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EFLM Connects National Societies of Clinical Chemistry and Laboratory Medicine and Creates a Platform for all European "Specialists in Laboratory Medicine"



## Foreword

Reported by Harjit Pal Bhattoa, Editor EFLM EuroLabNews



This spring edition of the EFLM EuroLabNews is offering a joyful bouquet of Laboratory Medicine news. The EFLM Secretary, Snežana Jovicic informs about three new EFLM Functional Units: Direct-to-Consumer Testing, Preparation of Labs for Emergencies and Integrated Diagnostics - a New Interdisciplinary Frontier. In line with the EFLM Strategic Plan 2022-2023, the dedicated efforts of these EFLM Task Forces are evidence of the continued commitment of the EFLM Executive Board, EFLM Functional Units and EFLM National Society Members to achieving better healthcare forwarded through Laboratory Medicine. Daria Pašalić, Chair of the EFLM Academy Award's Evaluation Committee and Chair of the EFLM Committee on Education and Training, announces the winner of the EFLM Academy Award for Education in 2022. Heartiest congratulations to Sedef Yenice. In the regular column 'Coffee with the EFLM President' read four excellent interviews by Tomris Ozben with Presidents of the national societies of Turkey, Norway, Montenegro and North Macedonia. Tomris Ozben furthermore, reports about the special issue edition of the CCLM and new certificate recipients for Green and Sustainable Laboratories.

### THE EFLM EXECUTIVE BOARD INFORMS

## Three new EFLM Functional Units have been established

Reported by Snežana Jovicic, EFLM Executive Board Secretary

On behalf of the EFLM Executive Board, I am delighted to announce three new EFLM Functional Units which have been established upon proposal of the EFLM President Prof. Tomris Ozben as an outcome of the recent EFLM Strategic Plan 2022-2023 prepared and developed by the EFLM President in consultation with EFLM National Societies and EFLM Functional Units Chairs and approved by the EFLM Executive Board.

- 1 [Task Force: Direct-to-Consumer Testing \(TF-DTCT\)](#) – Chair: Matthias Orth
- 2 [Task Force: Preparation of Labs for Emergencies \(TF-PLE\)](#) – Chair: Giuseppe Lippi
- 3 [Task Group: Integrated Diagnostics - a New Interdisciplinary Frontier \(TG-ID\)](#) – Chair: Jochen Lennerz

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Tara Rolić, EFLM Communication Committee member, reports on the EFLM Continuing Professional Education Credit System - CPECS®. Learn how to collect the credits in this news item. Short summaries and announcements of forthcoming EFLM webinars is presented. Visiting the EFLM e-Learning platform is highly encouraged, don't miss out on the latest happenings. An amazing EFLMLabX program is inviting EFLM members to apply to experience new laboratory settings and encourages dissipation among colleagues of the knowledge and experience gained in Laboratory Medicine. In news from National Societies, the Spanish Society is presenting the LabTest Online platform. The IFCC corner highlights global happenings in laboratory medicine. Mark your calendar for a variety of upcoming EFLM events and especially the upcoming conferences. I hope you enjoy reading this EuroLabNews issue and am looking forward to seeing you this May in Rome!

#### Task Force: Direct-to-Consumer Testing (TF-DTCT)



Test results of biomarkers can be obtained in different settings (such as in conventional lab tests, as POCT, as self-testing, or with implanted sensors such as CGM). The public and the attending physicians rely on the numeric results of IVD testing performed and are often not aware how these results were generated and whether the results can be used

interchangeably. There is a risk to patient safety when inappropriate test results are used for medical decisions or when resources are wasted due to insufficient quality of IVD tests. The aim of the Task Force is to inform the laboratory community about this problem and propose ways forward on how to handle it.

#### Task Force: Preparation of Labs for Emergencies (TF-PLE)



This functional unit is aimed to open a large debate and prepare a set of documents that may facilitate clinical laboratories and healthcare systems as a whole in Europe to be prepared for the most devastating scenarios originating from various types of emergencies.

#### Task Group: Integrated Diagnostics - a New Interdisciplinary Frontier (TG-ID)



The lack of a cohesive and efficient approach from presentation to final diagnosis results in fragmentation of informational units relevant to patient care. The fragmentation can result in delay of diagnosis and treatment or even lead to potential misdiagnosis. This task and finish group has the dedicated aim to develop a comprehensive and efficient definition and

framework for integrated diagnostics. The aim is to create a diagnostic approach for identifying, addressing, and overcoming diagnostic integration challenges across subspecialties and disciplines. The goal of integrating multiple diagnostic techniques aims to improve efficiency and meaningful use in the diagnostic process.

Since the 3<sup>rd</sup> EFLM Strategic Conference, in total six new Functional Units have been established under the presidency of Prof. Tomris Ozben, proving the full commitment of the EFLM Executive Board, EFLM Functional Units and EFLM National Society Members to achieving a better healthcare through Laboratory Medicine.

### **EFLM ACADEMY AWARD**

## EFLM Academy Award for Education - criteria, nominated projects, and the winner 2022

Reported by Daria Pašalić, Chair of the EFLM Academy Award's Evaluation Committee and Chair of EFLM Committee on Education and Training



In order to demonstrate the importance of post-graduate education in laboratory medicine and to foster activities in this field in Europe, the EFLM Executive Board has implemented the EFLM Academy Award for Education which was announced for the first time in 2021. According to its definition, the award is given, applying the respective criteria, to EFLM Academy Members who have made a substantial contribution to the education in laboratory medicine in Europe. Although consideration is given both to national and European projects, the preference is the most outstanding **European** projects. The nominated individual must be the author of the most distinguished educational activity or a project in the past 5 years. Until the deadline EFLM office received only one nomination, from Turkish Biochemical Society, but the candidate fulfils the formal requirements in educational activities and projects:

#### **Sedef Yenice**

Full Professor and Teaching Faculty, Demiroğlu Bilim University, Istanbul, Turkey; Head of the Department of

Medical Biochemistry, Izmir Tinaztepe University, Faculty of Medicine, Izmir, Turkey; Faculty Member at the Faculty of Arts and Sciences Demiroğlu Bilim University, Department of Molecular Biology and Genetics, Istanbul, Turkey, Teaching "Quality Assurance and Accreditation Requirements in Laboratory Practice"; Teaching Biochemistry at the Izmir Tinaztepe University, Faculty of Medicine, Department of Biochemistry, Izmir, Turkey; Technical writer/editor for CLSI C46 - Blood Gas and pH Analysis and Related Measurements; Member of CLSI CHEM ExP Document Development Committee for CLSI C65 - Biochemical Tumor Marker Testing; Chair of EFLM Working Group for Laboratory Medicine Credit Points (WG-LMCP), Chair of IFCC Abbott Visiting Lecturer Program; Chair and Member of Executive Committee, Education and Management Division, IFCC; In the last 5 years, 20 different invited talks, presentations, and lectures at the symposia and conferences in organisation of IFCC, AACC, DGLK, Colabiocoli, APFCB and others; 8 invited talks and 12 involvement in organisation of postgraduate educational events in Turkey; 3 EFLM and 2 "Malawi Association of Laboratory Medicine" webinars speaker. After a thorough evaluation, the Award Committee, consisting of Pilar Fernandez-Calle (Spain), Michel Langlois (Belgium) and Daria Pašalić (Croatia) decided that the 2022 EFLM Academy Award will be awarded on Sedef Yenice, PhD (Turkey). Details of her outstanding accomplishments are described in detail above. The proposal by the Award Committee was approved by the EFLM Executive Board and it was decided that, as stated in the announcement, the 2022 EFLM Academy Award will be presented at the EuroMedLab 2023, Rome (Italy), May 21-25, 2023.

## COFFEE WITH THE EFLM PRESIDENT



Dear Colleagues,

It is my great pleasure to present you in this issue of the EFLM EuroLabNews interviews with distinguished Presidents of the EFLM members Societies: Dogan Yucel, Bess Margrethe Frøyshov, Tanja Antunović and Katerina Toseska-Trajkovska.

I sincerely must thank my guest colleagues for the time to share their experiences, thoughts and opinions about EFLM and laboratory medicine profession. I am grateful for their substantial contribution to the EFLM and mission that make EFLM great today.

I hope you will enjoy reading these interviews with our esteemed colleagues and get to know them and their society better.

Tomris Ozben  
EFLM President



## Coffee with Prof. Dr Dogan Yucel, President of the Turkish Biochemical Society



**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 Turkish Biochemical Society (TBS) was founded in 1975 in Ankara, with the leadership of Professor Şerafettin Özkurt, MD, Med. Spec., to serve as an umbrella for establishing

and supporting continuing professional development and information exchange among all those working in the field of basic and applied medical biochemistry (such as biochemistry, clinical biochemistry, molecular biology, and molecular diagnostics) mainly through the organization of scientific activities. Besides stimulating scientific collaborations among professionals in the field, TBS aims to advance research in the science of medical biochemistry and to improve undergraduate and postgraduate medical biochemistry education. Another mission of TBS is to enhance patient care through training on competence, quality, and accreditation of medical laboratories in Türkiye for the improvement of their standards and service. Through active collaborations with concerned governmental (Ministry of Health, etc.) and non-governmental institutions

(educational and research bodies), the society also delivers assistance on related health issues and is involved in developing health policies. **In addition, we have a duty to promote and popularize medical biochemistry in our country, in general.** The Executive Board of TBS consists of 9 members and is elected every three years. Currently, TBS has 2479 members and official branches in metropolises like Istanbul, İzmir, and Adana. Physicians or scientists working in the field of basic and clinical biochemistry can become members of TBS. TBS also accepts honorary members from foreign countries or those working in fields close to biochemistry. TBS is the only full-member representative of the following organizations in Türkiye:

- Federation of European Biochemical Societies (FEBS, 1978)
- International Union of Biochemistry and Molecular Biology (IUBMB, 1978)
- Balkan Clinical Laboratory Federation (BCLF, 1996)
- International Federation of Clinical Chemistry and Laboratory Medicine (IFCC, 1997)
- European Federation of Clinical Chemistry and Laboratory Medicine (EFLM, 1997)

TBS has several working groups and committees around the representatives working in IFCC and EFLM committees/working groups/task forces. Currently, there are about 60 members or corresponding members in various IFCC or EFLM committees/working groups/task forces representing TBS. They not only support IFCC and EFLM activities but also support the scientific



and professional activities of TBS in Türkiye. In 2018, we found the TBS Academy, and all scientific activities, congresses, symposia, workshops, and courses are performed under the TBS Academy. Before 2005, national congresses were performed every 18 months, starting with 2005, national congresses have been performed annually. Ten to twenty scientific activities are organized in Türkiye every year. Some of them are international activities. For example, the 2006 FEBS Congress, 2014 IFCC Worldlab Congress, and BCLF Congresses in 1994, 1999, 2007, 2014, and 2019 were held in Türkiye. The 2025 FEBS Congress will also be held in Istanbul. In these congresses, TBS grants registration or accommodation bursaries to 75 to 100 young scientists every year.

TBS also supports the regulatory works of the Ministry of Health and the Social Security Institution in the laboratory medicine services such as the preparation of the Regulation of Medical Laboratories, the establishment of the LOINC coding system, and the test menu of Social Security Institution for reimbursement, etc. in Türkiye. Digital health is deeply affecting laboratory medicine, and it will much more affect our profession soon. For this reason, we have established an IT working group in 2018. TBS also has social media networks that allow communication between our colleagues. We contribute to the Ministry of Health Medical Specialization Board for the education and training curriculum of specialty students. On the other hand, we are in an effort to establish a single proficiency board with the Turkish Medical Association in terms of the standardization of education and training in Türkiye.

**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 and training for specialization in laboratory medicine should be based on both theoretical and practical training. To train good specialists, it is necessary to integrate theory and practice thoroughly. Practice without theory, and theory without practice would be incomplete. Education and training in medical laboratory specialization are given at the university hospitals and the training and research hospitals of the Ministry of Health (MoH) in Türkiye. There is a core curriculum for the training of medical biochemistry professionals, but, despite the existence of the core curriculum, training is not homogeneous or uniform, it includes differences between different education and training units. In general, there is a lack of practice in universities, while a lack of theory in training and research hospitals of the MoH. Another problem in Türkiye is the inability to purchase advanced technologies because of the changes in laboratory purchasing processes and over-centralization of medical laboratories as "megalabs" at the newly established "city hospitals" in big metropolises; in this case, those advanced or esoteric tests are

transferred to private referral laboratories. These processes are also negatively affecting the training of residents, because, there are about 40 training and research hospitals of MoH except city hospitals, and most of the residents at those training and research units, cannot practice those advanced or esoteric tests.

**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 laboratory is a highly dynamic area in medical practice. New technologies, especially information technology, communication technology, and molecular diagnostics, are deeply affecting laboratory medicine. That's why our colleagues are worried that laboratory medicine will come to an end. Against these challenges, we must embrace new technologies, bring emerging techniques to our laboratories, and use them successfully in laboratory medicine. There has been an important change in the healthcare system in the last 20-25 years: we watched the transition from laboratory-centered service to patient-centered service. Laboratory medicine specialists must keep up with this change. Another thing to do is to deepen the relations with clinicians both in hospital practice and in the social field and to conduct joint scientific studies. Laboratory hematology, coagulation, nutrition and metabolism, and molecular diagnostics are relatively "Achilles' heel" or weak points for us today; so, we must strengthen them. We need to improve public relations as laboratory medicine specialists in society as well.

**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?**

Medical biochemistry professionals are not ready for emerging technologies yet. There is some adaptation, but not enough. We can use digitalization and laboratory diagnostic algorithms partly for example in auto verification of the laboratory results or we can use big data for scientific papers. But not enough... Integrative diagnostics and clinical decision support systems are coming and we must be ready for these developments. Of course, I believe in the Partnership model for efficient integration and adoption of emerging technologies and innovations, but we must be ready for this task.

**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 3<sup>rd</sup> EFLM Strategic Conference, its sessions were recorded and are available for one year?**

Not all of our Members can fully participate in EFLM activities, but many of our colleagues participate in EFLM activities and contribute to EFLM's working groups and committees. For example, you are the best example of the contribution of our society. Prof. Abdurrahman Coskun is the Chair of EFLM Task Group: Practical Guide to Implement Measurement Uncertainty in Laboratory Medicine; Prof. Sedef Yenice is the Chair of EFLM Working Group on Laboratory Medicine Credit Points; Prof. Eser Sozmen is the Chair of EFLM Working Group: Congresses and Postgraduate Education. There are also many young colleagues working in different EFLM committees/task groups or working groups. TBS has been providing block membership to EFLM

Academy since 2021. Currently, the number of members of EFLM Academy from Türkiye through TBS is more than 150. We announced the free "Syllabus course" and the 3rd EFLM Strategic Conference in Türkiye. Many colleagues attended those activities. Especially the syllabus course will be very useful for laboratory specialists in their professional development. The Strategic Conference of last year brought future developments in lab med and is so important for our professional improvements and preparations for future changes.

**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 is the most active federation of IFCC and mostly plays a leading role. For example, the Green Lab initiative of EFLM...We must respect nature, we must decrease our deleterious wastes and we must minimize energy, water, and hazardous chemical use. Another new implementation of EFLM is **Continuing Professional Education Credit System – CPECS. This system could be spread around the World, I think.** The EFLM European Syllabus for post-graduate training for Specialists in Laboratory Medicine is also very important for all authorities. I would like to make a suggestion: of course, every nation's healthcare system is different, and not all the countries of the EFLM member societies are under European Union, but whether they are members of the European Union or not, EFLM should improve its relations with the ministries of health of all member states and should inform them about its initiatives.

**Some personal questions...**

**Please introduce yourself with a few sentences.**

It has been about 40 years in my professional life. I did my specialization at Yüksek İhtisas Training and Research Hospital, Ministry of Health in Ankara. Afterward, I worked there as a chief assistant. Then, I was appointed to the Department of Medical Biochemistry of Ankara Training and Research Hospital with an exam and worked there as an administrative and training chief for 22 years. During this period, I have trained more than 50 medical biochemistry specialists.

Now, I have been working as a full professor at the Department of Medical Biochemistry, Faculty of Medicine, Lokman Hekim University, Ankara since 2020.

Between 2007 and 2013, I served on the Clinical Laboratories Scientific Advisory Board, which prepared the Medical Laboratories Regulation circulated by the Ministry of Health. Between 2016-2020, I worked at the Ministry of Health Medical Laboratories Scientific Commission. I have been a member of this commission since March 2022 again. I am also the Editor-in-Chief of the Turkish Journal of Biochemistry, the official journal of TBS and it is listed in SCI-E and many other indexes.

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

There is a Turkish proverb: "you should not be like a camel's tail in life; it neither lengthens nor shortens for forty years." Everything is changing, everything is in motion in the universe, in nature, in our environment, in science... So, we must keep pace with this change or motion. We must continually improve both ourselves and those around us.

**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?**

One of my favorite lessons during my undergraduate studies in the faculty of pharmacy was biochemistry (the other two

were physiology and pharmacology). In the years of my hospital life (I stayed at the hospital for three years because of my health problem), my interest in this field increased even more. Then I took the medical specialization exam and started my medical biochemistry residency training. (I have a deterministic personality, but, maybe there was an impulse that I can't explain or know). I like laboratory medicine because it is related to almost all branches of medicine and many diseases. Moreover, I am a paraplegic man and the medical laboratory is very suitable for my physical condition (it is a "very well-tailored caftan" for me). If I have another chance, I would choose medical biochemistry again.

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

I advice to young scientists to work hard, follow innovations closely, and apply them, not to break away from the practice of the laboratory environment, but also not to break away from scientific activities and doing scientific research. Learning and teaching have a dialectical relationship. So, they must both learn and teach at the same time.

**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?**

Türkiye has a great cultural and historical heritage. It's the same in terms of music. Because numerous civilizations and tribes have passed from Anatolia. I play a Turkish folkloric instrument, "bağlama" in my free time. But, because of the great earthquake disaster, I have not played bağlama since February 6. I also like to learn about historical and sociopolitical affairs or realities and write some sociopolitical and popular science articles in various journals.



The first session of 27th National Biochemistry Congress.



During a meeting at the Testing and Diagnosis Services of MoH, 2016.



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Elie Fux (Germany, Chair of Working Group Metabolomics)



Reza Bakhtiari (Iran), Khosrow Adeli (IFCC President), Yeşim Özarda (IFCC C-RIDL Chair), Ferhan Sagin (Vice-President of TBS) and myself, 28<sup>th</sup> National Biochemistry Congress, October 2017.



With TBS board members on its 40<sup>th</sup> anniversary, at the 27<sup>th</sup> National Biochemistry Congress, October 2015.



Tomris Ozben, TBS EB, and some other Turkish colleagues working in IFCC and EFLM bodies, at the Joint Congress of BCLF and TBS, October 2019.



The last EB of TBS, at the TBS International Biochemistry Congress // 33<sup>rd</sup> National Biochemistry Congress, Çeşme, İzmir, October 2022.



With my students at my office at the Department of Medical Biochemistry, Ankara Training and Research Hospital (Murat Durak, Serkan Bolat, Ayşenur Macun, Özge Sezgin, Neslihan Cihan, Selin Yıldız, and myself, Ankara, 2017).



Tomris Ozben (EFLM President) and Mario Plebani (President-Elect of EFLM) at the Joint Congress of BCLF and TBS in Antalya, October 2019.



Khosrow Adeli, Tomris Ozben and myself at the Joint Congress of BCLF and TBS in Antalya, October 2019.



### Coffee with Dr Bess Margrethe Frøyshov, President of the Norwegian Society of Medical Biochemistry



**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 Norwegian Society of Medical Biochemistry was established in 1957. Our main goal is to contribute to develop all aspects of

Medical Biochemistry; research, practical use of our knowledge, and our relation to clinicians and patient treatment.

Our members range from medical specialists, our specialists to be, laboratory leaders, and biomedical analysts with master's degrees or specialist training. We want everyone with relevant competence who wants to contribute to our society, to be able to do so. At present, we have just over 150 members.

Our board consists of six members from different parts of Norway, who have various interests within the field of Medical Biochemistry. We have established several working groups that contribute to standardizing procedures and interpretations and developing new common knowledge. These groups are led by dedicated members from our organization and focus on topics such as environmental toxins and health, HbA1c interpretations, standardization of eGFR, and pediatric reference values.

Together with our sister organization in the Medical Association, we arrange a yearly national meeting in Medical Biochemistry for members from these two organizations. This both represents an opportunity to meet and have nice social happenings together, and to exchange information and learn from each other.

**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?**

The education system for medical specialization in Norway has recently been changed. Learning objectives and activities now define the curriculum of Medical Biochemistry, and each hospital needs to describe good plans for their specialist training program. Our main issue is that we are short of specialists, which challenges our capacity to educate more specialists. At present, some hospitals in Norway do not have specialists, and many only have one or two specialists within our field. Resultantly, we have to work together to educate young doctors, especially in rural Norway. We also cooperate with other Nordic countries in the Nordic organization NFKK (Nordisk Forening for Klinisk Kemi), and each country arranges educational courses open for all specialist candidates. Norway is responsible for education in academic writing. NFKK is also responsible for publishing a scientific journal, SJCLI (Scandinavian Journal of Clinical and Laboratory Investigation) and our Nordic journal KBN (Klinisk biokjemi i Norden).



**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?**

We encourage our members to participate in EFLM working groups and other professional initiatives. At the same time, we know that many people have a very tight schedule on a daily basis as we are few specialists in Norway and that there is not always possible to find time to contribute as much as we might want to in a busy schedule. We also have good and close cooperation within the Nordic countries, which is important for us both collegially and professionally.

**Some personal questions...**

**Please introduce yourself with a few sentences.**

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

**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???**

My motivation in practicing the medical profession is to contribute to good and equal services for everyone who needs it when they need it, regardless of gender, age, place of residence, ethnic background, and religion. This is also the text of our legislation on specialist health services and is an important anchor for me in the day-to-day exercise of my work. I became a specialist in Medical Biochemistry in 2003 and continued my education in management with a master's degree in "The experience-based master's program in health administration", University of Oslo, in 2005. My interest in leadership and management awakened when I was a union representative for young doctors at the hospital I worked, and later as a leader in the local Norwegian Medical Association. After working for a few years in the laboratory as a senior physician, I became head of the diagnostic division in our hospital trust, Vestre Viken Hospital Trust. This hospital trust was established by merging four hospitals and the experience from this process was very useful to me in my next position as CEO of Sykehuset Telemark Hospital Trust, which consisted of five former hospitals. The experience from laboratory work with its high-quality demands and efficient logistics, together with the dialogue with many clinical specialties and professional groups gave me a deeper understanding of our hospital services as a whole. I understood and acknowledged that all the wheels in the machinery must work for the hospital as a complete organization to deliver its services. To do so, health workers must be seen, listened to, and respected for their work. Throughout my years in hospital leadership, I observed considerable development in the demands for high quality, patient safety, and control of our processes and organization. Laboratory medicine developed in parallel with high-quality criteria, technology, and new methods, and I had to refresh and renew my knowledge in Medical Biochemistry when I returned to the profession after almost 10 years as a leader. Correspondingly, during my management positions, I gained valuable knowledge that I use in my current position as the senior specialist in our department, and how our role in the entire health service system can offer good services and be useful in patient treatment. The most important experience I have from both types of positions is the need for good cooperation with others and good and safe communication. You must be clear and honest about who you are to gain this trust from your coworkers, a trust that is the foundation for leadership, management, and human and professional development. It is also the most difficult thing to execute well. In order to succeed, I have held on to my motivation

**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?**

Laboratory medicine is constantly evolving. New clinical needs, development of new ways and methods. New and deeper understanding of existing analyzes, are all factors leading laboratory medicine forward.

There is hardly any patient treatment where laboratory medicine does not play a central role in diagnostics, treatment, and follow-up. The possibility of using artificial intelligence in the development of algorithms for patient care is coming. Development of diagnostic tools that integrate analysis results, clinical symptoms, and other information will likely be seen in the near future. Specialists in laboratory medicine are central in this development, which requires close collaboration with clinicians and specialists from other diagnostic disciplines.

**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?**

Our profession handles a demanding combination of standardization and strict quality criteria, as well as innovation, cooperation, and development. We must be able to focus on several tasks at the same time and appreciate and use the new tools that are made available. Some will probably find it demanding to let other disciplines into our laboratory domain, but I believe that our ability for scientific understanding, development, and cooperation with clinicians will help us find new solutions together with other types of disciplines. As of today, we are not enough specialists in our profession to continue working as we always have done. Thus, using digital knowledge and cooperating with other disciplines will be necessary to provide equal or improved services in 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 3<sup>rd</sup> EFLM Strategic Conference, its sessions were recorded and are available for one year?**

The board of our National society has decided to give EFLM Academy membership to all our members so that they can have access to good professional lectures, summaries of knowledge, journals, and books as well as CLSI documents and other professional and organizational information. I find that this is valued and used both in our daily work and in the training of new specialists.

and my professional anchor “creating good and equal services for everyone when they need it”. We are fortunate in our profession to be able to contribute with analyzes and answers, important to the treatment of almost all patients. Our responsibility is to contribute with the right Interpretation to the right patient at the right time, in close dialogue with the clinicians who treat the patients. If we do not understand the clinicians and their demands and they do not understand us, or our answers, it will affect the care of the patient and the safety of the patient.

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

In Norway, the training of new specialists is defined by 96 learning objectives with associated activities. In addition, young doctors must participate in training in ethics, communication, understanding of scientific work, among other things. I believe it is just as important to develop competence in cooperation and communication as in professional competence and that these elements are better taken into account in the new description of our education than the previous one.

A famous song lyric goes like this; “Life is what happens to you while you are busy making other plans.” We make our choices and experience both the joys and challenges of doing so. I chose Medical Biochemistry out of professional interest. Later, I chose leadership and management instead, because I saw that organization, structure, and development of hospitals were essential to providing good patient care. However, I ended up choosing my original profession again, which in the meantime, in my experience, had become both more advanced and challenging. In my two career choices, I have enjoyed and benefited from both paths, regardless of the position I have held. You take your experiences with you throughout life and learn from the people you meet and the processes in which you are involved. The important thing is to never stop asking questions and always be curious to learn and develop yourself.

Medical Biochemistry is both a difficult and an easy field of knowledge. By that, I mean that our profession is technically complex and rapidly developing, and at the same time most medical tasks can be carried out during daytime and you usually have both time and the opportunity to immerse into exciting and difficult cases. Daytime work also enables time for family and leisure. I had three small children when I chose my specialty, and my choice of field was probably influenced as much by this fact as by my interest in Medical Biochemistry. Family life has always been important to me, both husband and children and our five, soon to be seven, grandchildren. I love knitting, and I have a big family who enjoy the products of my hobby. We live by the sea and walks with the dog and swimming in the sea (all year round) are also activities high on my agenda, as well as spending time in our cabin in the mountain.

I believe that a good personal life and a good professional life play together, and I am grateful that I can enjoy both every day. I also believe that this is the future of the profession; to invest in young doctors who are motivated by helping patients and are anchored in “good and equal services to all” and at the same time want to have the opportunity to live good lives with their families.



Our group of specialists in Medical Biochemistry in our hospital



## Coffee with Dr Tanja Antunović, President of the Montenegrin Association of Clinical Chemistry and 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?**

Montenegro is a small country in the central Mediterranean, west Balkan region, which regained its independence in 2006. Accordingly, our Society – Montenegrin Association of Clinical Chemistry and Laboratory Medicine (MACC) was founded in 2007. Before

that we were part of The Society of Medical Biochemists of Yugoslavia and The Society of Medical Biochemists of Serbia and Montenegro. Our Society has 60 active members, mostly medical doctors, specialists in clinical biochemistry, pharmacists, specialists in medical biochemistry or pharmacists – medical biochemists. Purpose of our Society is continuing medical education of our members, promotion of our profession among other healthcare workers, and efforts to make an impact in Montenegrin legislation regarding the position of laboratory medicine in our healthcare system. Our focus right now is on harmonization of measurement units and reference values, initiatives for accreditation of all medical laboratories in Montenegro according to ISO 15189 standard, participation in upgrading existing e-health systems with laboratory data from all laboratories in public health as well as private laboratories. Regarding continuing education our plan is to organize regular national conferences biannually.

**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?**

Our profession is very dynamic, vivid, and improving rapidly from year to year. Best suggestion for education throughout an entire professional career is to read, watch, hear and learn something new every day. Nowadays there are so many online programs, webinars, presentations, workshops, exchange programs, scientific papers etc. which make everything easier for our generation in contrast to generations 30-40 years ago. My preferred way of education as a specialist and subspecialist is through visiting and temporary working in some other specialized laboratory.

I didn't finish undergraduate and postgraduate studies in my country. There is no syllabus for specialist studies in laboratory medicine in Montenegro yet. Young people may finish undergraduate studies at the Faculty of Medicine, University of Montenegro in Podgorica, but then they have to enroll into specialist studies in some of the neighboring countries, usually Serbia. Neighboring countries have very good syllabuses, in accordance with European syllabus for post-graduate training in clinical chemistry and laboratory medicine.

There were some initiatives concerning developing a core curriculum for the training of medical biochemistry professionals in Montenegro, but in my opinion, training of medical biochemistry professionals in my country should start only with core curriculum prepared in best possible way, more laboratory professionals eager to transfer knowledge and advancing laboratory profession in general. Very interesting idea could be collaboration with some University in one of the neighboring countries and forming some kind of joint, merged syllabus.

**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?**

One of my dearest colleagues said to me once: "If I wanted to be more visible I would be a surgeon". Fact is that laboratory people have a unique set of character features and that they usually don't want to be in the spotlight. But, laboratory medicine has become so much more than interpretation of glucose and urea values and our position is very important in connecting clinics and diagnostics. Our biggest challenge is to recognize and accept that role and act accordingly. We are very much visible in my opinion.

**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?**

Emerging technologies are already slowly but surely becoming a part of medical laboratories. Development of these technologies is happening fast and medical biochemistry professionals need to adjust, study and accept new knowledge. Certainly, Partnership models for efficient integration of emerging technologies could be very beneficial.

**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 3<sup>rd</sup> EFLM Strategic Conference, its sessions were recorded and are available for one year?**

Members of our Society gain full EFLM Academy membership this year for the first time. 42 of 60 MACC members registered for EFLM Academy, and can use all of the advantages of EFLM Academy which are many and remarkable.

Regarding EFLM activities through many working groups, unfortunately we do not participate enough. Hopefully that will change in future.

**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 best activity of the EFLM so far, in my opinion, is creating the EFLM Academy Syllabus course. It was a great effort, and now it is free for every Academy member to obtain much important information. I would also emphasize the promotion of the EUSpLM specialist in not just the EU, but all European countries.

I'm certain that EFLM will have a central role in improving our profession in future. One of the activities that was also very significant was publishing guidelines in cooperation with other societies (for example EAS-EFLM consensus guideline of non-fasting lipid testing and reporting) and expectantly EFLM will continue to do so.

**Some personal questions...**

**Please introduce yourself with a few sentences.**

My name is Tanja Antunović and I am a specialist in medical biochemistry, subspecialist in clinical immunochemistry and have PhD in medical science. I have worked in a laboratory for 18 years, and I knew that would be my occupation since I was 15 years of age. I was raised in one small town on Montenegrin coast, in one of the most beautiful bays in Europe (Bay of Kotor), and still consider that town, full of stairs, my true home. Now I live in the capital of Montenegro, Podgorica and work in the Clinical Centre of Montenegro.

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

My motivation in everything I did was always improving myself, professionally and personally growing. Every position, if any, was a lucky consequence of that standpoint.



**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 always wanted to participate in helping people, and caring about their health. But, I saw myself in the background and not at the front-line. For that reason, I considered the laboratory profession my ideal fit. After all, "playing with molecules" is so intriguing and no, I wouldn't choose anything else if I have another chance.

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

Pretty much as for any other profession: "You must inform yourself very well about profession that you think you wish to pursue, you have to love that profession and work hard to become the best professional you could be.

**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 like all sort of art: literature, music, film, painting, photography... I also enjoy in dancing tango, walking, swimming and hiking. Montenegro is Mediterranean country, and one of the most common ways of spending free time on the coast of Mediterranean Sea is to be with your friends outside, on the streets, in cafés and talk unstoppable. Beside that national and regional hallmark I like to spend time with my family, or go to countryside.





**Coffee with Prof. Dr Katerina Tosheska-Trajkovska, President of the Macedonian Society of Medical Biochemistry and 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?**

Doctors and pharmacists specializing in medical biochemistry have been organized in a professional association since the 60s of the last century within the Association of the Medical

Biochemists of Yugoslavia (DMBJ). In 1990, an independent Society of Medical Biochemists (SMB) was formed with Prof. Dr. Radmila Hrisoho as her first President. After the independence of the Republic of Macedonia (1991), the society was renamed in the Association of Medical Biochemists of Macedonia (ZMBM) in 1993. ZMBM has been a member of the Balkan Clinical Laboratory Federation (BCLF) since its formation, and since 1993, ZMBM has been a full member of the International Federation of Clinical Chemistry (IFCC).

The Macedonian Society of Medical Biochemistry and Laboratory Medicine was founded in 2003 under the name Society of doctors specialists in medical biochemistry. In 2014 changed its name to the Macedonian Society of Medical Biochemistry and Laboratory Medicine (MSMBLM). The first president of the Society was prof.d-r Bojana Todorova, who in 2008 appointed prof.d-r Danica Labudovic as Acting president. From 2013-2019 prof.d-r Danica Labudovic was President of the Society. In 2019 I was elected as President of the MSMBLM. The Board of the Society is elected for four years and consists of 7 members. Since 2014, MSMBLM has been a full member of IFCC and EFLM. Since 2015, MSMBLM has been a full member of BCLF.

MSMBLM is a small association with nearly 120 active members (North Macedonia is a small country with only about 2 million inhabitants). MSMBLM is part of the Macedonian Doctors Association (MDA); it is a voluntary, vocational, professional and scientific society of specialists in Medical Biochemistry (Medical Doctors and Master of Pharmacy/Graduated Pharmacists) and Medical Doctors and Masters of Pharmacy, currently specializing in Medical Biochemistry, as well as other university graduates working in the field of Medical Biochemistry and Laboratory Medicine. The primary focus remains educating, training, and updating our members on the latest technological developments and trends. Another essential goal of this association is to promote

professional cooperation with colleagues in the same field or related medical fields domestically and with international associations, participation in international professional and scientific meetings, the nomination of members of the Society for awards etc. Over the years, MSMBLM has organized important international activities such as the 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup> and 26<sup>th</sup> Meetings of the BCLF in Struga, Ohrid, and Skopje.

**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?**

Laboratory profession across Europe still differs in academic background of the specialists in clinical chemistry. In our country, two university institutions are offering post-graduate specialization in medical biochemistry for Medical Doctors and a Master of Pharmacy. Specialists in medical biochemistry/clinical chemistry hold basic education in general medicine (MDs) or pharmacy (Ms PHs). The length of the graduate studies in general medicine is six years with 360 ECTS, and the length for general pharmacy is five years with 300 ECTS.

The postgraduate training in medical biochemistry, as a monovalent specialization, for both profiles, ranges 4 years. Presently, the total length of basic education for both profiles is 10,5 for MDs and 9,5 years respectively, and both profiles are registered in the European Register of Specialists in Laboratory Medicine.

In 2013, the post-graduate specialization in this field was updated to implement a syllabus that reflects the EFLM and UEMS recommendations. Today we have a harmonized post-graduate program in medical biochemistry that is aligned with the European syllabus and EU directives.

We appreciate all efforts of EFLM to harmonize post-graduate education in laboratory medicine in Europe.

**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 a member of a new generation of laboratory specialists (not by age but by a state of mind), I feel that it's our responsibility to take a new stand and refuse the negative conversation and finger-pointing within our circles. Instead, we must be constructive, optimistic and confident. I see Laboratory professionals **as a group of people working together to advance their shared goals and ideas.**

One way laboratory specialists can increase their visibility within the healthcare system is by participating in interdisciplinary teams and collaborating with other healthcare professionals to integrate laboratory testing into the broader healthcare process. This can help to demonstrate the value of laboratory medicine and the vital role that laboratory professionals play in patient care.

I know we have big challenges ahead of us. But, a positive attitude doesn't cost much. Yet, it can be challenging to maintain at times. It's our responsibility to preserve the focus only on things we can both control and influence at the same time – how we support and respect each other. By nature, I am an optimist, and I believe in positive movement. It represents a positive focus and a celebration of something we're all proud of – our work, which we all consider our mission in life.

**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?**

Laboratory medicine is a digital science. Processing, connecting, storing, and ordering extensive parts of these individual data requires Big Data techniques. Whereas new technologies such as artificial intelligence and machine learning have exciting applications for the augmentation of laboratory medicine, the Big Data concept remains fundamental for any sophisticated data analysis in large databases. Amended with clinical data, laboratory medicine data allow a gain in pathophysiological insights, can ameliorate patient care, or can be used to develop reference intervals for diagnostic purposes. Nevertheless, Big Data in laboratory medicine come with challenges: the growing number of analyses and data derived from them is a demanding task to be taken care of. Laboratory medicine experts are and will be needed to drive this development, take an active part in the ongoing digitalization, and provide guidance for their clinical colleagues. Additionally, there may be financial constraints and challenges in implementing new technologies and systems, as well as the need to ensure that any new technologies are fully validated and meet regulatory standards. Finally, there are ethical considerations when using AI in medicine, too.

**Do you think your society members participate and/or contribute enough to EFLM activities? Do they know the advantages to be EFLM Academy member, 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?**

Currently, we have one MSMBLM member as a full member in the WG-Register and WG-Accreditation and ISO/CEN standards. In addition, one young scientist was a member of the WG-Harmonisation for several years. Recently, one member of our society became National EFLM TF-GSL Expert. It can always be better. Therefore, I would like to encourage young members to apply to all positions and working groups that are offered to them. One of the biggest challenges for MSMBL was enrolment of our members-specialists in the Register of Specialists in Laboratory Medicine (EuSpLM). I am really proud that all my colleagues, Medical Doctors and Master of Pharmacy with a minimum of 9 years of education met Equivalence of Standards (EoS) in education and training across Europe. Evaluation of the requested documentation by the EFLM Profession Committee confirmed that we have the knowledge, competences and skills to join the EuSpLM Register. I want to thank Dr. Gilbert Wieringa for his enormous support to our Society in our effort to become members of the EuSpLM Register. Starting in 2020, members of the MSMBLM have the opportunity to register en-block for the "EFLM Academy" section. In my opinion, establishing the EFLM Academy is one of the best steps. The benefits of membership in the EFLM Academy are: free online subscription to the scientific journals, free access to documents of the Clinical Laboratory Standards Institute (CLSI), CLSI membership at a reduced rate, Reduced registration fee to EFLM conferences and courses, free access to the Syllabus course, Free access to EFLM webinars; Eligibility to apply for EFLM travel grants.

**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?**

Cooperation with EFLM is a great opportunity, especially for us, who come from upper-middle income and middle-income countries, to promote science and facilitate research in laboratories in our countries. Additionally, EFLM offers us great opportunities for continuous training and education. I do not support the idea that small societies are not capable of organizing educational or training activities. But it would be much easier if small societies (of the region) can jointly apply for projects, grants, training and educational activities. In 2022, it was

proposed to EFLM National Societies the Course "Biostatistics in Laboratory Medicine" organized by the WG on Congresses and Postgraduate Education. Among 9 applications, our application was selected in the frame of the EFLM Scholarship Programme in memory of Prof. Vic Blaton. The course was structured in 2 days in November 2022 and delivered by Prof. Matteo Vidali and Prof. Andrea Padoan from Italy. We had a very successful course, with almost 40 participants, financially supported by IVD Companies. We would like to organize this course in the coming years, maybe in a different format. First, as a course in basic statistics, then at an advanced level, etc. We found that biostatistics is the weakest link in the process of scientific-research projects. The EFLM Scientific Research Grant has been established to promote science and facilitate research in European Laboratory Medicine. As a result, two research projects from our country received the EFLM Research Grant (Vic Blaton Grant): "Impact of oxidized low density lipoprotein (oxLDL) and anti-oxLDL antibodies on cardiovascular health" (2022) and "Thyroid Hormone Changes during Pregnancy in the era of the COVID-19 Pandemic" (2023).

**Some personal questions...**

**Please introduce yourself in a few sentences.**

My name is Katerina Tosheska-Trajkovska. I was born in Skopje in 1973. I am married to Ivica Trajkovski and the proud mom of Peter, my son. I graduated from the Medical Faculty in Skopje, where I finished my medical biochemistry specialization. In 2004 I obtained my Master of Science in Molecular Biology and Genetic Engineering (molecular medicine). In 2011 I received my Ph.D. degree in medicine. I have worked at Institute for Medical and Experimental Biochemistry for 25 years.

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

Currently I am the head of the Institute of Medical and Experimental Biochemistry, Medical Faculty in Skopje and I have been also honored with the privilege to serve the Macedonian Society of Medical Biochemistry and Laboratory Medicine (MSMBLM) as its President. I am a full professor in biochemistry and clinical biochemistry at Medical Faculty in Skopje. I am Vice president of the Technical Committee for medical laboratories at the Institute for accreditation of the Republic of North Macedonia. The three C's of life describe me the best: chance, challenge, and change. Life can be hard sometimes and the path is not always clear. But if we are making choices, either way, we sure would rather be picking the path that leads us closer to our vision than letting fear make the choice by default.

**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 must be honest; it was not love at first sight. But in time, I realized how lucky I have been. For me, the most inspiring part of my current job is teaching, working with students, and sharing the mysteries of metabolic pathways. I have no regrets about the choices I have made.

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

I am very proud of the young members of our Society. In the past years, there has been a growing interest in specializing in medical biochemistry. The young MSMBLM's members are a driving force in adopting and sharing new ideas and approaches and applying recent trends and technologies. Sometimes I admire them for their spirit, ideas and enthusiasm. My advice would be: "Follow your dream. Work hard. Explore. Read a lot. Be brave. Be happy."



BCLF 2018, Skopje

**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 love nature. I learned to manage my time effectively and enjoy my everyday routine- brisk walking in the city park. In summer I enjoy swimming in the Ohrid Lake and the Aegean Sea. My friends know that I am a real thalassophile because of the amount of time I spend near or in the sea. I am a passionate book reader. I LOVE reading. The biggest problem in our home is that we need more bookshelves for all our books. I also enjoy travelling, especially with my family. I genuinely enjoy spending time " just the three of us", exploring new cities, cultures and cuisine, specifically the last one J.



EFLM Postgraduate Course in Biostatistics in Laboratory Medicine, Skopje, 2022



16th Belgrade Symposium for Balkan region, organized under EFLM and IFCC Auspices 2022



Family trip, Rome 2018



LM4MS, 2nd AFCB-EFLM Conference coorganized with 29th BCLF Meeting, Heraklion, Crete, 2022



Skopje, BCLF 2018

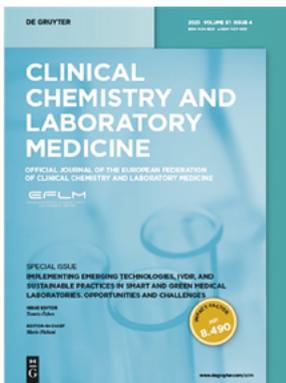


MSMBLM & Snibe Symposium, Endocrine Grand Rounds 2022, North Macedonia, 2022

## NEWS FROM EFLM FUNCTIONAL UNITS

# Green and Sustainable Labs: the EFLM commitment

Reported by Tomris Ozben, Chair of the EFLM Task Force "Green and Sustainable Laboratories"



In my role as the Chair of the EFLM Task Force "Green and Sustainable Laboratories" (TF-GSL), I am delighted to inform you that the CCLM Special Issue containing the papers from the TF-GSL Speakers of the 3<sup>rd</sup> EFLM Strategic Conference "SMART and GREEN LABORATORIES - How to implement IVDR, emerging technologies and sustainable practices in medical laboratories?" has been published and freely downloadable.

Thanks to the agreement between EFLM and the publisher DeGruyter. Click below to access the full contents of the Special Issue.

[Volume 61 Issue 4 - Special Issue: Implementing Emerging Technologies, IVDR, and Sustainable Practices in Smart and Green Medical Laboratories. Opportunities and Challenges;](#)  
Issue Editor: Tomris Ozben

I am also proud to announce that in February, the first sessions of exams to appoint **National TF-GSL Experts** have been held and the following 19 people have received the TF-GSL Expert certificate with a validity of two years.

- Rasa Auglienė, Lithuania
- Guzin Aykal, Turkey
- Natia Bukhrashvili, Georgia
- Sean Costelloe, Ireland
- Greta Domarkaite, Ireland
- Blanca Fabre, Spain
- Katarzyna Fischer, Poland
- Lidija Gobec, Slovenia
- Adina Hutanu, Romania
- Tuuji Männistö, Finland

- Ledina Mino, Albania
- Helen Muller, France
- Iva Perović Blagojević, Serbia
- Hedviga Pivovarníková, Slovak Republic
- Anna Sanders, UK
- Sanja Stankovic, Serbia
- Elena Stanojevska Petrushevska, North Macedonia
- Margunn Bye Tøsdal, Norway
- J.J.C.M. (Sjef) van de Leur, Netherlands





## NEWS FROM EFLM FUNCTIONAL UNITS

# EFLM Continuing Professional Education Credit System - CPECS®

Reported by Tara Rolić,  
Member of the EFLM Communication Committee

25th International Congress of Clinical Chemistry and Laboratory Medicine (IFCC) WorldLab and 25th European Congress of Clinical Chemistry and Laboratory Medicine (EFLM) EuroMedLab and 55th Annual Congress of the Italian Society of Clinical Biochemistry and Clinical Molecular Biology (SIBioC) are accredited by the **EFLM CPECS®** to provide the following CPD activity for participants.

EFLM CPECS® is an administrative system that provides a quality assurance mechanism for the accreditation of continuing education programs and events offered based on high-quality continuing education content in laboratory medicine and relevant scientific topics.

A maximum of 19,5 CPECS® credits can be awarded for the scientific sessions of the 25th IFCC-EFLM EuroMedLab Congress. Each participant should receive credit only for the hours corresponding to the extent of his/her participation in the scientific part. Information on CPECS® credits per session can be found in the scientific program and the mobile app, which will be available for download during the congress.

More information can be found [here](#).

The EFLM CPECS® Continuing Professional Education Credit System is a unique acronym for laboratory medicine and an EFLM trademark registered by the European Union Intellectual Property Office (EUIPO) for professional recognition of continuing education.

The banner features logos for the 21-25 May congress in Rome, including WorldLab, EuroMedLab, IFCC, EFLM, and SIBioC. The central text reads 'EFLM CPECS® ACCREDITATION'. A graphic shows a person holding a glowing lightbulb, with the text 'A reason to attend the IFCC WORLDLAB EUROMEDLAB ROMA 2023' next to it.

## Open call for the EFLM LabX offerers!

Reported by Tara Rolić, Member of the EFLM Task Group LabX

The EFLM LabX program facilitates practical training in different fields within Laboratory Medicine for specialists/trainees seeking training opportunities outside their own country. The EFLM LabX website contains a searchable database of medical laboratories, which are ready to offer additional practical education and training and/or research opportunities in laboratory medicine.

The aims of the programme are to share experience and knowledge between medical laboratory specialists across Europe and allow specialists/trainee to achieve higher levels of expertise in specific areas of laboratory diagnostics.

The EFLM LabX programme provides the opportunity for laboratories offering a practice to identify motivated and talented individuals to become part of their research and scientific team. If you are interested in applying as an offerer of laboratory practice please visit [Lab X platform guide](#).

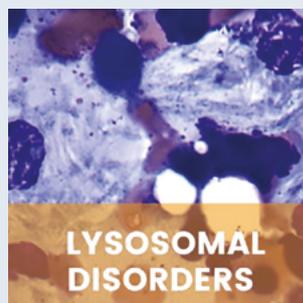
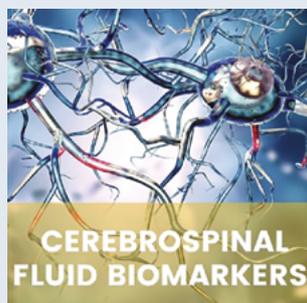
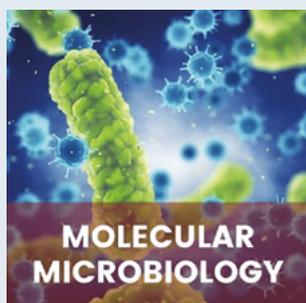
The screenshot shows the 'LABORATORY PRACTICE' section of the website. It features a yellow banner stating 'It is free and gives visibility to your Institution!'. Below this is a search bar with filters for 'COUNTRY (ANY)', 'INSTITUTION (ANY)', and 'TYPE OF PRACTICE (ANY)'. The main heading is 'Laboratory Exchange Programme (EFLMLabX)'. At the bottom, it says 'Welcome user' and 'Search for your practice'.

## PAST EFLM EVENTS

# Past EFLM webinars

Reported by Tara Rolić, Member of the EFLM Communication Committee

The EFLM e-Learning platform started in 2023 with interesting webinars for the EFLM Academy members. If you missed one of these amazing webinars, we strongly recommend you visit the [EFLM eLearning platform](#) and play on-demand webinars. If you are not an EFLM Academy member sign up [here](#) (webinars are available only for EFLM Academy members).



During February and March 2023, different topics in laboratory medicine in webinars were presented: microbiology methods, biomarkers for neurodegenerative dementias, lysosomal disorders and one about monitoring the performance of a measurement system for clinical use. Nadav Sorek from Israel talked about the limitations and understanding of the process of integrating rapid detection methods in microbiology with examples where fast rapid detection methods did have success. Elisabeth Kapaki from Greece explained evaluation criteria as well as the establishment and emerging biomarkers in neurodegenerative disorders in cerebrospinal fluid. Hans Aerts (the Netherlands) presented a diagnosis of Gaucher disease and other lysosomal disorders: which abnormalities to exploit for laboratory diagnosis of Gaucher disease, presented the limitation of genetic testing and the value of storage cell-derived biomarkers. Monitoring the performance of a measurement system for its intended clinical use was a title of a webinar held by Mauro Panteghini from Italy and the learning objectives were the role of metrological traceability implementation in improving the outcome of medical laboratory services, the importance of IVD-MD post-marketing surveillance using appropriate Quality Control programs. The webinar concluded with how internal and external quality assessment should be redesigned to provide enough information about the metrological traceability of IVD-MDs and associated measurement uncertainty.

## UPCOMING EFLM EVENTS

# 5th Symposium CELME 2023. Analytical Performance Specifications (APS): moving from models to practical recommendations

Reported by Silvia Cattaneo, EFLM Office

Do you know CELME? CELME is a biennial Symposium jointly organized by EFLM and the Czech Society of Clinical Biochemistry and takes place in Prague in the historical venue of the Carolinum Charles University.

The CELME Symposium is the place where to share the latest innovative thinking in the delivery of the best laboratory medicine activities and to learn from expert innovators presenting new ways of solving financial, quality and organizational problems of laboratories.

The 2023 edition is dedicated to Analytical Performance Specifications and the aim of the conference is to go through and discuss the three different models agreed by the Milan 2014 EFLM Strategic Conference to set Analytical Performance Specifications for the medical laboratory and to give practical examples on how this can be done. Symposium Chairs are: Prof. Sverre Sandberg, Prof. Mauro Panteghini and Prof. Tomáš Zima. [Click here to access the detailed scientific programme](#)

There is a limited number of seats since organizers can only accommodate 120 participants, therefore those interested are invited to arrange the on-line registrations as soon as possible. Further information at: <http://celme2023.cz>





<https://2023roma.org>

**EFLM**

EUROPEAN FEDERATION OF CLINICAL CHEMISTRY  
AND LABORATORY MEDICINE

WORLDLAB · EUROMEDLAB  
ROMA 2023

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

2022-23

**EFLM**  
EUROPEAN FEDERATION OF CLINICAL CHEMISTRY  
AND LABORATORY MEDICINE

## EFLM LESSONS IN IMMUNOCHEMISTRY

A series of 8 live webinars of 90' each (4 in 2022 and 4 in 2023) introducing to the principles and applications of Clinical Immunochemistry in Laboratory Medicine.

Each lesson will see the presence of a medical doctor presenting a specific disease and its diagnostic challenges; then Specialists in Laboratory Medicine will present the related immunochemistry markers for that specific disease focusing on analytical aspects and pre/postanalytical issues.

*This is an EFLM educational activity organized by the EFLM Working Group "Congresses and Postgraduate Education".*

### REGISTRATION:

This is an EFLM educational activity reserved for free to EFLM Academy Members.

<https://www.eflm-elearning.eu>

### WHEN:

11 April 2023  
27 June 2023  
26 September 2023  
6 December 2023

*Always at 16.00 CET*

### KEY LEARNING OBJECTIVES

- to be able to analyse the diagnostic challenges of the disease
- to learn about the laboratory and clinical aspects of the disease
- to gain knowledge on the diagnostic and prognostic immunochemistry markers
- to understand advantages and discrepancies of these markers in terms of preanalytical, analytical and postanalytical aspects

This EFLM activity is made possible thanks to the kind and unconditional support of



**EFLM**  
EUROPEAN FEDERATION OF CLINICAL CHEMISTRY  
AND LABORATORY MEDICINE

11 April 2023

## EFLM LESSONS IN IMMUNOCHEMISTRY

Lesson n. 5

### FERTILITY: the role of Anti Mullerian Hormone

Moderator: Evgenija Homsak (Slovenia)

### Our Speakers:



**EVGENIJA HOMSAK**  
Introduction to Anti Mullerian Hormone (AMH)

Dept of Clinical Biochemistry, Faculty of Medicine, University in Maribor, Slovenia



**DAMIEN GRUSON**  
Analytical challenges in determination of AMH

Dept of Clinical Biochemistry, Cliniques Universitaires Saint Luc, Brussels, Belgium



**JURE KNEZ**  
AMH in clinical diagnosis (with some case presentations)

Dept of Gynecologic Oncology, Faculty of Medicine, University in Maribor, Slovenia

### WHEN:

11 APRIL 2023  
at 16.00 CET

### REGISTRATION:

This is an EFLM educational activity reserved for free to EFLM Academy Members.

<https://www.eflm-elearning.eu>

This EFLM activity is made possible thanks to the kind and unconditional support of



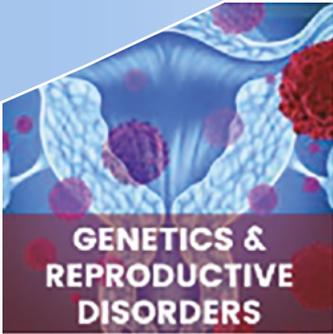
*This is an EFLM educational activity organized by the EFLM Working Group "Congresses and Postgraduate Education".*



## FORTHCOMING EFLM EVENTS

# Forthcoming EFLM webinars

Reported by Tara Rolić, Member of the EFLM Communication Committee



### GENETICS & REPRODUCTIVE DISORDERS

**Applied genetic methods in reproductive disorder**  
Date: 4<sup>th</sup> April 2023  
at 18:00 CET time  
Speaker: Mariam Chipashvili, Georgia



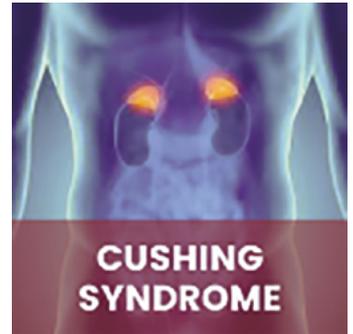
### CLINICAL UTILITY OF MEDICAL TESTS

**The Clinical Utility Of Medical Tests**  
Date: 9<sup>th</sup> May 2023  
at 18:00 CET time  
Speaker: Patrick Bossuyt, Netherlands



### THE FUTURE OF THE LABORATORY

**The future of laboratory lies beyond its wall**  
Date: 18<sup>th</sup> April 2023  
at 18:00 CET time  
Speaker: Jane Cadamuro, Austria



### CUSHING SYNDROME

**Cushing syndrome and its biological work up**  
Date: 30<sup>th</sup> May 2023  
at 18:00 CET time  
Speaker: Damien Gruson, Belgium

Do not miss excellent forthcoming webinars, free and available on demand for EFLM Academy members at the [EFLM e-learning platform](#)!

## NEWS FROM EFLM NATIONAL SOCIETIES

# SEQC<sup>ML</sup> updates Lab Tests Online with the aim of becoming the reference website in the clinical laboratory field



The website in Spanish is the result of collaboration between the Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>), responsible for its

content, and the Spanish Federation of Healthcare Technology Companies (FENIN)

- Lab Tests Online (LTO) allows anyone to reliably interpret their blood and urine tests. For their part, healthcare professionals can quickly find out about specific aspects of a complex test and its interpretation
- The platform has an average of 500,000 monthly visits. Since its launch in Spain in 2007, visits have increased significantly, going from an average of 130,000 per month in 2015, to 480,000 unique monthly users in 2022.
- The new digital space has a renovated format for quick and intuitive access to its contents. It will shortly include a "Laboratory Spies" section, prepared by FENIN, with videos on what a clinical laboratory is like from the inside
- The website has information on some 340 laboratory tests, more than 150 physiological states and diseases, a dictionary with many definitions, population screenings, advice and a monthly news item.

Lab Tests Online (LTO) is a web page designed with the objective of offering a reliable source of knowledge on laboratory tests and related diseases, through simple and rigorous language, so that it is useful for both healthcare professionals and the general population. The Spanish version of LTO was launched in 2007 thanks to the joint effort of the Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>), responsible for its content, and the Spanish Federation of Healthcare Technology Companies (FENIN), which has given project support. In its goal of becoming the reference website in the clinical laboratory field, the platform has been updated with a renovated format for faster and more intuitive access to its contents.

In the words of Dr. Josep Miquel Bauçà, member of the Board of Directors of the SEQC<sup>ML</sup>, "when a patient has a blood or urine test done, he wants to know which tests have been studied and what they all mean. Thanks to the website, the society can find out about the multitude of tests that are carried out in these laboratories and understand their impact on the screening, diagnosis and treatment of diseases". For their part, healthcare professionals can quickly learn about specific aspects of a complex test and its interpretation.

Lab Tests Online is a website that offers complete and up-to-date information for each test or disease, with a simple summary for quick reference, answers to common questions, and the possibility of delving deeper into most of the tests.



The updating of the web incorporates changes in colour, typography, and structure. "In addition, we have just created a profile on Instagram to disseminate curiosities about tests, screenings and diseases, which we continue to update", according to Dr. Bauçà. In addition, a "Laboratory Spies" section will be added shortly, prepared by FENIN, which will include videos on what a clinical laboratory is like from the inside. "This way we will open our specialty even more to other health professionals and to any member of the public," he noted.

The recent changes to the website are only the starting point, the contents of which will continue to be updated and expanded as demanded by users and science. According to Dr. Bauçà, the most consulted pages within LTO are those related to common laboratory tests (cholesterol, liver function tests, and urinalysis) and those on requirements for a blood test.

The website from our country is considered a success story; in fact, visits have been increasing significantly, going from an average of 130,000 per month in 2015 to 350,000 in 2018, and reaching 480,000 unique users per month in 2022. According to the SEQC<sup>ML</sup>, "over the last few years the website has had an average of 500,000 monthly visits, with a total of 4.1 million unique users in the last year". Currently the web has information on some 340-laboratory tests, more than 150 physiological states and diseases, a dictionary with a multitude of definitions, population screenings, advice, and a monthly news item. Dr. Bauçà concluded: "Our intention in the coming years is to increase the number of tests and keep them fully updated, which we will achieve thanks to the collaboration of the SEQC<sup>ML</sup> and the support of FENIN".

<https://www.labtestsonline.es/>  
[www.seqc.es](http://www.seqc.es)

## IFCC NEWS

Reported by Katherina Psarra, Editor of IFCC eNews and Chair eNews WG

Dear Colleagues,

Here we are again with a new issue. I hope that you went through the rich first 2023 eNews issue and that you are ready to travel around the world with [this issue](#).

But before guiding you around the world, I am calling you to read around the world with [President's Prof Khosrow Adeli's message](#) because you will find a detailed description of the IFCC meeting on a new IFCC project, the guidelines of almost all or as many as possible laboratory tests. Almost all the IFCC officers participated and expressed their opinion and a lot more will be done in all the committees and task forces for this ambitious purpose to be fulfilled.

There is a radio station in Greece called "Kosmos" (the Greek word for world) where we hear music from all over the world. And in the [IFCC eNews issue](#) you can hear "music" from all over the world, news from Peru, Argentina and Bolivia, China, Saudi Arabia and Japan, and Spain and EFLM. Kosmos Laboratory Medicine, colleagues from all over the world.

Read the issue and listen to the music created by all these voices.

Katherina

## IFCC FORUM for Young Scientists 21 May 2023, Rome (IT) – II Edition

Young Scientists (YS) are the future of laboratory medicine. Future leaders need to be trained and encouraged to succeed in their role, ideally with the support of experienced leaders. To make this feasible, the IFCC Task Force for Young Scientists (TF-YS) invites you to attend the "IFCC Young Scientists FORUM", where YS will have opportunities of training and improve communication and networking. The scientific program at the FORUM will provide the YS an excellent opportunity for open discussion about scientific and personal experiences, exchange of ideas among colleagues and best practices. Young Scientists will present and discuss their activities in laboratory medicine and benefit from career skills development.

[Be ready to book your place at the FORUM](#)



## Are You Ready To Apply For UNIVANTS?

Now is the time to start thinking about your 2023 UNIVANTS of Healthcare Excellence award application. Unify with your team to review outcome metrics for your integrated clinical care initiative. Applications for this prestigious UNIVANTS recognition program begin this August with a deadline of November 2023. To learn more about UNIVANTS, past winners and to prepare your application, please visit [www.UnivantsHCE.com](http://www.UnivantsHCE.com)



## The eJIFCC adopts Editorial Manager (EM) system for manuscripts

Prof J. Kappelmayr, eJIFCC Editor-in-Chief, and Dr HP Bhattoa, eJIFCC Assistant Editor, are glad to announce that the eJIFCC adopted "Editorial Manager" for manuscript submission.

In the past years, the eJIFCC has become increasingly visible among laboratory specialists worldwide. This resulted in the increase of the number of downloads of published papers (the eJIFCC is a platinum open access publication), and in a considerable increase in the number of submissions. We detailed the progress in the advancement of the [scientometric parameters](#) of the journal in a review in the eJIFCC, Issue 4, 2021. Therefore, we decided to advance our manuscript handling process, and subscribed to Editorial Manager (EM). Editorial Manager is a long-established and one of the best-known editorial submission and manuscript processing program that belongs to Aries. The introduction of EM, along with the use of Ithenticate, the most trusted plagiarism checker by the world's top researchers, publishers, and scholars, will increase eJIFCC reputation among the Scientific journals.



## 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](mailto:eflm@eflm.eu)

4 April 2023 <b>EFLM Webinar:</b> Applied genetic methods in reproductive disorder on-line, <a href="#">Click here for information</a>	 5-7 April 2023 <b>VIII. Türkiye in vitro Diagnostic (IVD) Symposium "Preclinical Modelling"</b> Izmir (TR), <a href="#">Click here for information</a>
11 April 2023 <b>EFLM Lessons in Immunochemistry:</b> Lesson n. 5 - FERTILITY: the role of Anti Mullerian Hormone on-line, <a href="#">Click here for information</a>	 14-15 April 2023 <b>15ª Reunião Científica da SPML (20th anniversary)</b> Oporto (PT), <a href="#">Click here for information</a>
18 April 2023 <b>EFLM Webinar:</b> The future of laboratory lies beyond its wall on-line, <a href="#">Click here for information</a>	 4 May 2023 <b>11th European Symposium of Clinical Laboratory and In Vitro Diagnostic Industry: "THE LABORATORY OF HAEMATOLOGY: A 360° VISION"</b> Barcelona (ES), <a href="#">Click here for information</a>
9 May 2023 <b>EFLM Webinar:</b> The Clinical Utility Of Medical Tests on-line, <a href="#">Click here for information</a>	 16-19 May 2023 <b>The 14th International &amp; 20th National Congress on Quality Improvement in Clinical Laboratories</b> Tehran (IR), <a href="#">Click here for information</a>
19 May 2023 <b>Updates on Laboratory Automation: Moving towards Standardization</b> Rome (IT),	20-21 May 2023 <b>Clinical mass spectrometry: validation and accreditation of IVD and Laboratory Developed Test (LDT) in the new "Regulation EU 2017/746" era</b> Rome (IT), Worldlab-EuroMedLab 2023 Satellite Meeting <a href="#">Click here for information</a>

<p>21-25 May 2023</p> <p><b>EuroMedLab 2023 25th IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine</b> Rome (IT), <a href="#">Click here for information</a></p>	<p>30 May 2023</p> <p><b>EFLM Webinar: Cushing syndrome and its biological work up</b> on-line, <a href="#">Click here for information</a></p>
<p>8-10 June 2023</p> <p><b>61st Congress of the Hungarian Society of Lab Med</b> Budapest (HU), <a href="#">Click here for information</a></p>	<p>13 June 2023</p> <p><b>EFLM Webinar: Machine learning based clinical decision support using laboratory data</b> on-line, <a href="#">Click here for information</a></p>
<p>27 June 2023</p> <p><b>EFLM Lessons in Immunochemistry: Lesson n. 6 - ANEMIA</b> on-line, <a href="#">Click here for information</a></p>	<p>11 July 2023</p> <p><b>EFLM Webinar: The use of metabolic bone markers in childhood</b> on-line, <a href="#">Click here for information</a></p>
<p>12 September 2023</p> <p><b>EFLM Webinar: Digital Transformation: What to do and How to do</b> on-line, <a href="#">Click here for information</a></p>	<p>20-23 September 2023</p> <p><b>6th ACTC meeting “Liquid Biopsy and Precision Oncology: where do we stand now”</b> Skiathos (GR), <a href="#">Click here for information</a></p>
<p>20 September 2023</p> <p><b>THE INTERNATIONAL CONFERENCE OF LABORATORY MEDICINE: 30 YEARS LATER</b> Symposium dedicated to the memory of Professor Angelo Burlina Padua (IT), <a href="#">Click here for information</a></p>	<p>23 September 2023</p> <p><b>Laboratory medicine role in clinical outcome and Challenges of Laboratory Medicine in Georgia</b> Tbilisi (GE),</p>
<p>26 September 2023</p> <p><b>EFLM Lessons in Immunochemistry: Lesson n. 7 - HEPATIC FIBROSIS: the role of laboratory biomarkers in diagnosis and monitoring</b> on-line, <a href="#">Click here for information</a></p>	<p>27-30 September 2023</p> <p><b>BCLF 2023 – 30. Balkan Clinical Laboratory Federation Congress and and 2. Montenegrin Congress of Clinical Chemistry and Lab. Medicine</b> Herceg-Novi, Boka Bay (ME), <a href="#">Click here for information</a></p>
<p>12-13 October 2023</p> <p><b>5th Symposium CELME 2023. Analytical Performance Specifications (APS): moving from models to practical recommendations</b> Prague (CZ), EFLM Event <a href="#">Click here for information</a></p>	<p>6 December 2023</p> <p><b>EFLM Lessons in Immunochemistry: Lesson n. 8 - CORONARY ARTERY DISEASE predicting the development in apparently healthy individuals: the role of Lp(a)</b> on-line, <a href="#">Click here for information</a></p>
<p>21-24 May 2024</p> <p><b>The 10+1 Santorini Conference “Systems medicine and personalised health &amp; therapy”- “The odyssey from hope to practice: Patient first - Keeps Ithaca always in your mind”</b> Santorini (GR), <a href="#">Click here for information</a></p>	<p>13-14 June 2024</p> <p><b>9th International Symposium on Critical Care Testing and Blood Gases</b> Saint Malo (FR), <a href="#">Click here for information</a></p>

### 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 12,500 laboratory medicine professionals and is also published on the EFLM website.

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

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

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