

# EuroLabNews

THE EFLM BI-MONTHLY NEWSLETTER

## Happy Holiday Season

## Farewell note of the EFLM President



Dear colleagues, members, and friends, for me the role of EFLM, beyond all, has always been to serve its members and to listen to their needs and expectations. As I was preparing to take the role of the EFLM President in the winter of 2019, and when thinking about the things I want to accomplish as a President, it was clear to me that I need to hear your voice and understand what you need. And this is why I asked all EFLM National societies and each and every EFLM officer, including my Executive Board members,

to take some time to think about EFLM and share with me their thoughts about three key questions:

- 1) three things you like most about EFLM,
- 2) three things you dislike most about EFLM,
- 3) do you have some suggestions for improvements or for future EFLM plans, actions and/or activities?

The response to the survey was excellent and we have gathered a lot of valuable opinions and suggestions. The plan was to use the feedback collected through that survey to brainstorm, do a SWOT analysis and produce a 2-year action plan, during the first EB meeting which was supposed to take place in March 2020 in Wien.

As you all know very well, 2020 was the year of COVID-19 pandemic and this pandemic has made us change all our plans, both privately and professionally. Not only have we had to cancel all our face-to-face meetings for the entire 2020, but our priorities suddenly shifted from whatever it was until then, to the global race aimed to control and fight back the deadly virus.

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## Foreword

by Harjit Pal Bhattoa, Editor EFLM EuroLabNews



In our end of year EuroLabNews issue, the EFLM President Ana-Maria Simundic recaps her exemplary and quite eventful term in office touching upon the major milestones achieved. Luke B Hesson is the author of this issue's Hot Topic in Laboratory Medicine entitled The clinical utility of epigenetic testing in laboratory medicine. Tomris Ozben, EFLM President-Elect and the Chair of TF

Green Labs, proudly informs us about the task force established to implement sustainable practices in medical laboratories. Ana-Maria Simundic, EFLM President announces the launch of a new EFLM award, the EFLM Academy Award where the deadline for application is the 15<sup>th</sup> of December, 2021. Ana-Maria Simundic also presents the new EFLM e-learning platform, which has been given a substantial face lift to improve accessibility to various educational resources. Coffee with the President, another trademark of Ana-Maria Simundic, column runs its last 4 interviews with dedicated EFLM personalities. Silvia Cattaneo, from the EFLM Office, informs us about the candidates elected for the EFLM Executive Board. The office also announces the postponement of EuroMedLab 2021 in Munich, Germany to April 10-14, 2022. Tara Rolic, member of the EFLM WG Promotions and Publications, updates us on the most recent EFLM publications with their work groups' ingenious signature infographics. Past and on-going EFLM events have been summarized. Daria Pasalic, Chair EFLM Committee Education and Training and Eser Y. Sozmen, Chair EFLM Working Group Congresses and Postgraduate Education update us on the new EFLM Speakers' Bureau.

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The Czech Society of Clinical Biochemistry report on their latest activities. The IFCC corner presents the IFCC Presidents' Message along with other happenings at the IFCC. The Calendar of Events lists all major happenings in our field but please keep a close eye on the change in dates. As always, the dedicated EFLM Newsletter team has tried its best to keep the readership informed on all important events in the EFLM, and we wish our readers good health, a peaceful festive season and a Happy and Prosperous New Year. Last but not least, I would like to convey my personal gratitude, and thank all regular and corresponding members of the EFLM WG Promotions & Publications and Silvia Cattaneo from the EFLM office for all their heroic efforts in compiling the issues of EuroLabNews newsletter.

*Continued from Season's Greetings from the President of the EFLM*

This battle has consumed a great portion of our time and resources, leaving us very little for anything else. And so it took us almost one year to be able to take some time to focus on the results of the survey and shape the EFLM Action plan. The EFLM action plan for 2021 was designed with 30 specific actions points – each of them being a particular project/activity which addresses a particular issue/need identified in the survey and it was circulated to EFLM community in the beginning of 2021. As my term as EFLM President comes to an end by the end of this year, I'd like to take this opportunity to reflect on some of our key accomplishments and give you a progress report of these 30 actions shaped to address your needs and expectations. The great news is that the absolute majority (25/30; 83%) of these action points are either completed or are in progress and are to be completed some time soon in 2022. The summary is as follows:

- 23 action points - are fully completed
- 2 action points - in progress
- 4 action points - not done
- 1 action point - not relevant anymore

The full list of all planned projects and their status, as of December 2021 is in the table below.

Area	Action	Status	Notes
1 Educational events and resources	1 Establish a new course: Leadership skills	Completed	The on-line course was held during 13-23 September 2021. Course was well attended and was rated as an excellent event by majority of participants.
	2 Establish a new course: Diagnostic accuracy	Completed	Diagnostic accuracy is covered within the Syllabus course.
	3 Produce the structure/plan of the Syllabus course and deliver 1-2 modules	Completed	Syllabus course consists of 44 modules, covers the entire EFLM Syllabus and its official launch is planned for January 2022.
	4 Develop a Speaker's Bureau	Completed	The EFLM Speaker's Bureau is available at the EFLM website. It is a list of >100 outstanding speakers, current and former EFLM officers or colleagues indicated by EFLM National Societies according to their competence, accomplishments, and their commitment to education.
2 EFLM Academy	5 Organize meetings with NSs to promote their involvement in the EFLM Academy	Completed	During May and June 2021, small group meetings with EFLM National Societies and EFLM officers were organized, to present new benefits of the EFLM Academy, explain the enrollment procedure and understand possible challenges and obstacles of EFLM societies
3 Opportunities for better involvement of young scientists / colleagues	6 Establish Young Scientists TG	Completed	EFLM Task Group Young Scientists (TG-YS) was established to operate as a coordination framework that puts together young scientists, residents, all young professionals in laboratory medicine in Europe
	7 Launch a forum for discussion for Young Scientists (monthly forum, hosted by one EFLM Expert)	Not done	This task is still been discussed by the TG-YS and will hopefully be completed in 2022.
	8 Create a dedicated mailing list for Young Scientists	Completed	The list of EFLM Young scientists has been established and is growing.

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Area	Action	Status	Notes
4 Support for developing European countries (financial and educational support)	9 Establish scientific grants for scientific projects (each year 2 projects; 2500 EUR each; one for EFLM NSs and one particularly for Vic Blaton program)	Completed	The call for grant proposals is to be launched by 1 December with a deadline for applications by the end of January 2022.
	10 Provide free subscription to Clinical Chemistry - one recipient per each developing country	Completed	In June 2020 EFLM has established a Vic Blaton scholarship program for developing countries. The aim of this program is to provide financial and educational support for some less developed countries in Europe. One of the benefits for all countries in this program is to enjoy 5 free annual EFLM Academy registrations for Young Scientists ( $\leq 35y$ ) per country. The EFLM Academy membership includes free subscription to Clinical Chemistry among many other benefits.
5 Limited leadership periods of time	11 Establish a rule (in the EFLM Bylaws): no member may exercise more than 8 subsequent years in the EB	Completed	This rule has now been included in the revised Articles of Association (EFLM Statutes)
6 Lack of transparency, objectivity and/or feedback (surveys, selections for various EFLM roles, such as WG members, speakers at various meetings, EB elections, etc.)	12 Implement a limit to one EB member per country	Completed	In the revised version of the EFLM Procedure Manual circulated to EFLM National Societies in April 2021, this new rule has been implemented, under Chapter 4: EFLM Functional Units and Officers Positions; section "Country representation". The elections in 2021 for the Executive Board members for the term of office 2022-2023 have followed this rule.
	13 Establish a policy on geographic equality and inclusion: - Have objective and transparent criteria for all selections - An elaborated decision about new member selection shall be available, for each call - A set of predefined objective and transparent criteria for evaluating proposals for all calls for various vacant positions should be defined, elaborated, and made available with the calls, whenever possible	Completed	In the revised version of the EFLM Procedure Manual circulated to EFLM National Societies in April 2021, this new rule has been implemented, under Chapter 20: EFLM Transparency policy. All elections and nominations since then have followed this rule.
7 Difficult to understand EFLM procedures for new officers	14 Establish "EFLM intro day" for all EFLM WGs and Cs + NSs Ps and NRs (to present and inform all new and existing officers with EFLM rules and policies (President + Silvia)	Completed	The "EFLM intro day" has been organized on May 6 <sup>th</sup> , 2021. The event was well attended. It was the opportunity for all new and "old" EFLM officers to understand the mode of communication and operation within EFLM, as well as to learn about EFLM rules and policies.
8 Website – difficult to navigate	15 New website (better visibility of EFLM projects, easier to navigate)	In progress	The specification for the task has been created and currently offers are being collected from potential partners in various European countries. This activity will probably be completed in 2022.
9 Communication between EFLM functional units and between EFLM and NS	16 Establish e-communication platform (shared space for documents + on-line meetings) for all EFLM functional units	Not relevant anymore	Due to COVID-19 pandemic there has been a shift towards e-communication and online tools have become a common tool. We therefore do not consider this action point relevant.
	17 Have periodic on-line meetings with all EFLM officers + NSs Ps and NRs (to share success stories), possibly 2 times per year	Not done	This task has turned out to be a greater challenge than expected and has therefore unfortunately not been done. It remains for the next Executive Board to consider if and how this task may be completed.
	18 Have 1-2 extra meetings with C chairs per year to discuss matters of their interest (in addition to the one meeting at the end of each year)	Completed	EFLM has had 1 extra meeting with all Committee chairs in addition to the regular meeting at the end of each year. Additionally, some Committee chairs have been invited to attend a part of the EB meeting to discuss some particular points of interest. Finally, EFLM President has attended several meetings with most EFLM Committee chairs and various EFLM working groups to facilitate exchange of information between EFLM Executive Board and functional units and assist functional units and EFLM officers to fulfill their goals and projects
	19 Consult NSs to develop strategic and actions plans (formalize periodic consultation)	Completed	This has been done for the term of office 2020-2021. The plan is to maintain that as a mode of operation for all future Executive Boards.
	Send summary/feedback (with results) of EFLM surveys back to NSs who have participated	Completed	In the revised version of the EFLM Procedure Manual circulated to EFLM National Societies in April 2021, this new rule has been implemented, under Chapter 21: EFLM Surveys. The rule states that: "After the survey, the results of the survey and the accompanying analysis should be shared with survey participants within a reasonable timeframe, but not later than 2 months after the survey."

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Area	Action	Status	Notes
10 Lack of involvement of some NS	21 Reduced registration for EFLM officers at all EFLM meetings	Completed	EFLM officers are entitled to enjoy 50% reduction of the registration fee for all EFLM events and meetings.
	22 Establish the EFLM annual "Power list" – most successful EFLM stories/projects, candidates to be nominated by EFLM NSs and voted by a panel of independent judges or voted by Academy members. The winner, e.g. gets a free registration to the next EML, the rest receive Amazon gift card	Completed	The call has been launched and the selection of the candidates and the winner will be announced in the first issue of the EFLM Newsletter in 2022.
11 Limited cooperation with other Regional Federations and/or IFCC and/or other medical disciplines	23 Appoint EFLM 'Liaison Officers' with other European Clinical Societies and/or Regional Federations	Completed	EFLM has signed MoU and established collaboration with the following societies in 2020-2021: 1. American Association of Clinical Chemistry (AACC), 2. European Atherosclerosis Society (EAS), 3. European, Middle Eastern and African Society for Biopreservation and Biobanking (ESBB), 4. European Association of Nuclear Medicine (EANM), 5. European Renal Association (ERA-EDTA) – <i>currently being signed by both parties.</i>
12 Poor visibility of the Executive Board and WG projects to the EFLM NSs and to the public audience	24 Publish "caffè with the President" – short interviews with EFLM officers in the EFLM newsletter	Completed	A regular section "Coffee with the President" has been established in EFLM Newsletter. During 2021, twenty dear EFLM colleagues and officers have been guests at the Coffee with the President and have given the opportunity to wider EFLM community to get to know them better.
	25 Post annual WG reports on the Working Group site	Completed	Annual reports have been standardized to reflect the EFLM related activity of each functional unit and are available at the EFLM website under Downloads, under Official Documents – Annual Reports.
	26 Introduce Lab Day to celebrate Lab medicine - in collaboration with IFCC	In progress	EFLM has nominated an EFLM representative to the Global Lab Week IFCC Working Group. This working group will aim to organize the 1 <sup>st</sup> Global Lab Medicine Week in April 2022, in collaboration with all regional federations.
13 Inactive members and/or whole groups	27 Implement an efficient system of evaluation of outcomes/results and re-appointment	Not done	This task has unfortunately not been done. It remains for the next Executive Board to consider if and how this task may be completed.
14 Lack of IVD support for some EFLM projects	28 Develop a strategy for better IVD involvement in EFLM projects	Not done	This task has unfortunately not been done. It remains for the next Executive Board to consider if and how this task may be completed.
	29 Secure IVD support for some specific EFLM projects	Completed	EFLM has prepared an informative brochure with a number of sponsoring opportunities for IVD companies. The feedback was excellent, and many companies have agreed to support some EFLM projects and educational programs.
15 Limited attention to professionals at the end of his professional lives (talent retention)	30 Publish interviews with esteemed professionals at the end of their career - in the EFLM newsletter	Completed	A regular section "Interviews with past EFLM presidents and past EFLM officers" has been established in EFLM Newsletter. Our first guest in 2021 was prof. Mauro Panteghini, one of the Past EFLM Presidents, who has kindly agreed to share with us his thoughts about the EFLM, laboratory medicine as a profession and various milestones and challenges he has faced in his professional life.

We did all of it because you asked for it. Because we listened. Because we wanted to serve your needs. And all this would not be possible without many fantastic EFLM officers, big enthusiasts and volunteers devoted to build, grow, and promote laboratory medicine. My sincere thanks go to all of them who have contributed to the delivery of our plan, to all committees and working groups, to Mrs. Silvia Cattaneo from EFLM office, to my dear Executive board colleagues and to everyone else who joined us to make a difference and to grow the impact of laboratory medicine in Europe and beyond. The effort, commitment and hard work of all these great individuals was truly inspiring to me, and I feel honored and privileged to have had the opportunity to serve EFLM in the capacity of its President.

I now leave you in the capable hands of my successor, 2022-2023 EFLM President, Prof. Tomris Ozben, whose wisdom and leadership will undoubtedly lead our federation through new challenges and achievements.

Let me wish to all of you the happiest Christmas and Covid-free new year! May love, good health and happiness be with all of you.

*Yours, Ana-Maria Šimundić  
EFLM President (2020-2021)*

# The clinical utility of epigenetic testing in laboratory medicine

Reported by Luke B Hesson, Senior Genetics Scientist, Douglass Hanly Moir Pathology and University of New South Wales, Sydney, Australia



Epigenetic testing in pathology laboratories is rare and underutilised. In this Hot Topic, I'll describe some of the scenarios in which epigenetic testing may have clinical utility and consider some of the challenges that must be overcome for epigenetic testing to become more mainstream.

## What is epigenetics?

You may have heard the human genome being referred to as the book of life. If our genomes are the book of life then the epigenome represents the punctuation that format the text. Epigenetics tells the cell how to interpret our DNA, where to start reading, where to stop, where each word begins and ends and even when to read so that the appropriate sentence is read at the appropriate time. Extending this further, each sentence represents a gene and the linear order of sentences combine to form a chapter (chromosome). Typographical errors may be represented as misspelt words (sequence variants) or errors in punctuation (epigenetic differences). In either case, these may or may not change the meaning of a sentence (or the function of a gene) [1]. So, how does the cell punctuate our DNA? This is achieved through chemical tags that decorate our chromosomes and serve as signposts to instruct the cells what to read, or more accurately, what parts of the genome are readable [1]. Methylation of DNA, specifically 5-methylcytosine in the context of CpG dinucleotides, is the most well understood epigenetic mark. In the context of molecular diagnostics, DNA methylation is the only relevant analyte which is stable and for which there are readily available methods for detection.

## The clinical utility of epigenetic testing

Epigenetic variation can occur in somatic conditions such as cancer or in the germline, and is associated with the development of many diseases. Evidence-based clinical practice guidelines in oncology, such as those from the National Comprehensive Cancer Network (NCCN) [2] or eviQ [3], refer to the testing of tumour tissue for presence of promoter methylation at several genes. These can help guide treatment decisions, assist in diagnosis or identify patients that may benefit from further molecular testing. Examples include the testing of MGMT in gliomas to identify patients who may respond more favourably to temozolomide chemotherapy. As such, MGMT promoter methylation is considered in the molecular diagnostics of all grade 3 and 4 gliomas. TERT promoter methylation or genome-wide profiling of CpG methylation patterns alongside the presence or absence of other molecular features can assist in the classification of glioma subtype, particularly those with equivocal histology. In colon cancer, the presence of BRAF V600E mutation and/or MLH1 promoter methylation is consistent sporadic cancer, whereas absence of BRAF V600E mutation and DNA mismatch repair deficiency may indicate Lynch syndrome and prompt the testing of DNA mismatch repair genes for germline variants. The presence of methylated sequences in plasma cell free DNA also has numerous clinical applications ranging from the early detection of cancer [4] to transplant rejection [5].

In addition to somatic methylation changes, some diseases can be caused by constitutional epimutations. The term epimutation describes the epigenetic (transcriptional) silencing

of a gene that is normally active, or conversely, the expression of a gene that is normally inactive. Constitutional epimutations occur throughout normal tissues [6]. Table 1 lists conditions for which constitutional epimutations are a cause. Though individually rare, collectively they may be a common mechanism of disease predisposition. Consequently, they should be considered in cases in which there is strong clinical evidence for a particular diagnosis and in which no genetic cause can be identified, particularly where loss of function of a particular gene is inferred. This is the case in Lynch syndrome, several imprinting disorders and hereditary breast and ovarian cancer. Importantly, in most cases where these conditions were caused by constitutional epimutations, molecular diagnosis could only be achieved following epigenetic testing, which can have implications for reflex testing in family members.

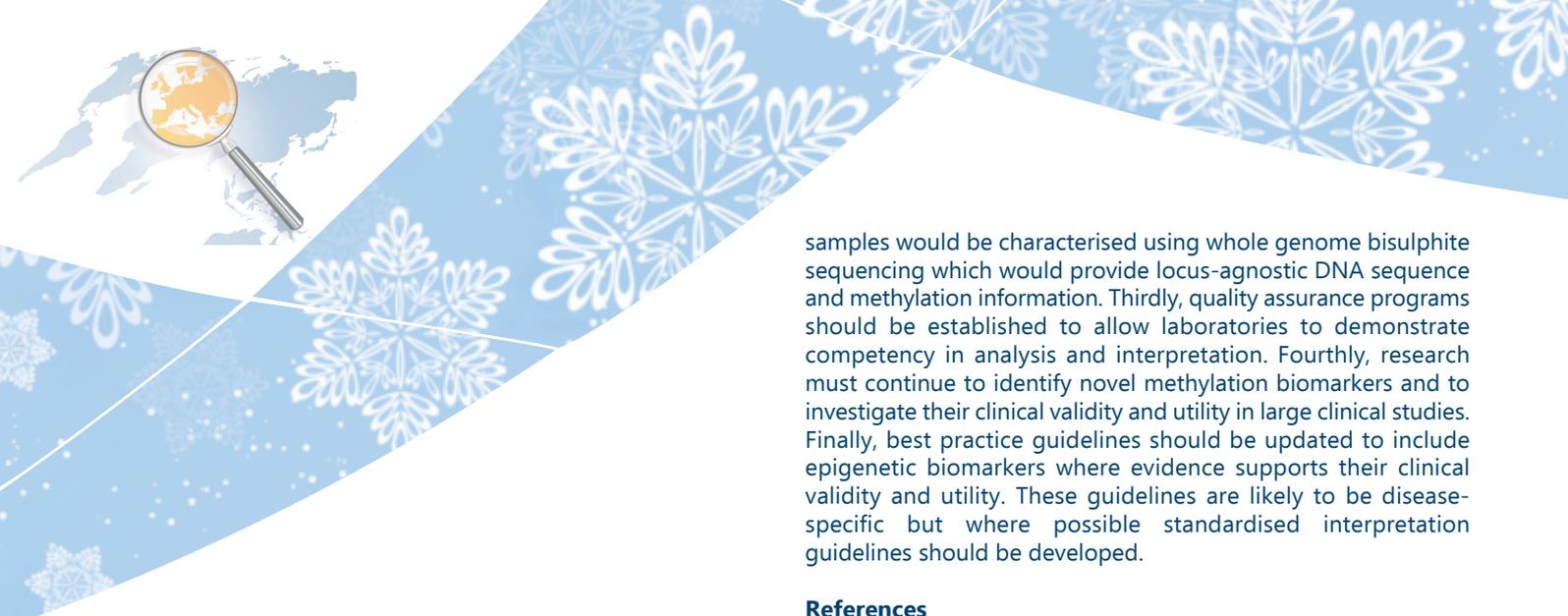
Recent studies have shown that constitutional epigenetic variation between individuals may be much more pervasive than previously appreciated [7;8]. This variation occurs at the promoters of hundreds of genes relevant to a wide range of inherited diseases including autism, schizophrenia, congenital disorders and cancer predisposition. These studies also show that genetic and epigenetic testing can be complementary. For example, local and genome-wide DNA methylation profiles known as episignatures can be associated with specific genetic variants in epigenetic modulators, for example [9-11]. Epigenetic testing can therefore assist in assessment of the functional consequences of DNA sequence variants. This is particularly important in the classification of genetic variants of uncertain significance when other evidence for pathogenicity is lacking. Such testing is currently offered by only specialised laboratories [11].

## The challenges of epigenetic testing

Technical. Several methodologies allow testing of DNA methylation differences. These include methylation-specific PCR, methylation-specific high-resolution melting, pyrosequencing, droplet digital PCR, methylation-specific multiplex ligation dependent probe amplification, microarrays and bisulphite sequencing. However, they require highly specialised expertise to develop and clinically validate. When interpreting the functional consequences of the presence or absence of DNA methylation, context is everything. A deep understanding of the precise regions to be tested and expected normal levels of methylation are necessary. For example, hypermethylation of a promoter region usually correlates with transcriptional silencing of the linked gene. However, hypermethylation at some regions may correlate with transcriptional activation and gene expression. In some contexts, allele-specific methylation information may be required, which relies on methods that are capable of detecting both DNA sequence variants and methylation levels.

Another technical issue relates to the level of methylation that is clinically meaningful. Most methylation assays interrogate multiple CpG sites. Is methylation at only one site meaningful? What level of methylation is meaningful – 5% or 50%? These issues are exacerbated when patterns or signatures of methylation across multiple genes are investigated. Answers to these questions are often dependent on the gene(s) tested and clinical indications. Though guidelines have been developed for the interpretation of DNA methylation changes at specific loci and in specific clinical contexts these cover relatively few genes. As a result, the interpretation of test results can be challenging. Biological. Testing for constitutional epimutations is complicated by three factors.

1. Non-Mendelian inheritance. Constitutional epimutations associated with a genetic variant in cis usually segregate faithfully with the genetic variant and show Mendelian inheritance. However, those not associated with a genetic variant in cis may or may not be reversed in the germline of the



samples would be characterised using whole genome bisulphite sequencing which would provide locus-agnostic DNA sequence and methylation information. Thirdly, quality assurance programs should be established to allow laboratories to demonstrate competency in analysis and interpretation. Fourthly, research must continue to identify novel methylation biomarkers and to investigate their clinical validity and utility in large clinical studies. Finally, best practice guidelines should be updated to include epigenetic biomarkers where evidence supports their clinical validity and utility. These guidelines are likely to be disease-specific but where possible standardised interpretation guidelines should be developed.

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**Table 1. Examples of constitutional epimutations that cause genetic conditions.** See reference [1].

Condition	Gene(s)
Lynch syndrome	<i>MLH1, MSH2</i>
Hereditary breast and ovarian cancer	<i>BRCA1</i>
Beckwith Wiedemann syndrome	<i>IGF2 (+/+)</i>
Silver Russell syndrome	<i>IGF2 (-/-)</i>
Angelman syndrome	<i>UBE3A</i>
Prader-Willi syndrome	<i>SNRPN, NDN</i>
B-cell chronic lymphocytic leukaemia	<i>DAPK1</i>
Alpha thalassaemia	<i>HBA2</i>
Fascioscapulohumeral muscular dystrophy	<i>DUX4 (D4Z4 repeat array)</i>
Developmental delay	<i>XIST</i>
Fragile X syndrome	<i>FMR1</i>

affected individual, resulting in non-Mendelian inheritance patterns. This adds a layer of complexity to data interpretation, reporting and genetic counselling.

2. Specimen types. Genetic testing requires a single specimen type, which is usually peripheral blood or buccal swabs. However, one of the criteria for identifying a constitutional epimutation is demonstrating its presence in multiple germ layers of an individual [12]. As a result, specimens from peripheral blood, buccal swabs, hair follicles or skin biopsies may be required. Collection of these specimen types is atypical in most pathology settings and may not be practically possible.

3. Mosaicism. The term mosaicism is used in genetics to describe genetic differences between cells of the same individual. Constitutional epimutations can show mosaicism throughout the normal cells of an individual and this has implications for disease risk and inheritance patterns. For example, in 1-3 % of cases of Lynch syndrome MSH2 epimutations can be caused by deletions encompassing the transcription termination signal of the upstream EPCAM gene. In these cases, there is variability in the levels of MSH2 methylation between different tissues, attributable to the expression levels of EPCAM. The highest levels of MSH2 methylation are found in colonic epithelium, in which EPCAM is highly expressed, and this explains the predisposition to colon cancer in these patients [13]. In another example of the importance of mosaicism, an individual with early-onset colon cancer caused by an MLH1 epimutation inherited this epimutation from his asymptomatic mosaic mother [14].

## Next steps

Considering all of the above, the non-expert could be forgiven for reaching the conclusion that epigenetic testing presents insurmountable challenges, however, this is not the case. Though the design and interpretation of epigenetic tests can be complex, they can be invaluable for clinicians, patients, and their families in identifying the cause of disease and subsequent treatment and management.

A future in which epigenetic testing is more broadly available and utilised in molecular diagnostics will require development in a number of key areas. Firstly, development of publicly accessible databases that define normal levels of epigenetic variation will be required. These resources would be synonymous with DNA sequence variation databases and would help in defining thresholds for abnormal presence or levels of methylation. However, in addition to potential differences in methylation at the population level such databases will need to be specific to cell-type, tissue-type or developmental stage. Secondly, the development of biorepositories for reference samples that is well-characterised for DNA methylation levels would provide a source of material for test development and validation. Ideally, these reference

## The new EFLM Task Force: Green Labs

Reported by Tomris Ozben, Chair, EFLM TF-Green Labs; EFLM President-Elect

EFLM is proud to inform the establishment of the **"EFLM TASK FORCE - GREEN LABS"** aimed to **implement sustainable practices in medical laboratories.**

The aim is to transform clinical laboratories into a safe and sustainable spaces by decreasing their deleterious environmental impact and implementing efficient actions in laboratories, and taking steps to minimize energy, water, and hazardous chemical use, as well as waste generation without compromising the quality of healthcare.

EFLM will lead the laboratory medicine community for the shift to carbon neutrality in line with the European Green Deal (EGD) Investment Plan, also known as the Sustainable Europe Investment Plan, which is aimed at making Europe the world's first climate-neutral continent by 2050. Becoming the world's first climate-neutral bloc by 2050 is a great challenge but also a great opportunity.

Good collaboration among the European Union (EU) healthcare systems and a common vision for future actions would help to achieve such goals. The effectiveness of the EGD depends on the involvement of all EU stakeholders. The European Commission in line with the Paris Agreement for climate has already taken some initiatives, developed and distributed a high-quality Guide entitled "Energy intelligent, energy Europe; towards zero carbon hospitals with renewable energy systems" in Europe by providing them suitable tools to achieve greater sustainability. [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_20\\_24](https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24)

**Laboratory medicine should contribute to a sustainable healthcare system and environment-friendly laboratories ensuring that resources are used efficiently from ecological, social, and economical perspectives, while providing high-quality services to patients and physicians.**

Sustainability measures should be a key feature in the rapidly changing healthcare environment. It will be a challenge for clinical laboratories to achieve sustainable operations to reduce their negative impacts on the environment and economy. Clinical laboratories use more energy and water than offices, generate huge amounts of hazardous and non-hazardous wastes. Labs are large consumers of energy and thereby contribute to the largest percentage of carbon emissions. Due to their relatively high energy requirements, hospitals and laboratories must strive to achieve the long-term CO<sub>2</sub>-reduction targets set by the European Commission. Incorporating sustainable practices into daily lab routine will go towards saving energy, reducing emissions, and helping the European Green Deal (EGD) to reach its Climate and Sustainability Action Plan.

Clinical laboratories can limit their environmental impact and provide sustainable laboratory services making reductions in four key areas-energy consumption, water consumption, waste production, and use of hazardous chemicals. Establishing sustainable development goals and applying multiple means for reductions in these key areas, hospitals and clinical laboratories can reduce their environmental impact.

**The EFLM Executive Board decided that EFLM should lead the way in implementing sustainable clinical laboratory practices in Europe and for this reason a new Task Force has been created: the EFLM Task Force "Green Labs".**

The initial task of this new EFLM Task Force will be to create guidelines, criteria, and key recommendations for sustainable practices in clinical laboratories (a Green Lab Guide) and then to implement a system to guide Medical Laboratories towards the transition to Green Labs and then to monitor the status of Green Labs along the years by issuing an annual EFLM Certification for Green Labs.



## A new EFLM Award: the EFLM Academy Award

Reported by Ana-Maria Simundic, EFLM President



The EFLM Executive Board has the pleasure to announce a new Award exclusively addressed to EFLM Academy Members. The EFLM Academy award has been created to promote excellence and honor extraordinary individuals who have made substantial contribution to the education in Laboratory Medicine in Europe. The award aims to encourage educational activities and recognize the value and importance of education for EFLM. The award is granted annually to the author of the most distinguished educational activity or a project in the past 5 years. Eligible are various high quality educational materials, like educational papers, handbooks, books or book chapters, online educational resources, educational courses and workshops. EFLM values inclusiveness and accessibility through removing barriers and sharing resources in education. Therefore, although consideration will be given both to National and European projects, the preference will be given to the most outstanding European projects aimed to a wide international audience.

The award will be given on occasion of the EuroMedLab Congress 2023 in Rome.

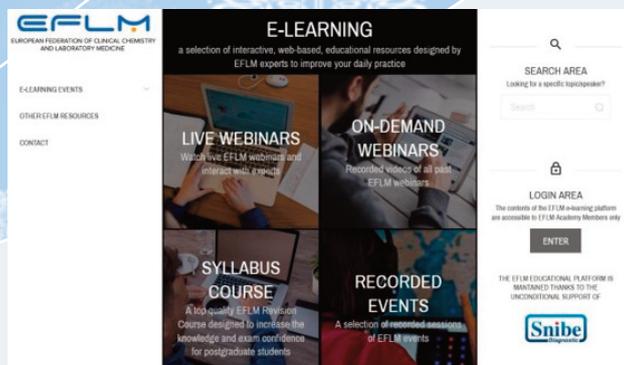
The award winner will receive a trophy and a certificate. As a token of appreciation, the winner will also receive the free registration, travel and accommodation for the EuroMedLab Congress where the award will be presented.

Applications and supporting documents must be written in English and submitted electronically to [eflm@eflm.eu](mailto:eflm@eflm.eu) within 15 December 2021. [Click here to download the award leaflet with the entry criteria and submission details.](#)



# The new EFLM e-learning platform in a click!

Reported by Ana-Maria Simundic, EFLM President



To offer better user experience and easy access to various educational opportunities to EFLM Academy Members, the EFLM Executive Board has decided to create a more user-friendly e-learning platform.

This platform offers access to live EFLM webinars, EFLM webinars on-demand, the new EFLM Syllabus Course (available in January 2022) and a selected collection of the recordings of some past EFLM events.

The EFLM Working Group "Distance Education and e-learning", chaired by Prof. Darko Cerne, will continue focusing the activities on new interesting EFLM webinars with highly qualified speakers and experts in various fields of Laboratory Medicine. A very rich calendar with monthly live EFLM webinars awaits Academy Members in 2022.

The EFLM Task Group "EFLM Syllabus Course", chaired by Prof. Ana-Maria Simundic, is working hard on the finalization of the EFLM Syllabus Course to be launched in January 2022: 44 modules with

more than 350 speakers: an amazing educational resource that encompasses the entire curriculum of Laboratory Medicine!

[Click here](#) to know more about the Syllabus Course.

We hope you will enjoy using this new platform!

A dedicated account ([eflm-elearning@mzcongressi.com](mailto:eflm-elearning@mzcongressi.com)) is available for any technical assistance's request. EFLM Academy Members can log-in automatically through the link in the personal Academy area.

NOT YET AN ACADEMY MEMBER? Do not hesitate any longer: join the EFLM Academy! Academy membership validity is for a calendar year. [Click here for information](#)

## COFFEE WITH THE EFLM PRESIDENT



Dear colleagues, it was a great pleasure to be a part of this wonderful project! In this issue of the EuroLabNews I present you the last four interviews during my Presidency - interviews with four EFLM officers: Ebru Sezer, Sedef Yanice, Janne Cadamuro and Klaus Kohse.

I am sure that this wonderful activity will continue and be facilitated by extraordinary people who enrich EFLM in every possible way. Therefore, these interviews are an excellent opportunity to acknowledge their unflinching and genuine efforts, to get to know them in professional and personal style.

I hope you enjoy these interviews and I invite you to listen to our podcast [here](#).

Ana-Maria Šimundić  
EFLM President



### Coffee with Ebru Sezer



**When did you join EFLM? What is your current role in EFLM? What are the activities of the functional unit in which you work?**

Turkish Biochemical Society is a full member of EFLM, and I was privileged to work as the treasurer and secretary of the Society's - İzmir Branch. I had the opportunity to follow all the EFLM activities closely and I tried to participate as much as I could since 2013. It was great challenge to work in the Scientific Committee of the 5<sup>th</sup> EFLM-UEMS European Joint Congress in Laboratory Medicine held in Turkey in 2018. Since 2019, I have been a corresponding member of WG-Biological Variation and the Biological Variation Database Task Group. Inspired by the WG we have conducted a survey in Turkey about the utilization of biological variation data in the interpretation of laboratory test results and published it this year. I believe thoroughly understanding of the BV studies with the widespread visibility and use of the BV Database will create an

evolution in the interpretation of the diseases and their management in the near future. It's great to be in the WG-BV with a lot of inspiring colleagues and contemporary pioneers of laboratory medicine. While on the subject, I would like to congratulate 3 members of our WG, S. Sandberg, A. Coşkun and J. Diaz Garzon and other esteemed award recipients who have been rewarded by EFLM Awards 2021 recently.

### What do you like most about EFLM?

First of all I think that EFLM has a warm and friendly atmosphere despite all the critical and analytical work done here for the quality and sustainability of our profession. I think that promoting the harmonization in post-graduate education and communication with national societies is very important to ease young laboratory specialists to gain new perspectives about the management and routine practice of their laboratories. My first contact with international societies related to laboratory medicine in Europe was when I received a travel grant for the EuroMedLab-2005 in Glasgow. So, I myself have experienced the encouraging support of international societies as a young medical laboratory specialist and I know how important that is. This year, just like a tradition which runs in the family, my PhD student will be able to participate the EuroMedLab 2021 in Munich with the contribution of the EFLM bursary too.

## How do you see EFLM in 10 years from today?

I believe that EFLM will manage to emphasize the importance and enhance the visibility of our profession by increasing collaboration with other disciplines. With the rapidly improving communication technologies, EFLM's educational support would reach a wider number of people with the courses, webinars and potential guidelines.

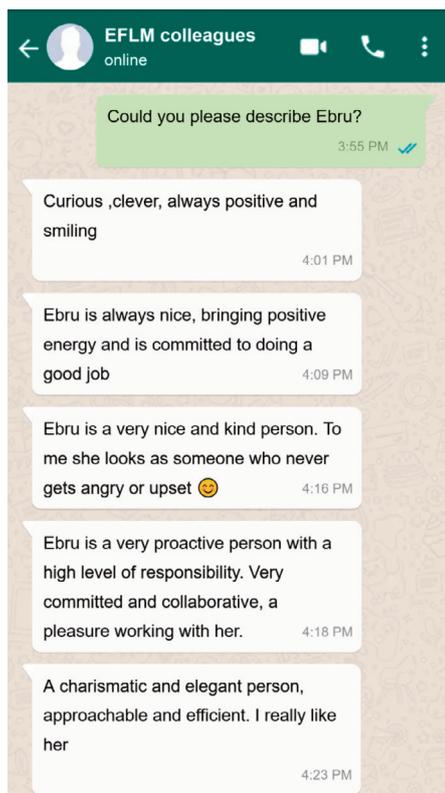
EFLM would accelerate its proactive and essential role as a reference resource for quality standards and in implementation of quality indicators for all phases of the testing process.

## What do you like about your current job?

I believe that in laboratory medicine, you kind of have to melt and blend the knowledge of medical biochemistry, a touch of mathematic skills, a bit of engineering and plenty of managing in one pot. And I think this makes our profession unique among other specialties in medicine.

In recent years aside from my academic responsibilities in the Department of Medical Biochemistry in Ege University Faculty of Medicine, I've focused on specific tests for lysosomal storage diseases in a small but very efficient lab in our pediatric hospital. Our core team with the laboratory staff and the clinicians is so harmonious and it's great to be a part of it for making a significant difference for the children with rare diseases and their families.

Another reasons why I like my profession is that, when compared to others, there is nearly no gender discrimination against women in the field of laboratory medicine, which I am very sensitive and happy about.



## Do you have a role model? If you do, what makes this person so special?

I have more than one role model. First of all they are all determined and honest people trying to give a meaning and purpose to their lives. If I have to name one it would be Prof. Türkan Saylan. She was a medical doctor who spent her youth fighting against leprosy(Hansen Disease) and the following years fighting against ignorance in Turkey as a socialist activist. She established an association against leprosy and made the treatment of this disease possible in Turkey. She was awarded with "International Gandhi Award" and dozens more. She worked as a consultant for WHO. But most importantly she established a foundation with the slogan "Father, send me to school!". She enabled 36 thousand girls to have a profession, provided scholarships to 29 thousand university students, built 28 girls' dormitories, 56 schools. She was a real role model whom I had the chance to work with as a college student, who has dedicated her life to science, public health and especially education of girls in my country against all obstacles.

## What are the qualities you appreciate most about people?

Kindness, trustworthiness, being responsible, humbleness, being non-judgemental and unprejudiced. Being a good listener, not to react but to respond, never losing the objectivity during a discussion, being open to criticism with a sense of humour.

## 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?

I'm a good music listener but I also used to sing, took roles in musicals and played the piano in the earlier years. Singing and music rises my energy and gives me the feeling that I can succeed in anything. I was passionate to start acting and singing again in an amateur group after many years but Covid-19 got on the way. It is still in my bucket list. I also enjoy taking long walks in the nature whenever I can. In summer time we rent a boat and sail in the Aegean Sea with my family and friends.

## How would your spouse (wife, husband) describe you?

Problem solver, Patient and enduring, generous and merciful, responsible, forgiving, caring, a bit of a control freak. Too conscientious that injustice to anyone or anything drives her crazy.

## What are your greatest challenges? Are you good in time management?

You got me there! Time management was never one of my strong sides but still was always able to get everything ready before the deadlines with the feeling of responsibility. Unfortunately during the

Covid-19 Pandemic I have become a real procrastinator and I hope to recover as soon as possible.



Another challenge was leaving my 3 months old daughter at home and going to work. All working mothers would understand me by heart. When you deliver the baby out, some how they put the guilt in. I'm so glad those days are over and she's a lovely teenager now.



## What do you value most about your country and its culture?

I am passionately in love with my "lonely and beautiful country" as Nuri Bilge Ceylan, the famous director, mentioned in the Cannes Film Festival receiving Palme D'or Award. There are so many reasons that make Turkey so adorable, not to mention the, warmth and distinguished hospitality of the people, delicious Turkish cuisine, the marvelous climate with four seasons and the delightful nature.

Due to Turkey's depth of history layer by layer and geographic location, Turkish culture is a combination of heavily diverse elements that have been derived from the various cultures of the Eastern Mediterranean, Western/Central Asia, Middle East, with Eastern European and Caucasian cultures enriching Turkey with unique traditions and customs. The ethnic and cultural variety has created a unique tolerance and precious indulgence among the Anatolian people living together as neighbors for centuries.

## Do you have a pet?

We have a cat named Tarçın (Cinnamon) who as a kitten jumped into the trunk of our car in the parking lot of the hospital 5 years ago. We fell in love with him and believed that he chose us. He has been our son and the joy of our home since than.





### Coffee with Sedef Yanice

#### When did you join EFLM? What is your current role in EFLM? What are the activities of the functional unit in which you work?

I joined the WG-LMCP having been appointed as a chair of this group on April 6, 2021.

My current role is the chair position.

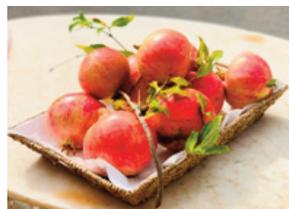
The primary tasks of WG-LMCP are;

- to institute an EFLM credit system to control the activities of high-quality continuing education content for laboratory specialists leading to CPD points,
- to evaluate applications and allocate credit points to various educational activities/programs,
- to provide a certificate of credit upon successful completion of an EFLM CPD.

WG-LMCP is currently involved in developing a "Provider Application and Manual for EFLM Accreditation of Educational Programs" in association with a management system that is referred to as Continuing Professional Education Credit System (CPECS). This is designed as an administrative system serving as the quality assurance mechanism for the acknowledgment of continuing education programs and events based on the high-quality continuing education content in laboratory medicine and relevant scientific topics offered to clinical and medical laboratory professionals by the EFLM member national as well as non-member societies. Participants in EFLM CPECS®-approved educational sessions will have confidence in the quality of the program.

#### What do you like most about EFLM?

- The Leading society in Laboratory Medicine across Europe.
- Engaged in the professional needs of the laboratory specialists and scientists.
- Produces a state-of-the-art scientific data and publications.
- Promotes multi-national professional collaboration between the laboratorians.
- Encourages and supports the young scientists.



*The pomegranates are grown in our garden that I collected 2 weeks ago.*

#### How do you see EFLM 10 years from today?

- Becoming more competitive in promoting Continuing Professional Education and filling in the gaps in this area through appealing to the non-member societies worldwide.
- Constituting a WG/TF on digitalized laboratory medicine

#### What do you like about your current job?

A leading position. Also, it requires my leadership, experience, expertise, creativity, and agility.

#### Do you have a role model? If you do, what makes this person so special?

Not a specific person. But, I inherited a lot of good qualities, wisdom, and intelligence from my grandparents, mother, and father. My mom was a clinical chemist and my dad was a clinician specializing in internal medicine. They both encouraged and supported me to be a good scientist since my early childhood. They were special because of had a vision, read a lot, and were keen on improving themselves in their practice, emphasizing scientific advancements, training, and education.

#### What are the qualities you appreciate most about people?

Whoever sets a high value on and appreciate continuous learning, creating a synergy effect, well cooperating and collaborating, playing fair and straight, integrity

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

My hobbies are cooking, gardening, photography, traveling to get to know the different cultures, swimming, jazz music, jogging, and Tai Chi. Usually growing flowers, trees and taking care of the soil.



Then, simply I would get busy cooking meals from international cousins and perform food or gastronomic photography.

Because I took a training course on food photography techniques. Some photos I took are shown here.

Else, socializing with my family and friends is also an invaluable moment for my age.



#### How would your spouse (wife, husband) describe you?

I am single and known as perseverant, patient, perfectionist, industrious, go-getter.

#### What are your greatest challenges? Are you good at time management?

Overwork, over-responsibility. Yes, I usually act cautiously about the timings and deadlines.

#### What do you value most about your country and its culture?

Friendly and hospitable. Anatolia is a rich hub of the great crossroads of ancient civilizations that lived on this territory and a broad peninsula that lies between the Black Sea and the Mediterranean Sea. The landscape is beautiful. From the gastronomic view, Turkish cuisine is well known as special good tastes exist spreading over the different regions of the country.

I believe the following photographs that I took well assort with the theme of "Coffee with the President".



Traditional Turkish coffee is usually served along with Turkish delight – "lokum". But, I used the French Macarons instead by making another version of service and captured this moment in my house.



This represents a christmas theme of serving coffee. This time, it was espresso.



**Do you have a pet? (feel free to share its photo with us, if you like)**

Yes. A female dog of breed Cavalier King Charles. Her name is Missy.



**Coffee with Janne Cadamuro**

**When did you join EFLM? What is your current role in EFLM? What are the activities of the functional unit in which you work?**

My first encounter with the EFLM "family" was in 2015 at the preanalytical conference in Porto, when you, Ana-Maria, contacted me, asking if I would like to join the Working Group "Preanalytical Phase" (WG-PRE) as the Austrian delegate. Obviously, I immediately accepted and found a new scientific home as well as very welcoming and openhearted people which in the meantime I have the honor of calling my friends. The WG-PRE always was a very productive working group from its beginning on, mainly due to your enormous energy and your engaging aura, constantly striving for standardization and quality improvements in the preanalytical phase across Europe. To this day the WG has published 25 articles, opinion papers, checklists, guidelines and recommendations, amongst which the European consensus guideline on venous blood collection which has been translated in ten languages so far, and organized 5 successful conferences on this topic.

**What do you like most about EFLM?**

Probably the one quality of the EFLM I admire the most, is its focus on the goal of improving laboratory diagnostics and strengthen the importance of our profession rather than personal forthcoming or political influence or power as well as its focus on providing practical recommendations and guidelines rather than theoretical essays. So many people within the EFLM I have the pleasure to collaborate with are forward-thinking, progressive and open for new and sometimes even scary or silly ideas in order to achieve this goal, focusing more on how something could be achieved instead of searching for reasons of potential failure.

**How do you see EFLM in 10 years from today?**

I honestly don't know. I hope that EFLM will thrive and continue aiming for the above-mentioned goal, gaining influence within national societies and issuing recommendations which laboratory specialists around Europe indeed adhere to.

**What do you like about your current job?**

The decision to specialize in laboratory medicine was triggered by the fact that I would be able to allot my time better than in clinical care, focusing on one task at a time. Additionally, I am a very organized person and interested in programming, which fits perfectly in a certified laboratory.

**Do you have a role model? If you do, what makes this person so special?**

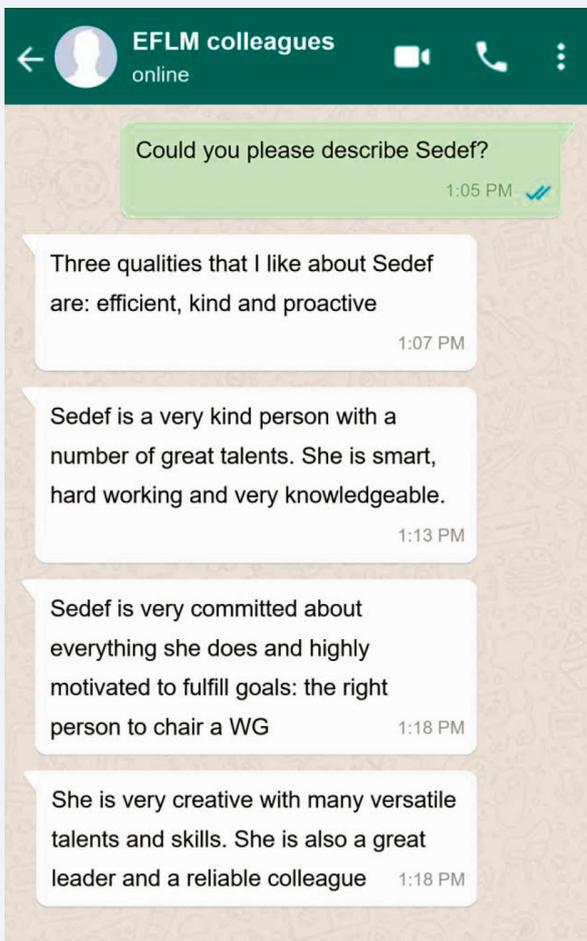
No. If I would have a role model, it would be someone who knows what is important in life, one who always puts his family before the job and one who is able of enjoying the little things in life. You don't necessarily need to leave your footprint, sometimes it is OK to just be.

**What are the qualities you appreciate most about people?**

Honesty, modesty and a dash of altruism. I appreciate people with whom I am able to have a real discussion and who are not only talking about themselves. Ideally, they have a dark sense of humor.

**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?**

I am into woodworking, probably because I need something I can hold in my hands after a day's work, since I do not have that in my job. I play the guitar, I like painting and sketching on my iPad and I am programming websites and some web-applications. But the most free time is definitely occupied by my family (wife and 3 kids, 13, 11, 7 y/o) – this is where I recharge my batteries.





Here is a picture of the bunch:



### How would your spouse (wife, husband) describe you?

I think I would have to let my wife answer this question herself: My husband is a handsome and loyal man. I feel very loved and respected around him. He makes me laugh a lot with his exquisite sense of humor. He is a loving father and puts his family always first. He is very intelligent and has a great talent in organization and planning. We are never out of electric power in our car

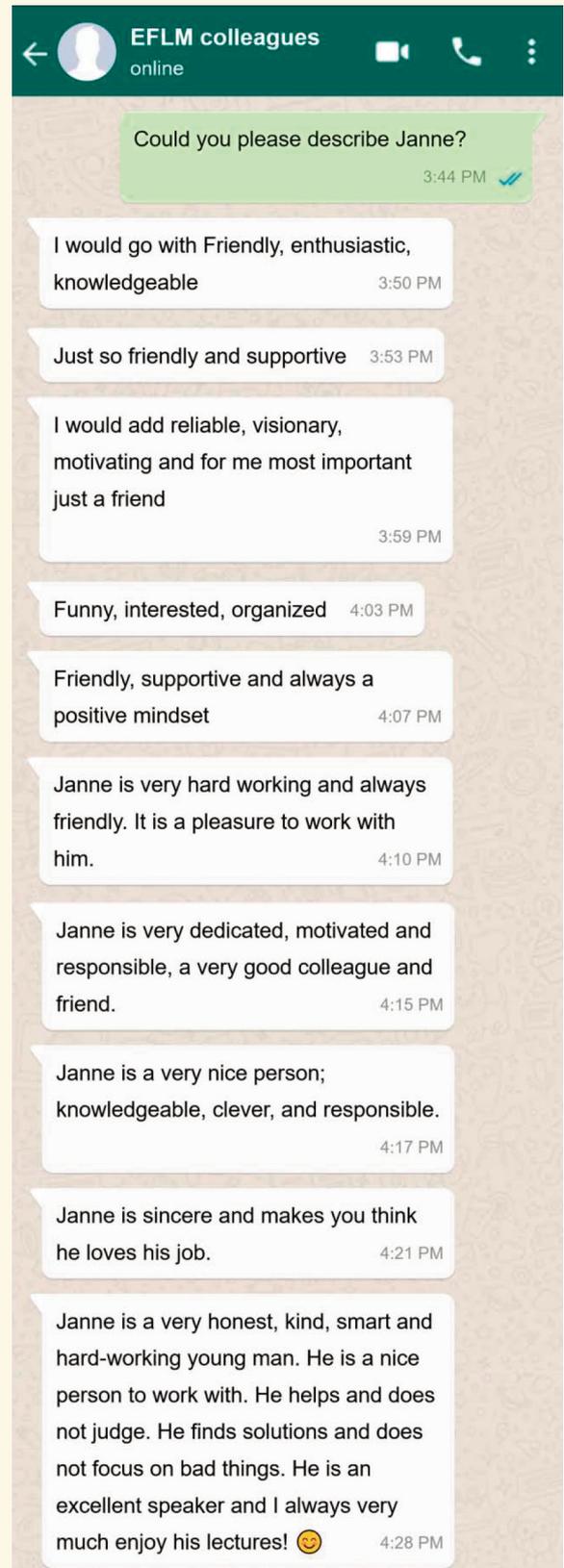
Wow – now that’s what I call exaggerating! I just don’t know why she put a smiley after “handsome”...

### What are your greatest challenges? Are you good in time management?

Probably the greatest challenge currently is being able to reconcile family and job. My wife is a general practitioner, so time management is crucial in our family. Gladly, this is one of my strongpoints

### What do you value most about your country and its culture?

I had to give this question a lot of thought. Landscape, quality of life, social security, recreational possibilities, etc. However, the one thing I like the most about Austria is the way of life, not taking everything too serious. Let me explain by citing two Austrian sayings: “Zu Tode gefürchtet ist auch gestorben” (transl.: “If you’re scared to death you also die” – meaning why bothering being anxious about what will happen if it hasn’t happened yet) and “Schauen wir mal dann sehen wir schon” (transl.: “Let’s look at it and then we will see” – meaning let’s wait a while, maybe it solves itself). Of course, this can be frustrating



sometimes when you try to get things done, but overall it improves the quality of life.

### Do you have a pet? (feel free to share its photo with us, if you like)

We have two rabbits, Freddi and Coco, who are living outside all year. Tragically, my son and I are both allergic to them as we had to find out. On the bright side, this spares us from cleaning the rabbit hutch

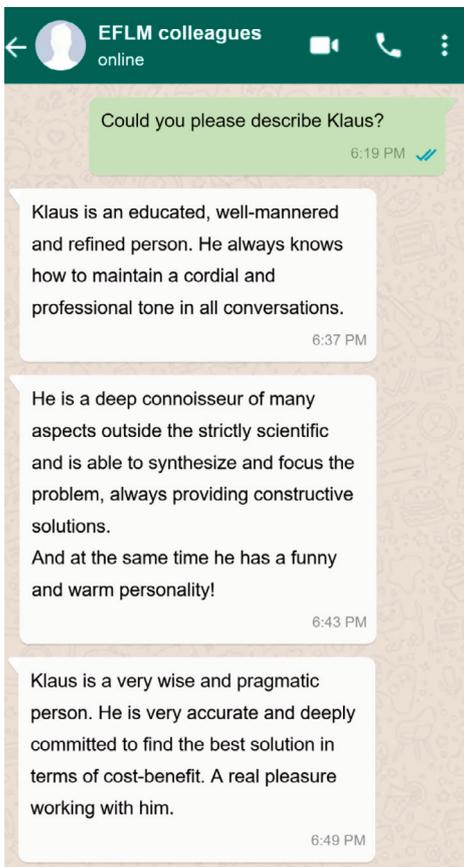


**When did you join EFLM? What is your current role in EFLM? What are the activities of the functional unit in which you work?**

I joined the EFLM Executive Board in January 2019 after I had been elected as Treasurer. This is, however, not my first time to be involved in European Clinical Chemistry and Laboratory Medicine activities. From 1995-2002, I was already Treasurer for the predecessor organization of EFLM, the European Communities' Confederation of Clinical Chemistry (EC4). As you know, in the year 2007, this Confederation merged with FESCC, the Forum of European Societies of Clinical Chemistry and Laboratory Medicine to form today's EFLM. Additionally, I served as National Representative for the German Society of Clinical Chemistry and Laboratory Medicine in EFLM.

My current role, being Treasurer is, naturally, to keep an eye on our finances in order to ensure the performance of the EFLM functional activities.

My "functional unit" is the Executive Board, and its activities - probably known to all EFLM member societies and most individual scientists within the member societies - mainly serve to steer the Federation through the "Laboratory Medicine Ocean" and initiate, enable as well as supervise scientific or professional projects.



**What do you like most about EFLM?**

I do like the international flavor in cooperating with so many colleagues in all European countries. Even after many years in the field, there's still a lot to learn about it, at every instant.

Thus, to gain insight into the broad variety of Laboratory Practice and Science in Europe is still fascinating to me.

**How do you see EFLM in 10 years from today?**

Well, you know that the great Danish physicist Niels Bohr (or maybe it was the American novelist Mark Twain?) once stated: "Prediction is very difficult, especially about the future." However, I am convinced that EFLM will be the number one entity in the scientific field of Medical Laboratory Diagnostics in Europe.

**What do you like about your current job?**

It's difficult to answer that question, because being recently retired from my positions at the University (as Professor of Clinical Chemistry, and Dean of Education) and the Hospital (as Director of the Institute of Laboratory Diagnostics and Microbiology at Klinikum Oldenburg), I don't have a regular "job". My previous volunteer "jobs" in EFLM and other organizations have now turned into "full time positions". However, I like the idea that I am responsible for the financial organization required for a smooth operation of EFLM - which, however, is made possible only due to the perfect work of Silvia Cattaneo, the EFLM Office Manager in Milan.

**Do you have a role model? If you do, what makes this person so special?**

My role model was my former boss and supervisor from 1985-1992, Professor Herrmann Wissler, Robert Bosch-Hospital, Stuttgart (Germany). He served our profession for many years in numerous functions, also after his official retirement, and also at the European level. He was a wise person as well as a wonderful guide in teaching the importance of engaging in activities beyond the boundaries of your own laboratory. He was always full of good humor, and in spite of the many important positions he held, he kept an unpretentious and modest personality. Everything I know about Laboratory Medicine, leading a large hospital lab covering all aspects of the discipline from hematology, clinical chemistry, microbiology, and immune hematology, and interaction or negotiation with hospital administrators or IVD company representatives, I learnt from him.

**What are the qualities you appreciate most about people?**

I appreciate persons who are able to listen, not only to talk.

**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?**

I'm passionate about travelling (have missed this SO MUCH in the last 18 months!), listening

to classical music and jazz concerts, and downhill skiing in Switzerland - at intermediate level, however. And, of course, spending time with the family - I have 3 grandchildren!

**How would your spouse (wife, husband) describe you?**

When I asked my wife, she was laughing at this question. I am authorized to quote: "He is a generous well-connected gentleman with a bright mind and multiple interests including, beyond science, classical and jazz music, reading, good food, and meeting with friends and family." You see, there is some redundancy in descriptions ...

**What are your greatest challenges? Are you good in time management?**

Time management is not my biggest strength; however, I usually get tasks done when they are due (but not very much earlier ...)

**What do you value most about your country and its culture?**

I value many things in Germany - mainly since it is the country I know best, of course. We have a stable society which hopefully can be kept for many decades into the future despite the many challenges we face today. Regarding the culture: In my opinion, there is no "Germany's culture" - we have a rich cultural history of decades, centuries, and millennia which we share with all European countries since there has been an extensive exchange over many centuries. It's wonderful to explore the evidence of this!

**Do you have a pet?**

We don't have a pet, but from time to time we host our daughter's Maine Coon cat which is a real pleasure. It's a large furry animal with an enormous charm.



The photo shows my family and me at the end of the Symposium held on occasion of my retirement as Director of the Institute for Laboratory Medicine at Klinikum Oldenburg, October 2020



## Elected candidates for the EFLM Executive Board 2022-2023

Reported by Silvia Cattaneo, Responsible of the EFLM Office

Following the election process held at the EFLM General Meetings in June and October, the following candidates have been appointed for the open positions as President-Elect, Executive Board Secretary, Treasurer and two Members-at-Large.

These new Officers will join the Executive Board in January 2022 together with the incoming

new EFLM President, Prof. Tomris Ozben, and Prof. Ana-Maria Simundic who will act at that time as EFLM Past President.

- **President-Elect:** Prof. Mario PLEBANI (Italy) elected with 16 votes out of 26 voting EFLM Full Member National Societies (the other candidate, Prof. Michel Langlois obtained 10 votes)
- **Executive Board Secretary:** Dr. Snežana JOVIČIĆ (Serbia)
- **Treasurer:** Prof. Klaus KOHSE (Germany) at the second term of office
- **Member-at-Large:** Dr. Pilar FERNANDEZ-CALLE (Spain) at the second term of office
- **Member-at-Large:** Prof. Dalius VITKUS (Lithuania) at the second term of office

The congratulations of the EFLM Executive Board goes to all successful candidates and our thanks to all applicants!

**NEW DATE: 10-14 APRIL 2022**

ICM MUNICH  
GERMANY



### UPDATES ON EFLM PUBLICATIONS

## Improving the laboratory result release process in the light of ISO 15189:2012 standard

*Cubukcu HC, Vanstapel F, Thelen M, Bernabeu-Andreu FA, van Schroyenstien Lantman M, Brugnoli D, Mesko Brguljan P, Milinkovic N, Linko S, Vaubourdolle M, O’Kelly R, Kroupis C, Lohmander M, Šprongl L, Panteghini M, Boursier G, on the behalf of the EFLM Working Group Accreditation, ISO/CEN standards WG-A/ISO*

Clinica Chimica Acta 2021; Available from: <https://doi.org/10.1016/j.cca.2021.08.013>

Reported by Tara Rolić, member of the EFLM WG-Promotion & Publications

The ISO 15189:2021 standard section 5.9.1. requires reviewing laboratory results before releasing them. Presented discussion paper suggests criteria and systematic framework for proper result reporting. Firstly, the authors propose checking sample quality by internal quality control, instrument flags, warning messages and interferences indexes. Moreover, prior releasing the results, a consistency check is needed: are the results consistent with patient age, location, clinical condition, diagnosis and medication? At last, notification of critical results should be reported. Result release is a process of a general view of the entire examination process. The proposed framework in the light of the ISO 15189 requirement should be a guideline for improved daily practice and help to automate processes resulting in remarkable and correct results in a short time.



Cubukcu HC et al., Clinica Chimica Acta, 2021  
[doi.org/10.1016/j.cca.2021.08.013](https://doi.org/10.1016/j.cca.2021.08.013)



### STANDARD ISO 15189:2012

5.9.1. reviewing laboratory results before laboratory report

### QUALITY CONTROL

- Evaluation of sample quality:
- internal quality control
  - instrument flags and warning messages
  - interference indexes (HIL)



### DELTA CHECK

- Evaluation of previous results:
- consistency check - results are consistent with patient age, location, clinical condition, diagnosis and medication



### CLINICAL INFORMATION

- consistency of the results with clinical condition
- detection and notification of the critical results



# Quality benchmarking of smartphone laboratory medicine applications: comparison of laboratory medicine specialists' and non-laboratory medicine professionals' evaluation

Jovičić S, Siodmiak J, Alcorta MD, Kittel M, Oosterhuis W, Aakre KM, Jørgensen P, Palicka V, Kutt M, Anttonen M, Velizarova MG and Marc J, European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Patient-Focused Laboratory Medicine

Clin Chem Lab Med 2021; Available from: <https://doi.org/10.1515/cclm-2020-0869>

Reported by Serkan Bolat, corresponding member of the EFLM WG-Promotion & Publications

The use of smartphones is increasing day by day, and mobile applications are also included in our daily lives in many ways. Smartphone health-fitness applications have entered the digital world within the scope of mobile health technologies. The aim of the presented study, by Jovičić et al., is to describe a benchmark to evaluate the quality of these applications, including laboratory data, and compare the opinions of non-laboratory medicine professionals (NLMP) and laboratory medicine specialists (LMS). Twenty-five volunteers who have no professional involvement in laboratory medicine evaluated and completed a questionnaire of 16 selected patient-oriented applications. As a result of this survey, all scores of the NLMP were found to be statistically lower than the LMS. However, there was no significant difference in terms of Information quality scores. These results indicate that the quality of existing health apps is low, and the benchmarks defined in this study could be used for the quality assessment of evaluated apps.



## Implementation of the new EU IVD regulation – urgent initiatives are needed to avert impending crisis

Cobbaert C, Capoluongo ED, Vanstapel FJLA, Bossuyt PMM, Bhattoa HP, Nissen PH, Orth M, Streichert T, Young IS, Macintyre E, Fraser AG and Neumaier M

Clin Chem Lab Med 2021; Available from: <https://doi.org/10.1515/cclm-2021-0975>

Reported by Lejla Alić, member of the EFLM WG-Promotion & Publications

In their recent publication, the EFLM Task Force on European Regulatory Affairs warns about the potential dangers of an upcoming transition (May 2022) from IVDD 98/79/EC to IVDR 2017/746, which might emerge due to the unpreparedness of the European Union regulatory infrastructure. The authors evaluated in detail all the potential threats and arguments for the transition deadline postponement, and presented testimonials from affected stakeholders included in the in-vitro diagnostics supply chain and development of in-house tests. The authors especially emphasize the following threats: CE-marked test shortages, development of specific or in-house tests, lack of adequate test developments in emerging public health threats like pandemics and potential financial burden for laboratories.

### OTHER RECENT EFLM PUBLICATIONS:

#### Biological variation estimates of thyroid related measurands - meta-analysis of BIVAC compliant studies

Fernández-Calle P, Díaz-Garzón J, Bartlett W, Sandberg S, Braga F, Beatriz B, Carobene A, Coskun A, Gonzalez-Lao E, Marques F, Perich C, Simon M, Aarsand AK, EFLM Working Group on Biological Variation and Task Group for the Biological Variation Database

Clin Chem Lab Med 2021 <https://doi.org/10.1515/cclm-2021-0904>

#### Within- and between-subject biological variation data for serum zinc, copper and selenium obtained from 68 apparently healthy Turkish subjects

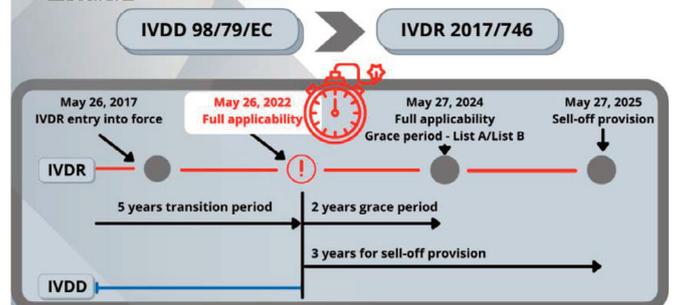
Coşkun A, Carobene A, Aarsand AK, Aksungar FB, Serteser M, Sandberg S, Díaz-Garzón J, Fernandez-Calle P, Karpuzoğlu FH, Coskun C, Kizilkaya E, Fidan D, Jonker N, Uğur E, Unsal I, on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation and Task Group for the Biological Variation Database

Clin Chem Lab Med 2021 <https://doi.org/10.1515/cclm-2021-0886>

### Opinion paper: Implementation of the new EU IVD regulation - urgent initiatives are needed to avert impending crisis



Cobbaert C, et al. Clin Chem Lab Med 2021 <https://doi.org/10.1515/cclm-2021-0975>



### THREATS

- ❗ Certification process and its infrastructure not ready
- ❗ CE-marked test shortages
- ❗ Specific or in-house test development will be hampered
- ❗ No adequate test development in e.g. pandemics
- ❗ Financial burden for laboratories

=> **POSTPONEMENT REQUIRED**

Infographic by Lejla Alić (EFLM C-C)

# 3<sup>rd</sup> EFLM STRATEGIC CONFERENCE

## SMART and GREEN LABORATORIES

How to implement IVDR, emerging technologies and sustainable practices in medical laboratories?

**Antalya, Turkey 27-28, May 2022**

After the successful previous two Strategic Conferences in Milan (2014) and Mannheim (2018), the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM), with great pleasure, officially announces and invites you to the 3rd EFLM Strategic Conference "Towards Smart and Sustainable Medical Laboratories" to be held in Antalya, Turkey (tentative), in May 2022.

The EFLM Strategic Conference series aim to address and discuss recent developments and challenges in our field of profession, Laboratory Medicine. The general goal will focus on important aspects in Laboratory Medicine in which some strategic actions/measures should be taken. The conference program has been tailored by the scientific advisory committee consisting of all the stakeholders in the field of laboratory medicine. Their feedback has guided us in the selection of the topics of this one. Global leaders and participants from laboratory medicine, diagnostics, digital health, medical devices, and representatives from MedTech Europe will join the conference to deliver the latest innovations in laboratory medicine, partnership model for efficient integration and adoption of emerging technologies, preparation for the new IVDR, switching to Green Labs, trends, opportunities, and challenges, they are facing. A panel of experts will discuss 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 will be important and taken into consideration to steer laboratory medicine forward and to shape the future of our profession.

Strategic Conference is not just about gaining knowledge from scientific sessions. Our aim is to have an interactive program, which will allow opportunities to interact, share and learn from all involved stakeholders.

## 6<sup>th</sup> EFLM CONFERENCE ON PREANALYTICAL PHASE

VIRTUAL

15-18 MARCH 2022

Preanalytical Quality  
an interdisciplinary journey

<http://www.preanalytical-phase.org/>

With great pleasure, we invite you to the **6th EFLM Preanalytical Phase Conference** to be held virtual on 15-18 March 2022. Previous Conferences have been successfully organized biannually with delegate numbers rising over the years (the last Conference in Zagreb had 640 delegates). Due to the COVID pandemic, the 2021 conference had to be rescheduled and will now be held purely online. On one hand this is maybe not quite as charming as a face to face conference, on the other hand we now have no limitation as to the number of delegates. The focus of this year's conference is the importance of interdisciplinary collaborations among laboratories, clinics and physicians, in order to improve the quality of the preanalytical phase within the total laboratory testing process. The Conference Scientific program has been tailored by the most renowned experts from Europe in the field to deliver up-to-date knowledge. It is the unique and maybe only opportunity to advert to an audience interested in preanalytical topics on such a large basis, as the EFLM Preanalytical Phase Conference is the largest such conference in the world.



## NEWS FROM EFLM FUNCTIONAL UNITS

# The new EFLM Speakers' Bureau is available on the EFLM website!

Reported by Daria Pasalic, Chair EFLM Committee "Education and Training" and Eser Y. Sozmen, Chair EFLM Working Group "Congresses and Postgraduate Education"

We are pleased to announce that the new-updated EFLM Speakers Bureau has been posted on the EFLM website: [click here to access it.](#)



The process of forming the new

EFLM Speakers Bureau included several phases of the WG "Congresses and Postgraduate Education" activities: a survey on the EFLM National Societies' interest on the formation and content of the list, defining data to be collected from potential lecturers, and recruiting lecturers.

According to the results of the survey in the first half of 2021, we noticed that about 70% of National Societies shows interest in the existence of Speakers Bureau and it was decided to invite former and current representatives of functional units, and well-known lecturers from various international conferences. Most National Societies felt that lecturers should have at least 5 publications in internationally peer-reviewed journals around the proposed lecture topic.

The lecturer recruitment strategy included communication and request to the EFLM Executive Board Members, Past Presidents, and Heads of all Committees and Working Groups from EFLM functional units. Finally, we asked EFLM National Societies representatives to encourage and recruit significant experts and scientists from their societies.

Based on the applications received, a list was made and arranged by groups of thematic units to make it easier to find a relevant speaker for any topic.

The list will be updated every 6 months; we invite EFLM National Societies and/or members of EFLM functional units to contact the Chair of the EFLM Education and Training Committee and the Chair of the WG "Congresses and Postgraduate Education" to send new possible speakers using the dedicated form available in the section "Download" of the EFLM website.

The EFLM Speakers Bureau aims to represent a useful tool for all EFLM National Societies and event organizers when searching for a speaker on a specific topic for international and national scientific events, so do not hesitate to consult it for your events!

For any further information, please contact: [eflm@eflm.eu](mailto:eflm@eflm.eu)

## PAST EFLM EVENT

# The general principles of laboratory biosafety

Reported by Tara Rolić, EFLM Communication Committee, WG Promotion and Publication



On **November 23<sup>rd</sup>, 2021**, at **18:00 Dr. Gijsbert van Willigen** held a webinar on EFLM e-learning platform about the general principles of laboratory biosafety. Biosafety as a working area for laboratory workers is important due to protection from the potential pathogenic organism from the patient specimens. Most of the laboratories work with materials up to biosafety level 2 (BL2). BL2 laboratories are part of the national and international regulatory framework. Standard procedures for laboratory workers, equipment and connection between biosafety and quality systems were presented. Differences between biosafety and biosecurity were explained. The conclusion of the presented webinar is that the protection of the worker in the laboratory from infections is crucial. More information can be found in [EFLM eLearning platform](#) (accessible for EFLM Academy members only).

## News from the Czech Society of Clinical Biochemistry

Reported by Jaroslav Racek, President of the Czech Society of Clinical Biochemistry and Tomáš Šálek, President of the 15<sup>th</sup> Congress of the Czech Society of Clinical Biochemistry

### 15<sup>th</sup> National Congress of the Czech Society of Clinical Biochemistry with International Participation

The 15<sup>th</sup> National Congress of the Czech Society of Clinical Biochemistry with International Participation was held under auspices of IFCC and EFLM on 10<sup>th</sup> – 12<sup>th</sup> October 2021 in Zlín, the city-center of the East Moravia. The organizing committee chose six current topics and guarantors of single lecture blocks managed to attract outstanding experts in given problems. Besides clinical chemists the lectures were held by experts in other branches of laboratory medicine and by excellent colleagues from clinical medical disciplines. The lectures were followed by extensive discussion; it was also aroused by other current problems of clinical chemistry in the Czech Republic; to name but a few, we can mention laboratory accreditation, professional education and training in clinical chemistry, personnel problems or updating list of laboratory tests for health insurance companies. The professional program was complemented by two plenary lectures of leading experts from abroad and, traditionally, also by an exhibition of companies dealing with laboratory instruments and reagents, and, finally, by numerous workshops. Abstracts of lectures and posters were published in No 3 of *Klinická biochemie a metabolismus*, the official journal of the Czech Society of Clinical Biochemistry.

The congress was opened by a lecture of Professor Racek "Treacherousness of immunochemical methods". The congress always represented the opportunity to award the outstanding personalities in clinical chemistry who significantly contributed to an excellent reputation of the Czech Society of Clinical Biochemistry both in our country and abroad. Professor Jaroslav Racek was awarded by the highest prize of the Czech Society of Clinical Biochemistry, the Medal of Professor Hořejší. The honorary membership was awarded to Assoc. Prof.



From the opening ceremony of the congress: president of the Czech Society of Clinical Chemistry Prof. Racek, congress president Dr. Šálek and director of the Tomas Bata Hospital in Zlín Assoc. Prof. Fili

Drahomíra Springer, Dr. Vladimír Bartoš, and Ms. Zdeňka Pešáková, a representative of medical laboratory technicians. It was followed by a lecture of Mgr. Josef Šilhavík, a librarian of The Tomas Bata Hospital, called "History of a Bata Corporation".

On Monday the congress started with a lecture block describing the current role of laboratory in diagnostics of kidney stones. The next part focused on case studies in laboratory medicine. This block was followed by a plenary lecture by Janne Cadamuro (Paracelsus Medical University Salzburg, Austria) "Laboratory result reporting". Doctor Cadamuro showed new trends in result reporting with the focus on visualization. The 3<sup>rd</sup> edition of a new book entitled "Clinical Biochemistry" by J. Racek and D. Rajdl was introduced after the second series of lectures. The speakers from the next block of lectures informed the congress visitors about new trends in diagnostics, treatment and control of thyroid diseases, especially during pregnancy. The last block named "Laboratory examination of extrahuman genome" focused especially on laboratory techniques in microbiology and current hot topic of COVID-19 infection diagnosis. The second day of the congress was traditionally closed with the plenary meeting of the members of the Czech Society of Clinical Biochemistry and with the meeting of the editorial board of the official journal of our society.

The last congress day started by a series of lectures dealing with mass spectrometry tests in laboratory medicine. It was followed by lecture by Professor Martina Montagnana (Laboratory of Clinical Chemistry and Haematology, University Hospital of Verona, Italy) called "The impact of pre-analytical phase on quality of laboratory testing: State of the art and future perspectives". Speakers of the last lecture block informed us on the recent knowledge in markers of bone metabolism. The key lectures were given by Professor Richard Eastell (Sheffield, UK) and Professor Vladimír Palička (Hradec Králové, Czech Republic).

The congress became the venue not only for lecture blocks but also for social meetings and informal discussion with colleagues and friends. The social program in the well-known restaurant of the Department store contributed to a friendly atmosphere. We believe that the 15<sup>th</sup> "Zlín" congress will rank among the successful projects of EFLM, the Czech Society of Clinical Biochemistry and the whole Czech Medical Association.

IFCC NEWS Reported by Katharina Psara, IFCC eNews editor



### The IFCC President's message

Dear colleagues,

We are all so excited to finally have the opportunity to meet in person at the end of the month. We have missed this personal contact so very much. IFCC has been present in our lives throughout this time when we were physically apart. Emails featuring IFCC arrive in our inbox quite often. IFCC is organizing an interesting new webinar. IFCC is putting together the Town Halls. We have been in touch, but it will be so more wonderful when we meet in Munich. Of course, some of the sessions will be available online, for all of you who cannot

attend in person and members of the committees and workshops can participate on line if they cannot attend. Try to be present either way, try to be in the congress! In this issue, our President Prof Adeli is presenting the 2022 IFCC General Conference in Brussels and the new IFCC Taskforces on Global Reference Interval Database and on Outcome Studies in Laboratory Medicine. [Click here](#) to read the full issue.

### Prof. Adeli, IFCC President's Message

My sincere greetings to you all in the IFCC family. I am excited to announce that the 2022 IFCC General Conference will be held in Brussels, Belgium, from October 25-30, 2022. Of note, this meeting is taking place at a special time because next year will be the 70<sup>th</sup> Anniversary of IFCC, and we will surely be celebrating this milestone. It will be a delight for us to be able to gather in person once again and foster collaboration between our divisions. The venue, the Radisson Collection Hotel located in the heart of the city of Brussels, will provide the perfect meeting space to convene the IFCC functional units and national representatives from around the world.

In other news, I am delighted to share that we have established the membership for the IFCC Taskforce on Global Reference Interval Database (TF-GRID). [Click here](#) to read the full message.



### eJIFCC Vol 32 n°3 - October 2021 eJIFCC Vol 32 n° 3 is now available!

In this issue: "POCT – making the point". Prof János Kappelmayer introduces the issue as follows: "This recent issue of the eJIFCC contains four additional manuscripts on topics that were presented at the Rome POCT Conference held between September 6-7, 2021. In particular, the role of POCT was

highlighted during the Covid-19 pandemic in screening and monitoring programs. I think we should be grateful for the perseverance of the organizers, particularly Professor Sergio Bernardini, and all the participants, particularly those who undertook the travel burdens in these uneasy times and made this conference a lively event". [Click here](#) to read all the latest issue of the eJIFCC.

### IFCC Townhalls

The IFCC Townhalls are a new initiative aimed to significantly enhance internal communications within the IFCC and between the IFCC Board and all IFCC member societies and Regional Federations. The 2021 series was very successful, with thousands of participants from the different IFCC regions and great Corporate attendance. Presentations and following debates gave significant updates on current and upcoming IFCC programs and new initiatives, providing a platform for an open communication forum between the IFCC board members and the board members of IFCC regional federations and national societies, as well as all laboratory professional and scientists in each region. There have been [four Interactive Virtual LIVE events](#) that were held in different time zones around the world.

## Calendar of EFLM events and events under EFLM auspices

Reported by Silvia Cattaneo, EFLM Office

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](mailto: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.**

 21 December 2021 <b>EFLM Webinar: Why we are not using old and novel bone markers as a routine biochemical marker?</b> online <a href="#">Click here for information</a>	 15-18 March 2022 <b>6<sup>th</sup> EFLM Conference on Preanalytical Phase "Preanalytical Quality: an interdisciplinary journey"</b> online <a href="#">Click here for information</a>
 25 January 2022 <b>EFLM Webinar: Isolation, characterization and cryopreservation of hematopoietic stem cells from cord blood units</b> online <a href="#">Click here for information</a>	 29 March 2022 <b>EFLM Webinar: Liquid biopsy</b> online <a href="#">Click here for information</a>
 8 February 2022 <b>EFLM Webinar: Patient-focused laboratory medicine - how can we communicate directly with patients?</b> online <a href="#">Click here for information</a>	 12 April 2022 <b>EFLM Webinar: Evidence-based laboratory medicine</b> online <a href="#">Click here for information</a>
10-11 February 2022 <b>International Congress on Quality in Laboratory Medicine 2022</b> Helsinki (F) <a href="#">Click here for information</a>	 26 April 2022 <b>EFLM Webinar: Laboratory diagnostic of thyroid diseases</b> online <a href="#">Click here for information</a>
 22 February 2022 <b>EFLM Webinar: Biological variation of CBC parameters as a pointer towards individual reference intervals</b> online <a href="#">Click here for information</a>	 10 May 2022 <b>EFLM Webinar: Regulation of In Vitro Diagnostics in the EU: Lessons for diagnostic professionals</b> online <a href="#">Click here for information</a>

23-26 May 2022

**The 10<sup>th</sup> Santorini Conference “Systems medicine and personalised health & therapy” - The odyssey from hope to practice: Patient first - Keeps Ithaca always in your mind**  
Santorini (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](#)

24 May 2022

EFLM Webinar: **Laboratory diagnostic of prostate cancer**  
online [Click here for information](#)



11 October 2022

EFLM Webinar: **Challenges in POC testing**  
online [Click here for information](#)



27-28 May 2022

**3<sup>rd</sup> EFLM Strategic Conference “SMART and GREEN LABORATORIES - How to implement IVDR, emerging technologies and sustainable practices in medical laboratories?”**  
Antalya (TR) [Click here for information](#)



8 November 2022

EFLM Webinar: **Monitoring the performance of a measurement system for its intended clinical use**  
online [Click here for information](#)



21 June 2022

EFLM Webinar: **Molecular Immunology: new tricks of the innate immune system**  
online [Click here for information](#)



22 November 2022

EFLM Webinar: **Atherogenic lipoproteins: which, when, and how to quantify**  
online [Click here for information](#)



28 June 2022

EFLM Webinar: **From IVD Directive to IVD Regulation: the changing landscape of Test Evaluation and Regulatory Requirements**  
online [Click here for information](#)



November 2022 (date to be defined)

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



15 July 2022

EFLM Webinar: **Cardiac Markers**  
online [Click here for information](#)



13 December 2022

EFLM Webinar: **Artificial Intelligence in laboratory medicine**  
online [Click here for information](#)



27 September 2022

EFLM Webinar: **Basic Semen Examination – WHO recommendations and new European ISO standard**  
online [Click here for information](#)



**Boost your brand and increase your company's visibility through the EFLM Newsletter!**

**EuroLabNews** is the digital bi-monthly newsletter of EFLM targeting more than 8,500 laboratory medicine professionals and is also published on the EFLM website. The Newsletter features information on EFLM initiatives and activities of its functional units, news from EFLM National Society members and includes a calendar of the major events in the Clinical Chemistry and Laboratory Medicine field.

The EFLM IVD partners are offered the possibility to advertise on EuroLabNews as follows:

	1 issue	6 issues
1 quarter of page	500 €	2000 €
Half a page	1000 €	4000 €
Full page	1500 €	6000 €

Those companies interested in this opportunity can contact the EFLM Office at [silvia.cattaneo@eflm.eu](mailto:silvia.cattaneo@eflm.eu)