EU). There were 6 countries at that time: Germany, Belgium, France, Italy, Luxembourg and the Netherlands, which founded the EEC in 1957, at the origin of the European Union as we know it today. From six members, Europe increased to nine, ten, twelve and then fifteen at first.

In 1995, the European Union was constituted of 15 countries France, Germany, Italy, Belgium, Luxembourg, Netherlands, United Kingdom, Ireland, Denmark, Greece, Spain, Portugal, Sweden, Finland, Austria. These States are traditionally considered to be the older Member States of the European Union. EC4 included several very active working groups, including the EC4 Register committee set up in 1998, and opened to applicants in 1999. One of the main aims of the register was to establish a framework of mutual recognition of qualifications to assist free movement within the EU. It is now the EFLM Register for Specialist in Laboratory medicine.

In 2003, a Code of Conduct was adopted.

In 2004, 10 countries joined the EU: Poland, Czech Republic, Hungary, Slovakia, Slovenia, Latvia, Lithuania, Estonia, Malta and Cyprus. They were joined in 2007 by Romania and Bulgaria, then in 2013 by Croatia. Today, the European Union is made up of 27 Member States, representing around 450 million Europeans. Its area is 4.2 million km².

In 2005: The "Directive 2005/36/EC of the European Parliament and of the Council on the Recognition of Professional Qualifications" was adopted by the Council in June 6th 2005 and published in the Official Journal of the European Union (2005, volume 48 September 30th: L 255; 22). In the directive the profession of Specialist in Clinical Chemistry and Laboratory Medicine was defined as regulated for medically trained specialists in most countries), but there was no regulation for pharmacy or science-trained specialists. The directive introduced a system of Common Platforms for professions that have not been granted free movement.

A Common Platform had the aim to provide a simple and self-regulating system for mutual recognition of qualifications in a particular profession between EU countries. In the advice of the European Economic and Social Committee on the draft Directive, the EC4 Register based on the Syllabus, was named as one of three examples of common platforms (C 28 E/50 Official Journal of the European Union EN 6.2.2003)

The syllabus is a text that describes the minimum scientific content of teaching and the knowledge that any professional, candidate must possess. This program is currently applied in each country of the E.U. to lead to the title of Specialist in Laboratory Medicine. The syllabus is in line with the European requirements on professional qualifications.

The main points are knowledge, pre-analytical conditions, evaluation of results, interpretations (post-analytical phase), laboratory management, quality assurance. The syllabus is in perfect agreement with the ISO/EN 15189 standard, which is the only specific standard for the accreditation of medical biology laboratories and which makes it possible to meet the requirements of the 1st ANAES reference system and version 2 of the HAS for the certification of public or private health establishments. Each country provided a table of training and competency equivalence compared to the EC4 training scheme: In 2007: as many European countries joined EU, few countries remain in FESCC. An initiative at the General Assembly in Glasgow in 2005 proposed a merger of FESCC and EC4; Mike Hallworth and Rob Jansen for EC4 worked with FESCC to propose the merged organization: EFCC (European Federation of Clinical Chemistry). This was accepted at the General Assembly in Amsterdam in June 2007 at the Meeting held at EuroMedLab.

The Code of Conduct adopted in 2003 was revised and updated, particularly taking account of the guidelines of CEPLIS (the European Council of the Liberal Professions) of which EFCC was a member. The revised version was approved by the EC4 Register Commission and by the EFCC Executive Board in Paris on 6 November 2008.

At that time, we were in discussion with the European Commission trying to install a common platform for our profession. The Director General of CEPLIS, Professor Th. Koutroubas, obtained a meeting with the officer in charge at the European Commission. I represented the profession. I will never forget this meeting: we were received in a formal and official manner. We were put in a room. After a few minutes the officer in charge arrived with a secretary carrying a computer and a ledger and he said to us: "who are you? we searched, you are nowhere in our documents..."

It was obvious, we didn't have an official name, the same for everyone, we couldn't be a recognized profession.

With Janette Murray and Rita Horvath we have done what is necessary to have a name recognized by all countries by an official vote. "Specialist in laboratory medicine. (see article *Biochemia Medica* 2012;22(3):272-3). We needed a common name to have a clear identity which best describes the scope of the work we carry out for the patients.

A clear and easily understood name which reflects the level of education and training of a specialist in the medical laboratory, and hence eligibility to be on the EC4 Register, is therefore needed, whatever academic background and whether versatile or sub-specialised. The new name "European Federation of Laboratory Medicine) and abbreviation EFLM was adopted in 2012 (64% of the votes cast were in favour).

The essential role of medical laboratories in diagnosis and therapy and the broad spectrum of medical laboratory investigations make the consultant role of medical laboratory specialists increasingly important. Attaining and maintaining standards of quality for both professionals and laboratories, and continuity of laboratory data within and between laboratories are vital, EC4 then EFLM worked to attain this and ensure that laboratory medicine is practiced at an adequate level



throughout Europe, as is currently the case in most countries. For the development of the Common Platform, EC4 has produced two key documents and presented them to the European Commission.

You were the delegate of the profession at the European Commission and European Parliament, involved in discussions for the Directive 2005/36/EC on the recognition of professional qualifications and Regulation (EU). Almost twenty years later, the Common Training Framework still is not activated by the European Commission. Did you expect that the process would take so long?

EFLM and CEPLIS have jointly lobbied very hard in order for the article on the Common Training Frameworks (CTF) to be included in the Directive for the Mutual Recognition of Professional Qualifications (2013/55/UE). I was at the time representing EFLM, and I cannot forget the several meetings we had in Brussels with Adrien Bedossa, then President of CEPLIS, and Professor Koutroubas, the Director General of CEPLIS, in order to persuade Ms Bernadette Vergnaud, who was the European Parliament's Rapporteur on the Directive, that there was a need for a replacement of the article on the Platforms. Our small team has submitted an article proposal to her, and this became the basis for the current CTF article.

Once this was achieved, our task was, and I guess still is, to persuade the European Commission to consider our claim for a CTF despite the fact that:

a) we are not a profession strong in numbers and/or economic impact within the EU;

b) we do not have, as a profession, a great history of mobility
In order to change minds, I have begun, in my new capacity as Vice-President of CEPLIS and representative of EFLM, and of the French association of laboratory medicine, a series of meetings with Ms Sophie Weisswange, who was the European Commission's officer responsible for the application of CTFs within the Unit " Free Movement of Professionals", headed at the time by Mr. Frohn (DG GROW). In parallel of course I was multiplying my official contacts with other persons of influence within the Commission, and I was coordinating all the professions who were also interested in CTFs, through a Working Group of CEPLIS, which I was chairing, in order for our claim to reach its destination from many doors...

The outcome was at the end quite positive, since the Commission got very clear idea of the Specialists in Laboratory Medicine as the profession who has done the most elaborate preparatory work towards a CTF, including persuading already a couple of

Member States. Given the professions' importance for public health and safety, the relevant Officers assured us that the possibility of using it as a "pilot" was seriously considered. Unfortunately, things change in politics when there is a change of persons. The arrival of the Juncker Commission has set things back for us, since the new Commissioner for the Internal Market, Ms Elzbieta Bienkowska, had no interest in the professions, and this led to a considerable reduction of the staff in charge of professionals and the recognition of qualifications. We have of course continued to put pressure on DG GROW, and at the end we were again successful in persuading the Juncker Commission that a CTF for our profession could be achieved rather easily, since all the essential work, including the agreement of several Member States, was already done. Again, I must say that my position as Vice-president of CEPLIS was essential for this work.

As you know, at the end of 2020, the von der Leyen Commission took office, and almost immediately afterwards the pandemic began. It was only in the second half of 2021 that the Commission assumed its normal work, and then a new Unit was set up to deal with the professions. In this context all the Officers we were working with have changed. As I am writing these lines, restructuring is still ongoing, but through CEPLIS (of which I am still Vice-president representing the French association) we have managed to establish contacts with the new persons and we hope that we shall be soon again able to achieve progress in presenting a CTF and in achieving a clear recognition of our specificity.

In that context, I must underline the importance of benefiting from a voice that represents all the professions who are in need of a CTF. The European institutions have their own rhythms and lobbying is more efficient when collective. Now it is the time for all the representatives of our profession to work together for our goal and to build on the evidence of the central role we play as specialists in laboratory medicine in times of health-related crisis.

Did you expect that EFLM would grow this much and how do you see its future?

EFLM is the culmination of the evolution of the structuring of biology within a stabilized European Union. Its evolution is normal and should strengthen in the future. But, it would be necessary to preserve contacts with the Commission and the European parliament. CEPLIS, which is the organization which brings together all the liberal professions at European level could help. I have been for many years, and still currently Vice-president of CEPLIS. I agreed to stay 3 additional years, given my experience, with Jean-Philippe Brochet with whom I share the post and who will take over.

I think that the period is crucial: for the future, it seems important to me to propose a common training for future "Specialists in Laboratory medicine", whatever the basic training. We had started to work together, We published the inventory with Wytze P. Oosterhuis (Clin Chem Lab Med 2015; 53(1): 5-14) and organized the first joint conference.



and manage all kinds of important projects, towards common European goals. Is it difficult to lead such a heterogeneous team? Could you describe your experience in the EC4, Professional Committee and WG-Accreditation during your engagement?

It would be important to come back to this work for the future in the interest of the profession and what we must bring in the chain of care where our profession has taken a great place.

Laboratory medicine has a vital and increasing role in diagnosis and monitoring in modern health systems. It has been estimated that 70% of medical decisions depend on laboratory data. It is vital to ensure acceptable quality of both professionals and laboratories. It is the specialty that underpins modern medicine's understanding of health and disease. Its disciplines include clinical chemistry, immunology, haematology blood transfusion, microbiology, virology, serology, parasitology, reproductive medicine, molecular diagnostics, genetics.etc... Its contributions include screening for the early detection of disease, differential diagnosis, monitoring, management of patients, and their prognostic assessment. This contribution continues to grow through research and development, technological advances, and the increasing knowledge and skills base of its specialist practitioners.

In the future, the specialist in Laboratory medicine will have an increasing role, be a real partner to clinicians to improve patients' outcome.

The Equivalence of standards together with the expected knowledge, skills, and competencies for practicing at specialist level, form the backbone of a proposed Common Training Framework at European Level. We must imagine another solution for the future of new generations.

The EFLM functional units are composed of members voted by EFLM National societies, who come from different cultures, have different priorities, views and preferences. That is not the team you select, but you have to work with that team

When you have the responsibility to work with colleagues who come from different cultures, it is not an obstacle, but an opportunity. By analysing a problem from different aspects, by sharing our experiences and our points of view, we are more likely to come up with good solutions, with shared acceptance. Moreover, our projects had a common imperative: "European goals".

"If you want to do something concrete, if you want to do something real, you have to be able to get different people to work together." (Ronald Regan)

Both for the Professional Committee and for the WG – Accreditation, we had to create a new way of working for a new profession. As we have seen, this new profession was born from 3 existing professions. We managed to prepare a common CTF for the different EU countries. Hopefully the application difficulties, of an administrative nature, will soon be resolved.

As for accreditation, the pre and post analytical phases, which are fundamental, had never been taken into account. We have succeeded in integrating these principles into the texts (ISO/ CEN 15189 standard)

It was not difficult to lead heterogeneous teams: With all the members of the working groups, we formed motivated and united teams, aware of our responsibility, seeking consensus. The friendly bonds we had created allowed us to obtain results. "Friendship is the closest of kinships" (African proverb)

We do not progress alone: we need the help of others to grow, to fulfil ourselves, to reveal ourselves thanks to the potential brought by each one, like a stained glass window needs the sun to light up.



For the end, as an expert and a senior colleague, what would be your advice to young individuals who wish to pursue their career in laboratory medicine? Is our education fit for the purpose? Is there something missing in our curriculum?

As André Gide explained it, "The caterpillar that clings to an ideal of a caterpillar will never become a butterfly"

It is necessary to create things in thoughts, to have the will to overcome the difficulties, to know the history and to foresee the future. Life is a leap of obstacles that you have to be ready to overcome. Love your profession and give the most you can to your work, with pleasure. When you give, you receive a lot.

Keep also a strong relationship with your children, the quality is above the quantity of the time spent together. They shall feel that they can be in contact with you anytime.

Continuous education is indispensable to all professions, and in particular in the field of Laboratory medicine.

When I started this profession, no one could have imagined the importance it was going to take, and we had to adapt from 3 professions that existed, as we have seen.

Currently, it is necessary to seriously reconsider the formation. Apart from the evolution of science and medicine, the structure of the laboratories changes. We must strengthen the profession by unifying it. Even keeping, at the beginning, the 3 possibilities of initial training, it is necessary to shorten the beginning of the training, and then to have a common core with a common training, a single common curriculum which would lead to a single profession; this would strengthen it and lead to a single CTF acceptable to the European Commission. The preparation for this evolution already exists. All the documents that we had prepared go in this direction.

Young people must be aware of this in order to prepare for the future. They must know what has already been done in this direction. We love our profession, it brings us exceptional fulfilment with a relationship between colleagues that cannot be found anywhere else. We give a lot, but we receive so much more. The bonds created during work periods are friendly and lasting.



How did you approach retirement? How do you like to spend your time?

There are 4 stages in life, like 4 seasons in the year. I entered in the winter of my life with serenity. Like Raymond Aron, I think you have to live as if you should never die.

I stopped my daily work in the laboratory and all my activities at 80. 5 years before, I was doing part-time. I kept only two positions to continue to bring my experience to the office of the laboratory union in France and to CEPLIS.

Several friends who retired before me told me: "I don't know how I had time to work before". We do things at a different pace. I do what I love without counting the time,

I do about 20 minutes of gymnastics every day. I'm listening to music. I read, I spend time with my family: 5 grandchildren and 3 great-grandchildren. I also need social exchanges that open my mind and my heart. Our daughter lives in Caen, we often go to Normandy.

I am lucky to live in front of the Bois de Vincennes, (One of the 2 large woods at the ends of Paris). We take a long walk in the woods every day with my husband.

So long as you believe in something, as you have hopes, as long as you love, as long as you keep your eyes on the stars, you do not get old. It is necessary to live and to act as if we had eternity before us, to act in accordance with the first rule of Kant's categorical imperative: "Always act so that a maxim based on your action could become erected as a universal law." That is what I will continue doing.

I am proud that I have received the French Legion of Honor. It is an important recognition of the nation, and it calls for obligations with social activities. For example: the below picture was taken at the scholarship award ceremony on May 21, 2022 with school students from a private high school under contract (the Assumption in Bondy France) who benefited from a study trip to New York.



UPCOMING EFLM EVENTS



EFLM
EUROPEAN FEDERATION OF CLINICAL CHEMISTRY
AND LABORATORY MEDICINE

Under the auspices of **IFCC**
International Federation of Clinical Chemistry and Laboratory Medicine

3rd EFLM online Postgraduate course
HOW TO WRITE AND PUBLISH A GOOD SCIENTIFIC & PROFESSIONAL ARTICLE
26 October - 15 November 2022

The EFLM Postgraduate Courses, organized by EFLM Working Group on Congresses and Postgraduate Education (WG-CPE), aim to focus on attractive topics for young trainees, and specialists. These educational courses are generally organized on 1 or 2 days and the theme, programme and speakers are proposed by the WG-CPE. Due to current pandemic, EFLM is offering these courses on-line.

EDUCATIONAL GOALS

- to teach the basic tips in writing a good manuscript
- to define the importance to focus on the data and the best presentation of data
- to emphasise the value of abstract and title
- to prepare the paper for publication
- to focus on the ethical issues in publication and research
- to define the peer reviewing process
- to present some practical examples and the most common mistakes in practice

MZ EVENTS
ORGANISING SECRETARIAT
MZ Events s.r.l.
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E-mail: pub@izla.sirionigMZevents.it

WWW.LM4MS.ORG

LABORATORY MEDICINE FOR MOBILE SOCIETIES IN OUR AREA
2 - 5 OCTOBER 2022
Aquila - Atlantis Hotel, Heraklion, Crete, Greece

EFLM
EUROPEAN FEDERATION OF CLINICAL CHEMISTRY
AND LABORATORY MEDICINE

<https://lm4ms.gr/>
FREE REGISTRATION FOR STUDENTS

This conference aims to stimulate discussion between Laboratory Scientists and Clinicians who are in the front line in providing medical services to refugees and immigrants around the Mediterranean Area. This will help to evaluate precisely the health and medical needs of the mobile populations and to identify problems that arise in host countries and their populations in order to propose to Health Authorities the best solutions for laboratory testing and health screening in hot spots and camps.

LM4MS
SECOND AFCB - EFLM CONFERENCE
Co-organized with the 20th GSCC-CB annual Congress and XXIX BCLF annual meeting

UNDER THE AUSPICES OF: **IFCC**  **GIANFRANCO SPINICCI UNIVERSITY OF CRETE**



21-25 May

WORLDLAB · EUROMEDLAB ROMA 2023

<https://2023roma.org>

EFLM
EUROPEAN FEDERATION OF CLINICAL CHEMISTRY
AND LABORATORY MEDICINE

Deadline for abstract submission: 15 January 2023
Deadline for reduced registration fee: 31 March 2023

Welcome to
ROMA 2023
WORLDLAB - EUROMEDLAB
21-25 May 2023





VACANCIES IN THE EFLM FUNCTIONAL UNITS

Vacancies in the EFLM WG "Laboratory Medicine Credit Points"

Reported by Silvia Terragni, EFLM Office

The call for nominations of a new member for the EFLM Working Group "Laboratory Medicine Credit Points" (WG-LMCP) under the chairmanship of Prof. Sedef Yenice is still open. The WG-LMCP focuses on tasks that advance the profession, stimulate professional development and support the Continuing Professional Development (CPD) of Laboratory Medicine Specialists.

Specifically, we are calling for nominations of 1 Full Member position.

["Click here"](#) to know more about the requirements for the requested position and the evaluation's procedure.

Deadline to send nominations: 15 September 2022.

The term of office will be for 2 years starting immediately after appointment and ending on 31 December 2023. The position could be renewable for other two more terms if the work for the Group is deemed essential at that time. The work is mainly conducted by e-mail and teleconferencing, the WG usually meets once per year.

Procedure for applications: each EFLM Full National Society Member in good standing with the membership fee can submit one nomination using the form circulated to the National Society's representatives to be sent back to eflm@eflm.eu. A brief plan of the applicant's contribution to the aims and objectives of the relevant Working Group must be included in the form. Together with the application, a short CV should also be submitted underlining the qualifications and prior experience and publications in the relevant area. Candidates must be officially recommended by their National Society through a formal letter of support. Applicants who are not selected as full members may be eligible for corresponding membership provided there is no another corresponding member from the same country.

UPDATES ON EFLM PUBLICATIONS

Preanalytical quality improvement – an interdisciplinary journey

Cadamuro J, Baird G, Baumann G, Bolenius K, Cornes M, Ibarz M, Lewis T, Lima Oliveira G, Lippi G, Plebani M, Simundic AM, von Meyer A, on behalf of the European Federation for Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for Preanalytical Phase (WG-PRE) [Clin Chem Lab Med 2022 doi.org/10.1515/cclm-2022-0117](https://doi.org/10.1515/cclm-2022-0117)

Reported by Ales Kvasnicka, Member of the EFLM Communication Committee

Preanalytical quality improvement – an interdisciplinary journey

Opinion paper
Janne Cadamuro, et al. CCLM 2022
doi.org/10.1515/cclm-2022-0117

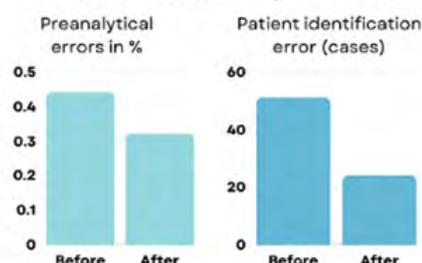


EFLM Preanalytical Phase Working Group (WG-PRE) efforts to increase preanalytical quality:

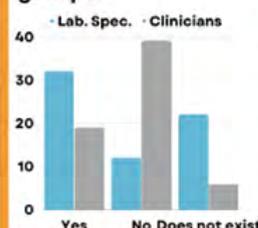
- **Resource for preanalytical standardization documents**
 - www.eflm.eu/site/pubsearch/WG-PRE
- **Educational activities**
 - Organizing conferences focusing solely on preanalytical topics.
- **Guidelines**
 - Development and endorsement of a dedicated checklist aimed at prevention of preanalytical diagnostic errors in clinical trials (PREDICT).

Pre-labelled barcode tubes + GeT-System

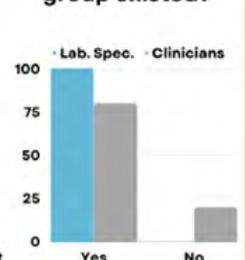
- Sample information in real-time linked to LIS
- Tested at General Hospital Steyr from 2016-2018



Do you participate in multidisciplinary groups?



Would you, if this group existed?



INFOGRAPHIC BY ALEŠ KVASNIČKA (EFLM C-C)

33rd Symposium of the Croatian Society of Medical Biochemistry and Laboratory Medicine

Reported by Vesna Šupak Smolčić, EuSpLM, President of the Organizing Committee



The 33rd Symposium of the Croatian Society of Medical Biochemistry and Laboratory Medicine (CSMBLM) entitled “Laboratory Diagnostics of Arterial Hypertension” was held on May 21, 2022, four days after the “World Hypertension Day”, which is celebrated on May 17. The symposium was held virtually via the Zoom platform. Eight speakers systematically addressed arterial hypertension from a laboratory perspective and highlighted the importance of laboratory diagnostics in arterial hypertension. Nina Poropat, MD, introduced arterial hypertension as a global health problem and emphasised the importance of the 2018 guidelines for the management of arterial hypertension issued by the European Society of Hypertension and the European Society of Cardiology, adapted by the Croatian Society of Arterial Hypertension and the Croatian Cardiology

Society. After the introduction from a clinical point of view, all participants had the opportunity to participate in an online quiz and test their knowledge on the correct measurement of arterial pressure. The quiz was entertaining and educational, as all questions were followed by an explanation prepared by Mihovil Horvat, M.Sc. in Medical Biochemistry. Vesna Šupak Smolčić, EuSpLM, pointed out the importance of laboratory diagnostics in the evaluation of patients with primary hypertension as a tool to identify comorbidities and hypertension-mediated target organ damage. Assist. Prof. Lorena Honović, EuSpLM, spoke about arterial hypertension and chronic kidney disease, starting with the “chicken or egg” causality dilemma associated with hypertension and chronic kidney disease. Pavica Šonjić, M.Sc. in Medical Biochemistry, spoke about hypertensive disorders in pregnancy and the urgent need for reliable biomarkers for early prediction of preeclampsia as one of the leading causes of maternal and perinatal morbidity and mortality. Lucija Franin, M.Sc. in Medical Biochemistry, reminded us about sodium balance regulation and the importance of timely detection of hyponatremia in patients on antihypertensive therapy. Maja Šimac, M.Sc. in Medical Biochemistry, pointed out the influence of antihypertensive drugs on laboratory results, as these drugs are widely used and there is a high probability that many patients coming to the laboratory are taking one of these drugs. Merica Aralica, EuSpLM, president of the symposium’s scientific committee, gave a presentation on screening for secondary hypertension, in which the laboratory plays an important role. The symposium was attended by 178 participants, 103 of whom took part in the quiz. Anyone interested can read the results of the quiz in the lecture presentations and abstracts in English, which are already available on the CSMBLM website. The review article on laboratory diagnostics of arterial hypertension will be published in the October issue of *Biochemia Medica*, the official journal of the CSMBLM. We thank all speakers and participants for attending this virtual event and hope that the next symposium will be held at a nice non-virtual venue.

NEWS FROM THE SPANISH SOCIETY OF LABORATORY MEDICINE (SEQC^{ML})

“The laboratory in the management of Acute Coronary Syndrome (ACS)”



The Spanish Society of Laboratory Medicine (SEQCML), on June 14, presented the course “The laboratory in the management of Acute Coronary Syndrome (ACS)”

It is necessary to unify clinical criteria for the interpretation of troponin as a biomarker of acute coronary syndrome

- Recently, great advances have been made in the diagnostic tools available for the diagnosis of ACS.
- The use of high-sensitivity cardiac troponin allows the diagnosis of non-ST-segment elevation myocardial infarction to be ruled out quickly and safely.
- Troponin has been a useful marker for risk stratification of the

COVID-19 patient.

- Various studies have shown the association between SARS-CoV-2 and the appearance of cardiovascular events once the acute phase of the disease has passed.
- The availability of markers such as troponin or natriuretic peptides can be very useful in the evaluation of patients with chest pain or dyspnea, which appear in a high percentage of patients with persistent COVID

Cardiovascular disease causes about 40% of deaths in Europe, most of it due to ischemic heart disease, a disease that is caused by an insufficient supply of blood to the myocardium due to the obstruction of the coronary arteries, generally due to atherosclerosis in the coronary arteries. Patients may have chronic (stable) or acute (unstable) disease. Acute coronary syndrome (ACS) encompasses the three most common acute clinical presentations: ST-segment elevation acute myocardial infarction (STEMI), non-ST-segment elevation myocardial infarction (NSTEMI), and unstable angina.

The Spanish Society of Laboratory Medicine (SEQCML), on June 14, presented the course “The laboratory in the management of Acute Coronary Syndrome” in order to address the importance of applying standardized criteria for the interpretation of troponin values, a cardiac biomarker, in clinical practice, as well as its value in assessing chest pain or dyspnea, very common in patients with



with highly sensitive methods.

He also added that “in order to make an early and accurate diagnosis, the clinical laboratory must have the appropriate immunoassays and be able to give the results quickly.”

Troponin and COVID-19

The disease caused by SARS-CoV-2 or COVID-19 infection was initially considered a respiratory pathology. However, it was soon confirmed that it was a pathology with multi-organ involvement. Thus, as explained by Dr. Luis García de Guadiana Romualdo, member of the SEQCML Commission on Biological Magnitudes related to Medical Emergencies, SARS-CoV-2 can interact with the cardiovascular system in multiple ways. One of them is the development of myocardial damage, “which can be reflected by an increase in the blood concentration of markers such as troponin.”

In his presentation, “What does troponin contribute to patients with COVID-19?”, Dr. García de Guadiana Romualdo addressed the role of troponin in risk stratification of COVID-19 patients during the acute phase of the disease. This role was evaluated in the BIOCOVID multicenter study, sponsored by the SEQCML and in which 32 Spanish hospitals participated, and which has recently been recognized by the European Society for Clinical Investigation (ESCI).

In addition, during the course the challenge that Laboratory Medicine faces as a specialty involved in the management of the post-COVID condition was highlighted.

Recent studies have shown the association between said infection and the appearance of cardiovascular events once the acute phase of the disease has passed. As Dr. García de Guadiana pointed out, “the availability of markers such as troponin or natriuretic peptides can be very useful in the evaluation of patients with chest pain or dyspnea, which appear in a high percentage of patients with persistent COVID, as included in the Clinical Guide for Patient Care “LONG COVID” in whose elaboration the SEQCML has participated. In this sense, Dr. Garcia de Guadiana pointed out the need for more studies to assess the usefulness of cardiac markers in the diagnosis and prediction of post-COVID cardiovascular disorders.

persistent COVID.

Recently, great advances have been made in the diagnostic tools available for the diagnosis of ACS. Firstly, due to the development of biomarkers, among them the determination of cardiac troponin with highly sensitive methods, noted by Doctor Aitor Alquézar Arbé, specialist in internal medicine of the Emergency Department of the Santa Creu i Sant Pau Hospital in Barcelona. But also, he added, it is necessary to highlight the great progress of recent years in diagnostic imaging techniques. In particular, coronary angiography by computerized tomography and cardiac magnetic resonance imaging. “In addition, at treatment level, new antiplatelet drugs have been created and vascular endoprostheses (stents) have been improved.”

Regarding troponin, according to Dr. Alquézar, it should be taken into account that it is cardiospecific, but it does not indicate the cause that produces the myocardial injury. Thus, during the SEQCML course, the different recommended diagnostic algorithms were reviewed, as well as their advantages and disadvantages.

According to the expert, “the use of high-sensitivity cardiac troponin not only enables an earlier and more accurate diagnosis of acute myocardial infarction without ST-segment elevation on the ECG (rule-in), but also allows it to be ruled out (rule -out) quickly and safely”. Dr. Alquézar stressed that the diagnosis of myocardial injury should be based on the determination of cardiac troponin

IFCC NEWS

Reported by Dr Katherina Psarra, IFCC eNews Editor



Dear Colleagues,

A vibrant colorful issue of the [eNews](#) has been prepared for you, full of energy, youthful, full of the future of the profession. The [reports by young colleagues](#) from all over the world are so enthusiastic and thankful. Promises to use the newly acquired knowledge and the new acquaintances caress our ears. We feel relaxed and confident for the future. IFCC guarantees the continuity of Laboratory Medicine all over the world. The Worldlab in Seoul was a big success. Everybody returned full of excitement, of memories, of new knowledge. Our President in [his message](#) is confirming the success and is inviting all IFCC officers and the representatives of the national societies to the General Conference next fall. In the meantime, go through the eNews to read the [interview to Prof Pillay](#) to celebrate 70 years of IFCC, or the enthusiastic [report on EFLM strategic](#) conference by EFLM president Prof Ozben. You will find interesting and inspiring the reports from the [Univants winners](#) about their successful team-work. With my best wishes for great break ahead!

Katherina Psarra, IFCC eNews Editor

Prof. Adeli, IFCC President’s Message

Greetings to you all in the IFCC family! I hope that everyone is having an enjoyable summer season. It was wonderful to see so many of you at the **WorldLab 2022** in June, which was hosted by the Korean Society of Clinical Chemistry (KSCC) and jointly held by IFCC and the Asia-Pacific Federation of Clinical Biochemistry (APFCB). More than 3,000 attendees, visitors, and exhibitors from countries around the world were able to participate, despite multiple challenges with the ongoing pandemic and obtaining visas to travel to Korea. As promised, the conference organizing committee delivered excellent scientific and social programs. This included the President and Speaker’s dinner, held just outside the lively city of Seoul, during which 10 Awards were presented in an IFCC Award Ceremony. I would like to express my sincere thanks to Prof. Won-Ki Min, Prof. Jehoon Lee, Prof. Junghan Song and Prof. Sail Chun of the KSCC, as well as Prof. Endang Hoyaranda and the APFCB Executive Board for supporting this successful scientific event.

IFCC FORUM for Young Scientists

The IFCC Young Scientists FORUM was held successfully on 25 and 26 June 2022, ahead of and in conjunction with the WorldLab Congress in Seoul, South Korea. Young Scientists (YSs) are the future of Laboratory Medicine. Constant evolution and dynamism are two adjectives that well describe our profession, Laboratory Medicine. Young Scientists are the Future Leaders, and they must have activities that encourage their participation, offer opportunities for training, and improve communication and networking. One of the objectives of the IFCC FORUM was to foster the creation of an opportunity to establish professional and scientific links/bridges among the YSs.

The Scientific Program was designed and prepared by the IFCC Task Force-Young Scientists to create a perfect environment for YSs to exchange experiences, to learn from other colleagues, to listen the ongoing TF-YS activities, opportunities, challenges and to improve networking. It provided the young scientists an excellent opportunity and open discussion platform to share their scientific, research and personal experiences, exchanging ideas with colleagues and establishing professional and scientific links, joint projects, exchange visits between laboratories and new acquaintances.

Calendar of EFLM events and events under EFLM auspices

Do not miss the opportunity to have your event listed here.

Apply for EFLM auspices! For more information visit [here](#) or email eflm@eflm.eu

Due to COVID-19 alert throughout the world, some upcoming events could have been cancelled or postponed, please direct check with the organizers if the date is confirmed.

12-14 September 2022

XXII Serbian Congress of Medical Biochemistry and Laboratory Medicine and 16th Belgrade Symposium for Balkan Region

Belgrade (SRB)

[Click here for information](#)

13 September 2022

EFLM Lessons in Immunochemistry - Lesson n. 3: Heart Failure and Natriuretic Peptides

on-line

[Click here for information](#)



19-20 September 2022

6th Slovenian Congress of Clinical Chemistry and Laboratory Medicine

Portorož (SI)

[Click here for information](#)

20-22 September 2022

Annual Meeting for Clinical Chemistry

Jonkoping (SW)

[Click here for information](#)

24-29 September 2022

XVI Baltic Congress in Laboratory Medicine

Tallinn (EE)

[Click here for information](#)

27 September 2022

EFLM Webinar: Basic Semen Examination – WHO recommendations and new European ISO standard

on-line

[Click here for information](#)



28 September - 1 October 2022

10th Congress of the Croatian Society of Medical Biochemistry and Laboratory Medicine with International Participation

Zabreb (HR)

[Click here for information](#)

30 September 2022

Cardiac Marker Dialogues

Glasgow (GB)

[Click here for information](#)

2-5 October 2022

2nd AFCB-EFLM Conference “Laboratory Medicine for Mobile Societies” jointly organized with the BCLF and GSCC-CB Annual Congresses

Crete (GR)

[Click here for information](#)



4-9 October 2022

FEBS Advanced Course: 360-degree Lysosome; from structure to genomics, from function to disease-update

Izmir (TR)

[Click here for information](#)

5-7 October 2022

5èmes Journées Francophones de Biologie Médicale (JFBM)

Saint Etienne (FR)

[Click here for information](#)

9-11 October 2022

XIV Congress of Slovak Society of Clinical Biochemistry

Demánovská Dolina (SK)

[Click here for information](#)

11 October 2022

EFLM Webinar: Challenges in POC testing

on-line

[Click here for information](#)



14-15 October 2022

44th Annual Conference of the Association of Clinical Biochemists in Ireland (ACBI 2022)

Cork (IE)

[Click here for information](#)

19-22 October 2022

20th PSLD National Congress

Kielce (PL)

[Click here for information](#)

25 October 2022

EFLM Webinar: Urinalysis

on-line

[Click here for information](#)





26 October - 15 November 2022



3rd EFLM Postgraduate Course: How to write and publish a good scientific & professional article on-line
[Click here for information](#)

26-30 October 2022

International Biochemistry Congress 2022 // 33th National Biochemistry Congress
Izmir (TR) [Click here for information](#)

8-9 November 2022

UKMedLab 22
London (GB)

[Click here for information](#)

18 November 2022

Annual Meeting of the RBSLM 2022
Brussels (BE) & hybrid meeting

[Click here for information](#)

22 November 2022

EFLM Webinar: Atherogenic lipoproteins: which, when, and how to quantify
on-line

[Click here for information](#)



24 November 2022

EFLM Lessons in Immunochemistry - Lesson n. 4: Androgen excess or deficiency: the role of testosterone and free testosterone
on-line

[Click here for information](#)



30 November 2022

14th CIRME International Scientific Meeting "Implementation of metrological traceability in laboratory medicine: where we are and what is missing"
Milan (IT) [Click here for information](#)

1-2 December 2022

JIB 2022
Paris (FR)

[Click here for information](#)

13 December 2022

EFLM Webinar: Artificial Intelligence in laboratory medicine
on-line

[Click here for information](#)



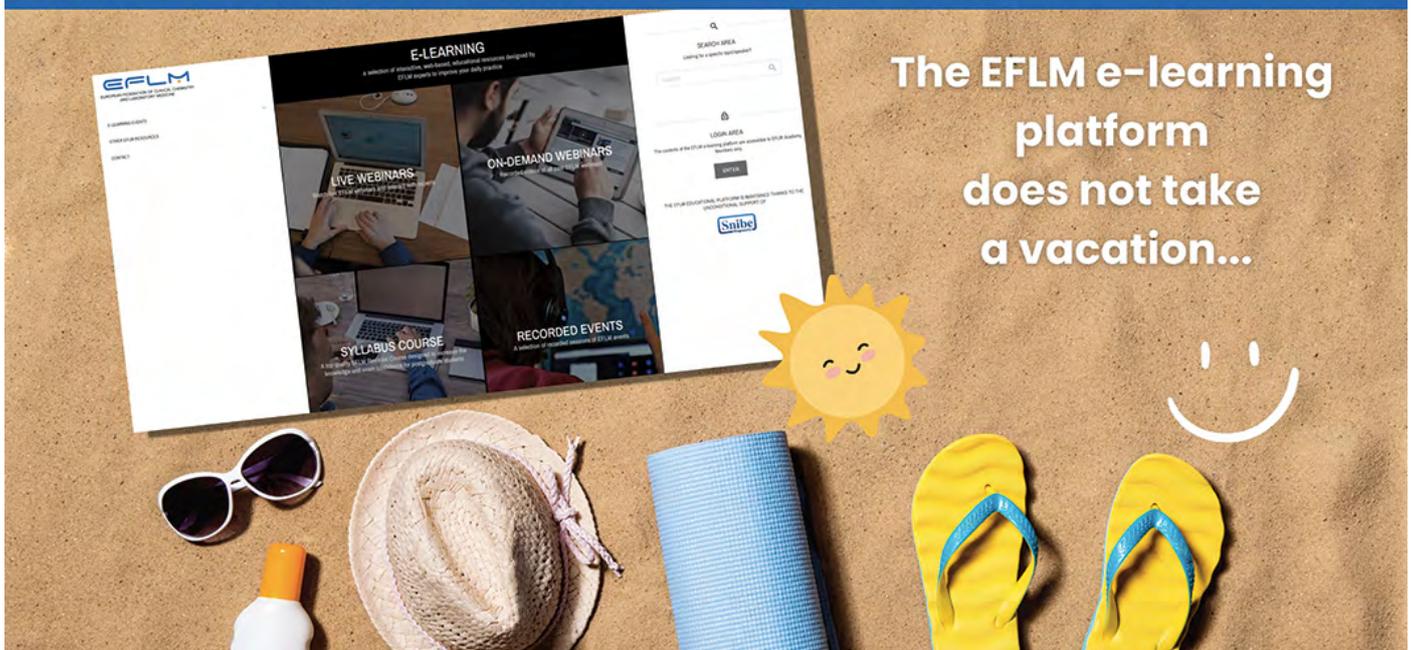
21-25 May 2023

EuroMedLab 2023 - 25th IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine
Rome (IT) [Click here for information](#)



A WONDERFUL SUMMER BREAK TO ALL OUR READERS!

The EFLM Office is closed from 8 to 19 August but...



The EFLM e-learning platform does not take a vacation...