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International Federation of Clinical Chemistry and Laboratory Medicine





In this issue

EDITORIAL

- ▶ Message from the eNews Editor 4

THE VOICE OF IFCC

- ▶ IFCC President's Message – June 2022 5
- ▶ IFCC President-Elect: the candidates 6
- ▶ IFCC C-MHBLM and C-POCT in Munich asking key questions about DTC testing 7

IFCC CELEBRATES 70 YEARS

- ▶ Interview with Prof. Tomris Obzen, EFLM Regional Federation Representative on the IFCC Executive Board 11

IFCC: THE YOUNG SCIENTISTS

- ▶ IFCC Forum for Young Scientists 15
- ▶ IFCC Roche Travel Scholarships for EuroMedLab Congress Munich 2022: Elizabeth Tchaiwe Chimbayo, Malawi 15
- ▶ IFCC Roche Travel Scholarships for EuroMedLab Congress Munich 2022: Wycliff Ochieng, Kenya 17

❑ CONTRIBUTE TO IFCC eNews	
▶ Going green: lab medicine and environmental sustainability (point of view)	19
❑ NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES	
▶ Continuing professional development activity on metabolic bone disorders in patients with β-thalassemia major	23
▶ Report from the 47th ACBICON 2021, Kolkata, India: "Towards a Better Tomorrow"	24
▶ News from the Japan Society of Clinical Chemistry (JSCC): the 2021 JSCC Article Award	27
▶ News from SEQC^{ML}: Update on Covid-19 and its aftermath	28
▶ News from the Bolivian Society of Clinical Biochemistry	30
❑ IFCC WELCOMES A NEW CORPORATE MEMBER	
▶ Sansure Biotech Inc.	37
❑ IFCC'S CALENDAR OF CONGRESSES, CONFERENCES & EVENTS	
▶ Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses	38
▶ Other events with IFCC auspices	40

EDITORIAL

Message from the eNews Editor

by Katherina Psarra
eNews Editor

Dear colleagues,

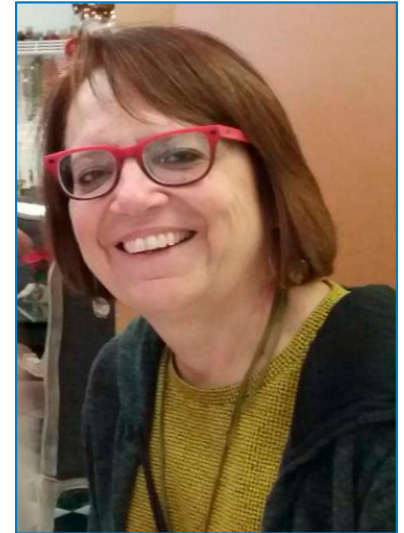
The summer is here – very hot from the start. I, of course, recognize that I emphasize the seasonal fluctuations in the Northern hemisphere. I hope you see the spirit of my meaning and mirror it for the rest of the world. IFCC covers so many countries on multiple continents, so that the blue beaches and swimming season in Greece may be the mirror of high mountains covered with snow in the countries of the Southern hemisphere. Celebration of nature and of free time in nature is what we honour while celebrating our valuable work in the labs.

We must play our role, our part in the global fight against climate change. This is why we are already discussing green labs and Dr. Bernard Gouget presents this important and crucial effort. Read his article and start thinking about your own lab and every little detail that could be altered in favour of Earth.

Our President, Professor Khoshrow, invites all of us to the WorldLab in Seoul, stressing the importance of the IFCC Forum for Young Scientists to be held in Seoul before the WorldLab. Imagine all these young scientists from all over the world gathered with all their enthusiasm and new ideas! Then we are invited to Brussels, the central city of Europe, to “foster collaborations between our regions and divisions” – in his own words. There we will all participate in the celebration of the 70-year anniversary of the IFCC. We will plan even better times ahead for the international lab community.

Go through the societies' news and discover their efforts, get inspiration from them and... celebrate the profession without forgetting your lab “greening”!

Katherina Psarra



Katherina Psarra, MSc, PhD



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THE VOICE OF IFCC

IFCC President's Message – June 2022

by Khosrow Adeli
IFCC President



Prof. Khosrow Adeli
PhD, FCACB, DABCC, FAACC

My cordial greetings and the best compliments of the summer season to you all in the IFCC family. So far, 2022 has been an extremely productive year for the IFCC, and we hope to continue this progress in the coming months.

First up, the **WorldLab 2022** is around the corner, taking place in the vibrant city of Seoul, South Korea from June 26-30, 2022. There is still time to [register](#) and take advantage of the strong scientific program, including plenary lectures, educational workshops, satellite meetings, and poster sessions. Importantly, this meeting presents a unique opportunity for us to get together with international colleagues, including laboratory scientists and industry partners, to discuss the latest advances in clinical laboratory science. The IFCC organization is pleased to partner with the Korean Society of Clinical Chemistry and the Asia-Pacific Federation of Clinical Biochemistry (APFCB) to hold this important scientific event, and I very much look forward to meeting many of you and discussing the opportunities and challenges for laboratory medicine over the coming decade.

Of note, the **IFCC Forum for Young Scientists** is being held on June 25-26, 2022, just ahead of and in conjunction with WordLab 2022. As the major workforce of laboratory professionals and future of laboratory medicine, it is essential that our future leaders are trained and encouraged to succeed. To do so, we must offer targeted training opportunities to facilitate learning, open exchange, and networking. I urge all young scientists under 40 years of age, as well as those above who are experienced leaders in their field, to [register](#) for this excellent opportunity, where young scientists will present and discuss their activities in laboratory medicine and build on career skills.

Later this year, the **2022 IFCC General Conference** will be held in Brussels, Belgium, from October 25-30, 2022. A truly global city often referred to as the “capital of Europe”, Brussels will set the perfect backdrop for this meeting. As the leading international community of National Societies and Corporate Members around the world, this meeting will allow IFCC to foster collaboration between our regions and divisions. Additionally, the General Conference will also be an occasion to celebrate the 70th Anniversary of IFCC, recognizing 70 years of global leadership in laboratory medicine and celebrating our contributions to advancing excellence in laboratory medicine for better healthcare worldwide. All IFCC Officers, including Members of Committees and Taskforces, as well as Presidents of National Societies and Regional Federations, are invited and encouraged to attend. Eligible individuals must confirm their participation by mid-July by emailing the IFCC Office.

As always, feel free to email me at president@ifcc.org with your feedback, questions, or concerns.

Till next time,
Khosrow 😊

IFCC President-Elect: the candidates

*by Prof. Leslie Lai Chair
IFCC Nominations Committee*

The IFCC Nominations Committee has approved three valid nominations for the position of IFCC President-Elect. The nominees may now be regarded as candidates for the role. The candidates (in alphabetical order by their surname) are:

Nominees	National Society
Michael Neumaier	German Society for Clinical Chemistry and Laboratory Medicine (DGKL)
Tomris Ozben	Turkish Biochemical Society (TBS)
Tahir Pillay	South African Association for Clinical Biochemistry and Laboratory Medicine (SAACB)



Michael Neumaier
DGKL (Germany)



Tomris Ozben
TBS (Turkey)



Tahir Pillay
SAACB (South Africa)

A ballot of IFCC Full Member Societies will be held in September 2022 to determine which of the three candidates will become President-Elect. To assist the decision-making process, Full Members have been provided with a biography and a personal statement from each candidate. The period between now and September allows for consultation by Full Member societies with their membership and for a preferred candidate to be agreed on. The successful candidate will commence his/her term on January 1st 2023 as President-Elect and will continue from January 2024 to December 2026 as President. The booklet with the slate of candidates is available at: https://www.ifcc.org/media/479462/ifcc-eb-2023-2026-president-elect-slate-of-candidates_final.pdf.

IFCC C-MHBLM and C-POCT in Munich asking key questions about DTC testing

by Bernard Gouget – Chair, IFCC-C-MHBLM

Michel Vaubourdolle – Member, IFCC C-POCT

James Nichols – Member, IFCC C-MHBLM

The “Viewpoint session” organized at EuroMedLab in Munich on April 13, 2022 by the IFCC C-MHBLM was an opportunity to confront two positions: for or against on the types of regulations of Direct to consumer testing (DTCT). In the medical diagnostics world, direct-to-consumer laboratory services are somewhat similar in concept to over-the-counter medications offered at pharmacies. According to the AACC, DTCT, also known as direct access testing, permits consumers to order laboratory tests directly from a laboratory without necessarily having to work with a healthcare provider. These test results may be used to monitor an existing health condition, identify a previously unknown medical disorder, or provide data regarding personal health characteristics. DTC laboratory testing is a key element of ongoing efforts to increase individuals’ engagement in managing their healthcare, and it is critical that DTCT results are accurate and well understood. Laboratory professionals must play a vital role in this process.

The DTCT, in particular genetic tests (family studies, predisposition to diseases including cancer, etc.), are sold on the Internet directly to users with mailing of a self-sample. It can also be “self-tests” sold “over the counter (OCT)” meaning over the internet and available without a prescription, in drugstores, supermarkets with “well-being” or “health” claims, and other retailers. A wide range of DTC tests are now available without an order or consultation from a physician or health care provider, including those to evaluate genetics, ancestry, disease or cancer risk, pharmacokinetics, and hormones. However, many DTC tests are of limited diagnostic or clinical value. These tests are often only intended to identify risk for a particular condition or subset of conditions and are not typically for diagnostic purposes, which is often difficult for

the average consumer to understand without appropriate counseling.

The global direct-to-consumer testing market is growing, fueled by a rise in awareness, and emerging culture of consumer empowerment. The rise of patient-consumerism has flipped the concept of diagnostic testing on its head. The popularity of direct-to-consumer lab testing has grown exponentially over the past few years as patients increasingly adopt a personalized and self-service healthcare mentality.

Several factors contribute in the popularity of DTCT: privacy, ownership over data health, convenience, cost savings, Rapid turn-around time, early disease detection, second opinion, and access to tests not covered by insurance.

The market for DTC genetic testing is expected to pick up momentum, driven by the new advancements, increasing prevalence of various genetic disorders like Alzheimer’s, cystic fibrosis and cancer. Amid the COVID-19 crisis, the global market for Direct-to-Consumer (DTC) Genetic Testing estimated at US\$1.1 Billion in the year 2020, is projected to reach a revised size of US\$2 Billion by 2026, growing at a CAGR of 11.5% over the analysis period.

Both presentations provided a better understanding of the North American approach with Prof. Jim Nichols (Nashville, Tennessee, USA) and the European and French approach with Dr. Michel Vaubourdolle (AP-HP Paris, France).

The first approach is based on the observation of a significant demand on the part of the public for a greater appropriation of its own health with direct action on it without necessarily involving health professionals. Thus, many online sales platforms have been opened with very broad applications ranging from

simple curiosity through “well-being” to health itself. Jim Nichols tried to describe these developments in the absence of any regulation except for the possible participation of specialists, clinicians and/or biologists “endorsing” some of these platforms. One of the strengths of the DTCT is, the fact of not having to go through expensive medical consultation, with the feeling of “saving time” by bypassing the health system. It showed that the guarantees of analytical reliability, clinical justification and support for patients’ results are not always present.

Performance of DTC doesn’t always live up to marketing claims. While government oversight is responsible for consumer test quality, not all tests are marketed for medical use and many are for entertainment purposes. The regulation is also still lacking to protect the consumer. In the USA not all DTC tests are reviewed by the US Food and Drug Administration before marketing. The accuracy or reliability of the results may be poor, which may have significant implications for the consumer.

The state agencies must remain vigilant in the oversight of DTCT. It is necessary to ensure that DTCT providers disclose sufficient information about the products and services so that consumers can make fully informed health decisions as descriptions of risks and benefits and limitations of tests offered. Physicians must familiarize themselves with the pitfalls of DTCT to best aid patients in results interpretation and guide them toward evidence base treatment plans. The lab medicine community must play a key role in all aspects of the consumer driven process as well as guidance on whether additional testing is required to confirm results. The US market being less regulated and little financed by the state in comparison with France, where a form of competition between laboratory “tests” and DTCT is taking place with very significant pressure from start-ups and other companies seeking to promote this health live and in exclusive virtual mode, much favored by the omnipresence of social networks.

Nevertheless, OCT and DTC diagnostics can also contribute to solve the pandemic problem. New technologies create rapid test solutions for the home market. Self-sampling technology is key. If Genetic DTC testing

led the way, now infectious disease testing is moving directly to the consumer. New sampling technology, rapid and multiplex tests have changed the picture on how and where testing is done and the COVID-19 situation is leading the charge. But amidst the pandemic, the market has been flooded by companies making unsubstantiated and often fraudulent claims, such as falsely stating that their tests have been approved by FDA or that their serological tests can diagnose the disease. The massive amount of information (and misinformation) about COVID-19, and the quickly changing landscape, can make it particularly challenging for consumers to differentiate between legitimate tests and fraudulent products. There is a need to promote an ethical marketing for DTCT.

The European and French approach is based on the real benefits that the exponential development of e-health and m-health in the context of the “internet of things” could bring to the patient. Developments in the monitoring of chronic diseases using connected and miniaturized devices (artificial pancreas, alert networks based on artificial intelligence, etc.) are radically changing the organization of health systems by integrating their rapid digital transition.

Connected self-tests have their place in an m-health device integrated into the health system, while the DTCT is not sufficiently regulated. Michel Vaubour-dolle drew a parallel between the DTCTs and the self-tests usable in France by placing them in a hierarchy from the laboratory to the patient ranging from biology delocalized in the hospital environment, passing through the rapid diagnostic orientation tests carried out by health professionals and by the self-tests used in self-monitoring on medical prescription, such as those for glycemic monitoring or monitoring of anticoagulants. Medical laboratory experts and health professionals must reposition themselves in the rapidly changing continuum of care. It is essential to quickly put in place adequate regulations to regulate an anarchic and dangerous diffusion for the patient. Generally speaking, studies on the benefit/risk by integrating the additional costs generated are essential. A review of this literature was presented by the speaker.

Many authors agree today on the predominance of present and uncontrolled risks at each stage of the



James Nichols, C-MHBLM member and President-Elect, CLSI

process, and on the potential benefits, rarely demonstrated by serious studies. He also presented the recommendations of the National Academy of Pharmacy for the regulation of self-tests, report published in 2018 of which he is one of the key authors. These recommendations have been addressed to health authorities, IVD market regulators, diagnostic companies, and community pharmacists, health professionals including medical biologists and training organizations.

With advances in lab technology and the maturing of evidence-based medicine, labs have become a critical part of the healthcare ecosystem. There is no doubt that a tidal shift within the healthcare industry is taking place, with consumers now wanting to be more involved in decisions affecting their care. Guarantees of analytical reliability will be obtained thanks to the forthcoming implementation of European regulations on DM-DIV, with the transition from a declarative system to an evaluation system by an independent body, to obtain the CE mark.

Concerning the control of risk management, clinical relevance and patient support, it is necessary to set up a coordinated network of health professionals including prescribers, nurses, community pharmacists and medical biologists, in link with diagnostic companies and around the patient.

The development of mobile health devices and the DTCT used by the patient or his entourage is inevitable but, depending on the country and the health systems, it can be done either in a rational way, guided by the interest of the patient and his safety, as well as by controlling additional costs in a spirit of public health and risk control, or else it will be done without health professionals in a purely commercial context.



L-R: Michel Vaubourdolle and Bernard Gouget

Growing awareness among general people about the availability of direct-to-consumer tests in developed as well as developing nations will fuel the market growth. Prominent industry players operating in direct-to-consumer testing focus on delivering multiple services to sustain market competition. The exchanges with the audience showed very heterogeneous situations depending on the countries, geographical constraints and their health financing system, not to mention the very clear desire of the digital giants to invest massively in the health sector. This question is still controversial and will undoubtedly be the subject of future professional meetings. During the session, we hope to have inspired and to catalyze dialogue on DTCT and increase collaboration between all health care professionals in order to promote a better understanding of biological and clinical challenges to improve public health.



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IFCC CELEBRATES 70 YEARS

Interview with Prof. Tomris Obzen, EFLM Regional Federation Representative on the IFCC Executive Board



*Interviewer: Dr. Maria del Carmen Pasquel
Member, CPR and WG-IANT/RIA/CPD-IFCC*



Prof. Tomris Obzen



Dr. Maria del Carmen
Pasquel

With following interview, we present the second one in the series of interviews delineating the many outstanding achievements of the IFCC over the past decades, the enormous achievements, the many important milestones that have been accomplished contributing to the IFCC's mission of "Advancing excellence in laboratory medicine for better healthcare worldwide".

Prof. Dr Tomris Ozbenis is Ph.D., D.Sc. Med. Lab Specialist is the President of European Federation of Clinical Chemistry and Laboratory Medicine (EFLM). She is one of the Board of Directors of the IFCC Foundation for Emerging Nations (FEN), Past-President of the Balkan Clinical Laboratory Federation (BCLF), Past-IFCC Treasurer and Past-Chair of the IFCC Congress and Conference Committee.

Over her tenure at Akdeniz University, Prof. Ozben has been the Director of Central Laboratory, Akdeniz University Hospital, Vice Rector and Chairman of the Dept. of Clinical Biochemistry.

Her research interests include identification of early markers for diagnosis and prognosis of cancer, and cardiovascular diseases, development and validation of new tests, analytical techniques, quality control and management, teaching, mentoring, research, and laboratory management.

She has been the Chair or Member in many Scientific Organizations, Societies, Committees and Councils. She has received distinguished scientist and outstanding service awards of Akdeniz University. Moreover, Prof. Ozben has been a member of the Editorial and Advisory Boards of Scientific Journals.

Prof. Ozben has published over 240 papers, several book chapters, edited books and invited to speak at more than 200 international conferences.

Dear Dr. Tomris Ozben, you are an important part of the history and present of the IFCC, so in this year 2022 that we celebrate its 70 years of foundation, we would like to ask you the following questions.

We appreciate your valuable time you have given to participate in this interview and your important responses.

1. How have you seen the progress that the IFCC has made in the scientific community of laboratory medicine in recent years, despite the fact that we have lived in a pandemic?

The International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) is a worldwide organization for clinical chemistry and laboratory medicine. IFCC connects 6 Regional Federations, Corporate members and National Societies of Clinical Chemistry and Laboratory Medicine and creates a common platform for all Laboratory Scientists since its establishment in 1952. IFCC Presidents and officers provide voluntary services to keep IFCC as the consistent global leader in Clinical Chemistry and Laboratory Medicine. IFCC is a dynamic organization that evolves constantly. During the Covid-19 pandemic, due to the travel restrictions, main IFCC Congresses have been postponed to later dates. On the other hand, IFCC has immediately adapted to these exceptional conditions and organized several virtual educational and scientific meetings and webinars. The meetings of the IFCC Functional Units were held on-line. IFCC has continued to work without causing any delays in its planned activities and projects. Covid-19 pandemic has helped to increase the visibility of Laboratory Medicine providing further evidence of the central role played by IFCC.

2. During your different positions at IFCC, what was your best experience and what would you like to share with us?

- It has been always an immense pleasure and great honor for me to serve IFCC. I liked all my services indicated below at different IFCC positions. These services have helped me to become acclimatized to the inner work of the IFCC and to become familiar with the work that is being done by various IFCC divisions, committees, working groups, and relations of IFCC with different federations, making me to know personally many colleagues all around the world.
- I initiated my service to IFCC as the Corresponding Member (2000-2004), Full Member (2005-2007) and two terms as the Chair (2008-2014) of the IFCC Congresses and Conferences Committee (C-CC).
- I was elected by the IFCC Council and served two terms as the IFCC Treasurer, Executive Board Member (2015-2017 and 2018-2020).

- I am one of the five members of the Board of Directors of the IFCC Foundation for Emerging Nations (FEN), a non-profit Charitable Trust devoted to improving the quality and delivery of laboratory medicine services, particularly in emerging nations (2016-present).
- I am IFCC Task Force-Young Scientists FORUM Consultant (2020-present).
- I have served as the Organising/Scientific Committee Member for several IFCC EuroMedLab Congresses (Innsbruck 2009; Berlin 2011; Milan 2013; Paris 2015 and Munich 2021), IFCC WorldLab Congresses (Fortaleza 2008; Berlin 2011; Istanbul 2014 and Rome 2023) and IFCC General Conferences (Antalya 2008; Corfu 2010; and Kuala Lumpur 2012). In addition, I served as the Steering Committee Member of the IFCC-Roche Bergmeyer Conferences (2008-2015) and as a Member of the International Advisory Board for IFCC WorldLab Congresses (18th ICCCLM 2002, Kyoto, Japan; IFCC&AACC 2005, Orlando, USA) and for the IFCC EuroMedLab Congress (2005, Glasgow, UK).

3. What message do you give to the scientific community that is part of the great world family of IFCC?

As we live in a global world, IFCC should ensure effective representation of laboratory medicine worldwide pursuing recognition of the importance and the clinical value of laboratory medicine, especially outside of the laboratory. As individual scientists, we can no longer solve the diagnostic healthcare problems. So, we should join our common interests and challenges under the IFCC network organization connecting to multiple relevant stakeholders of the healthcare ecosystem, including clinicians, IVD industry, regulators, health authorities, and health technology assessment bodies. In my perception, to keep health and patient care affordable and sustainable, integrative approaches are needed. So, I invite all the Laboratory Medicine professionals to join IFCC to share our common opportunities and challenges.

We appreciate your comprehensive and valuable answers to these interview questions. Again, thank you very much.





IFCC WorldLab SEOUL 2022

24th INTERNATIONAL CONGRESS OF
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16th ASIA-PACIFIC CONGRESS
OF CLINICAL BIOCHEMISTRY

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Coex, Seoul, Korea



IFCC: THE YOUNG SCIENTISTS



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IFCC Roche Travel Scholarships for EuroMedLab Congress Munich 2022: Elizabeth Tchaiwe Chimbayo, Malawi

*by Elizabeth Tchaiwe Chimbayo
Malawi Liverpool Wellcome Trust
Malawi*



Elizabeth Tchaiwe Chimbayo

I feel honoured and privileged to be awarded this prestigious travel scholarship to attend the 24th IFCC EuroMedLab congress in Munich Germany. By participating in this congress, I have developed a better understanding of up-to-date concepts on the principles of Clinical Laboratory Medicine and on research skills, as well as technical expertise that I plan to implement here, in Malawi, through our National Society. Eventually, this will help promote research integrity and improve lives of people. Furthermore, the interactive nature of the congress gave me an opportunity to network and learn about scientific advances from other medical experts and researchers in different fields.

I was fascinated to learn the new cutting-edge techniques in laboratory medicine that can aid accurate diagnosis of disease and patient management. With the growing increase of infectious and chronic diseases such as COVID-19 and HIV/AIDS, respectively, it is clear that biomedical research is critical in diagnosis, treatment monitoring as well as vaccine development.

Article continued on next page

My interaction with the young scientist from all over the world was one of the greatest moments. Among others, we discussed challenges that affect our daily operations as scientist as well as conflict resolutions at workplace.

Furthermore, it was interesting to learn from fellow scientists on how they managed the COVID 19 pandemic and the techniques currently in use. Specifically, I enjoyed the talk by Prof. Adeli on COVID 19 management now and beyond. He explained about lab assays available that can distinguish Covid vaccine induced immune responses from that of natural infections through identification of spike and nucleocapsid proteins. This will eventually allow monitoring the effectiveness of the vaccine.

The scientific program was uniquely designed to allow researchers access to current trends in Laboratory Medicine. From students' presentation, to scientific talks that yielded stimulating discussions. I will surely recommend this program to my colleagues to participate in the upcoming IFCC events.

Lastly, I'm grateful to Roche and to IFCC for the travel award which opened doors for my career growth. I was privileged to appreciate advanced innovations in Clinical laboratory Medicine aimed at improving patient lives through quality health systems care. I plan to utilize the knowledge I attained from the congress to improve the quality of Clinical laboratory practice in my country to aid accurate diagnosis and monitoring of various diseases to reduce mortality.

My vision is to contribute towards finding scientific tailored solutions to current public health challenges facing populations of Malawi and Africa through lab-based approach. Below are some of the highlights of the conference.



Presentation of Roche IFCC Travel scholarship award by the Prof. Khosrow Adeli, IFCC President; Dr. David Kinniburgh, IFCC Secretary; Dr. Päivi Laitinen, C-CC Chair; Mr. Joe Passarelli, Roche representative, and part of the members from the IFCC Task Force for Young Scientists

IFCC Roche Travel Scholarships for EuroMedLab Congress Munich 2022: Wycliff Ochieng, Kenya

*by Wycliff Ochieng
The Nairobi Hospital
Nairobi, Kenya*

The EuroMedLab 2021 was a great experience, and I learnt a lot of scientific research findings that were presented by various scientists in the conference. One key takeaway from the conference was the role of the Laboratory in patient care and management. Indeed, presenter after presenter underscored the importance Laboratory diagnostics play in day to day patient experience. Majority of oncology decisions for instance, was said to rely heavily on laboratory testing and results. To further publicize the laboratory role, the IFCC announced the commencement of Global MedLab Week 2022 (April 18-24) which celebrates Laboratory Professionals and I am happy to be one of them. Clinical use cases where Laboratory medicine and Radiology Integration were also highlighted by some of the speakers. Integrated diagnostics is thus a major milestone in patient management as the lab and radiology buttress each other.

My attendance to the conference has elicited questions from my colleagues who are asking how to attend a conference. They are rearing to carryout scientific research in order to present in the next upcoming conferences. This will have an important effect in encouraging young scientists to participate more and more in Clinical Chemists Association of Kenya and in turn Africa Federation of Clinical Chemistry.

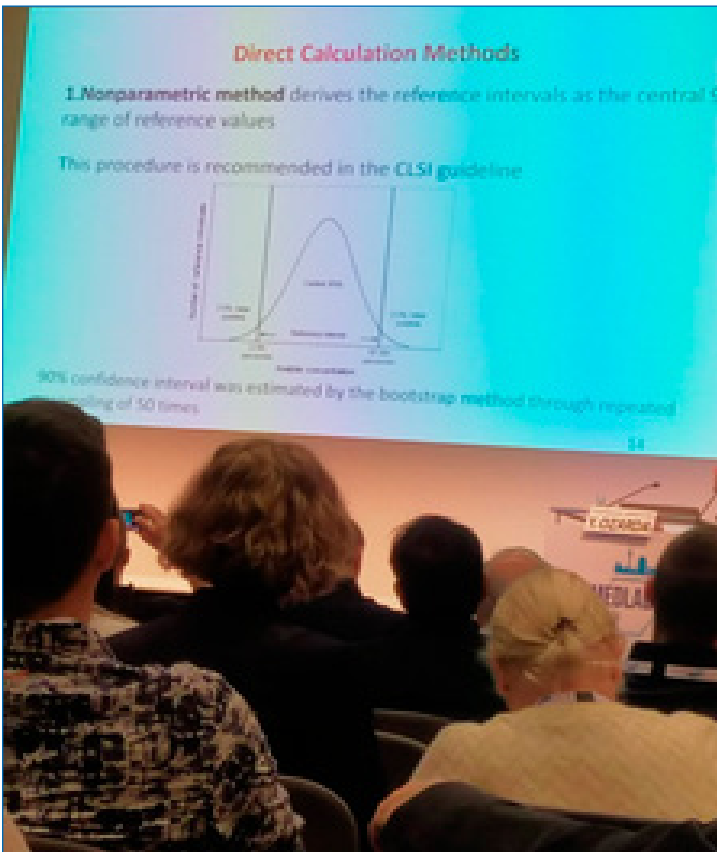
I wish to thank the IFCC authorities led by the President, Prof. Khosrow Adeli, IFCC Secretary, Dr. David Kinniburgh, the IFCC Treasurer, Dr. Alexander Haliassos for giving me an opportunity to attend in person the just concluded EuroMedLab conference. I am more motivated in my space as a young Laboratory scientist by the IFCC Roche Travel Scholarship award. Below are some of the images I captured during the conference.



Wycliff Ochieng receiving a certificate from the IFCC President, Prof. Khosrow Adeli, in the picture with Dr. David Kinniburgh, IFCC Secretary; Dr. Päivi Laitinen, C-CC Chair; Mr. Joe Passarelli, Roche representative and some members of the IFCC Task Force for Young Scientists



Exhibition area of the conference



A conference session underway in one of the breakaway rooms

Going green: lab medicine and environmental sustainability (point of view)

by Bernard Gouget
Chair, IFCC-C-MHBLM

At the start of the 21st century, production and consumption behaviors are degrading the environment. On a daily basis and throughout our lives, the environment is a major determinant of health. Chemical substances, pesticides, particles in the air, noise pollution, endocrine disruptors, electromagnetic waves, deployment of 5G, climate change are all elements and risk factors which raise questions about their effects on our health. If from an ethical point of view, healthcare structures serve to protect and improve public health, they can have negative effects on human well-being and the environment. Thus, sustainability is an important target in a rapidly changing healthcare landscape. The hospital takes care of the body and the mind. It participates in the prevention and promotion of public health, it does care for the health of mankind, and what surrounds it. However, the healthcare system overall pollutes using many resources. Globally, the healthcare sector's carbon footprint is equivalent to 4.4% of net emissions, contributing as one of the major problems of the climate crisis.

As a major economic and social player, it must be a participant in the transition towards sustainable development that protects people, resources and the ability to guarantee future generations for the same level of health and social protection that we have today. Therefore, any health structure has a duty to set an example in the sustainable development process, in the same way as companies or communities. Sustainability is also an incredibly important topic for the specialists in lab medicine to be considered now and building a lab medicine culture around sustainability is a must. Hospitals and medico-technical biology-pathology platforms use many resources (water, energy, digital, various fluids, manufactured products, etc.) and because of their activities, they generate multiple

emissions that potentially present risks to the environment. Reducing the sector's reliance on single-use plastic is another challenge. It is crucial to constantly work on innovative ways to reduce waste without compromising quality or safety. Process optimization will improve the efficiency and productivity of the medical lab while also adding progress of the sustainability journey.

Many opportunities are given to engage in this direction. The introduction of environmental criteria into the public procurement procedure, the search for sources of energy and water savings, selective sorting extended to waste generated by hospital activity are all paths. Any building construction or renovation should integrate high environmental quality criteria with a priority concern: quality of use and well-being for professionals and consumers. These approaches promote innovation and allow all staff to be involved in an eco-responsible approach. They are part of the quality attitude that meets a fundamental obligation which is "first to do no harm"

During EuroMedlab 2022, the IFCC-C-MHBLM was invited by Ortho Clinical Diagnostics – an IFCC corporate member – to explore the opportunities, obstacles and practical developments regarding implementation of sustainability in the landscape of lab medicine to reduce the environmental damage by ensuring that resources are used efficiently and responsibly. The company's educational workshop was an opportunity to have an overview on some already existing initiatives to drive the progress to a greener scenario.

Damien Gruson recalled that Health has been chosen as a COP26 science priority area. Climate change is resulting in poorer health outcomes, increasing mortality and driving to health inequities. The impact from

stronger climate change action can motivate stronger global ambition. Thus, Health systems which are resilient to climate change can help protecting their population from the negative impacts in a short and longer term. Sustainable low carbon health systems can make a substantial contribution to reducing national and global emissions. But the lack of awareness regarding sustainability among medical labs professionals currently is one of the most commonly described barriers for sustainability in healthcare. In an ideal world, every specialist in lab medicine would be working in a zero-waste, green lab that's fully sustainable. But we know this is a huge long-term challenge, especially when single-use plastics and ultracold freezers are needed for sensitive analysis. Medical laboratories use 10 times more energy and at least four times more water than office spaces. Air conditioning environments running 24/7 is unavoidably energy and water hungry. Sophisticated computers consume a lot of energy and resources. Medical laboratories are very carbon-emission and energy intense.

However, the green Lab movement is gaining momentum, demonstrating an appetite for change. Sustainability in medical labs must take into account several

factors as: constructing and managing laboratory facilities following sustainable practices; using sustainable equipment whose performances ensure biosafety with appropriate diagnostic quality according to international standards and promoting daily sustainable practices for health professionals. Through simple and easy changes, it is possible to make reductions in each key area: energy, water waste and hazardous chemicals that will result in a safe, more sustainable lab, either large or small can have significant impacts in the long run. We are living in a fast-paced socio-economic revolution driven by rapid technological progress that is disrupting entire health care sector. In the new world of limitless connectivity, AI and mobile technology open new possibilities to pioneer a sustainable future. With digital innovation, carbon emission can be reduced. Lab Medicine can contribute to an environmental healthcare system through integration and emerging technologies while providing high quality services to patients.

Jordi Trafi-Prats, senior director of EMEA Marketing at Ortho Clinical Diagnostics underlined that as the healthcare IVD industry continues to grow, so does its effect on the environment. As a sector that exists to promote long healthier lives, the subject of environmental impact, and its related health consequences carries extra significance. He asked the question: Are we ready for an evolving healthcare and lab medicine landscape? Ongoing IVD technological advancements



Aleksei Tikhonov, EFLM-CC, EFLM/IFCC YS and Marie Lenski, IFCC YS, promoting a greener future in Lab Medicine in between a “sustainable leader”, Prof. Damien Gruson



Jordi Trafi-Prats, Senior Director, EMEA Marketing, Ortho Clinical Diagnostics - IFCC corporate member

are bringing many challenges and opportunities for improving environmental sustainability. Before getting feedback from OCD customers, he described the advantages of the waterless solution based on Ortho's Integrated Systems which is presenting plenty of opportunities of sustainability for laboratories as well as saving water and money. The supply and treatment of water represents a significant proportion of the environmental footprint for a laboratory. Equipment selection should therefore consider the potentially contaminated wastewater from analyzers, as well as expensive and wasteful deionized water.

The healthcare sector has already taken steps to better define how such improvements can be realized. Jordi presented the EU Eco-Management and Audit Scheme (EMAS) which is a premium management instrument developed by the European Commission for companies and other organizations to evaluate, report, and improve their environmental performance. The voluntary adoption of an Environmental Management System (EMS) according to the International Standards ISO 14001 or EMAS (Eco Management and Audit Scheme), provide a framework for a more sustainable operating model. Adopting such measures can help to ensure regulatory compliance and enhance the hospital's reputation as a progressive and forward-looking organization. EMS adoption also offers potential commercial advantages by reducing the risk of government-imposed fines, lowering energy consumption, improving resource efficiency, and optimizing waste management processes. The cumulative effects of these measures can therefore deliver substantial overall competitive advantages. Nevertheless today, very few clinical laboratories have made the important step to ISO 14001 certification. Despite the growing global focus on building a cleaner and greener future, most laboratories have yet to formulate plans to reduce their impact on the environment. It is not a secret that the world is at a critical inflection point. It is now time to re-think how IVD industry operates, and where it can be improved. It has been the center of the culture of Ortho Clinical Diagnostics to work in harmony with the environment and, to ensure that OCD incorporate effective sustainability practice to build a cleaner, an innovative and more maintainable future.

Prof. Tomris Ozben, EFLM President, during the discussion presented the "EFLM Task Force-Green Labs" aiming to implement sustainable practices in medical laboratories. There is a real opportunity to provide powerful leadership towards a low-carbon, climate-smart, more equitable, and healthier future. The aim is to transform medical labs into a safe and sustainable space by decreasing their deleterious environmental impact and implementing everyday efficient sustainable actions in laboratories. The EFLM challenge is to lead the laboratory medicine community to the shift to carbon neutrality in line with the EU Green deal.

Sustainability in Lab Medicine is a joint and multidisciplinary effort to optimize sustainable practices while continuing to do the right biological diagnosis that enable outstanding patient care and outcomes. The IFCC specialists in lab medicine are a vibrant community, willing to provoke a change to reduce the environmental burden through several positive actions and extraordinary commitments. They have a tremendous opportunity to champion the sustainability movement to make a positive impact on the long-term health. It is time to act and thus participate in this challenge for the Future.



Prof. Tomris Ozben, EFLM President-IFCC EB-EFLM representative with Aleksei Tikhonov, Post-doctoral at the Translational Research Laboratory in Immunotherapy (Prof. Aurelien Marabelle) Institut Gustave Roussy, who received an EFLMLabX bursary 2022.

International Laboratory Medicine Case Contest

Have your winning cases published on IFCC Website!

July 5th (Tuesday)

20:30 (UTC+8: Beijing) 15:30 (UTC+3: Turkey)
 19:30 (UTC+7: Indonesia) 14:30 (CET: Poland)
 18:00 (UTC+5:30: India) 09:30 (BRT: Argentina)



Scan for the registration

Case Review Board



Prof. Khosrow Adeli Host

- IFCC president
- Head and Professor of Clinical Biochemistry, The Hospital for Sick Children, University of Toronto, Toronto



Canada



Prof. Sergio Bernardini

- Chair, IFCC- Emerging Technologies Division (ETD)
- Chief of the Laboratory Medicine Functional Integrated Area (Clinical Biochemistry, Microbiology, Virology and Pathology), Tor Vergata University Hospital, Rome



Italy



Dr. Bernard Gouget

- Chair, IFCC-Committee on Mobile Health and Bioengineering in Lab Medicine (C-MHBLM)
- President, Human Healthcare Division Executive Committee, Comité Francois d'Accréditation (COFRAC), Paris



France



Prof. Damien Gruson

- Head of the Division of Clinical Biochemistry, Cliniques Universitaires St Luc, Brussels
- Member, IFCC Executive Committee, Emerging Technologies Division (ETD)



Belgium



Prof. Dr. Sedef Yenice

- Professor of Biochemistry and Clinical Chemistry
- Member of the Executive Committee, IFCC Education and Management Division (EMD)
- Chair of the EFLM Working Group for Laboratory Medicine Credit Points



Turkey



Prof. Dr.dr. Aryati, MS, SpPK (K)

- President of Indonesian Association of Clinical Pathology and Laboratory Medicine (IACPALM)
- Professor at Faculty of Medicine Airlangga University, Surabaya Indonesia
- Head of Clinical Pathology Sub-Specialist Program, Faculty of Medicine, Airlangga University, Surabaya Indonesia



Indonesia



Dr Aparna Jairam

- Honor Secretary- CAHO LAB DIVISION
- APPI –(Association of Practicing Pathologists-India) Managing committee member
- Infertility , Autoimmunity and Immunology expert



India

Agenda

Time (UTC+8)	Topic	Presenter
20:30-20:35	Opening Speech	Host
20:35-23:05	Winning Cases Panel Discussion	Case Review Board and Clinical Case Winners
23:05-23:20	Winning Cases Award Ceremony	



>> Scan for the <<
Case Contest Details

NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES



Continuing professional development activity on metabolic bone disorders in patients with β -thalassemia major

by Arsala Jameel Farooqui

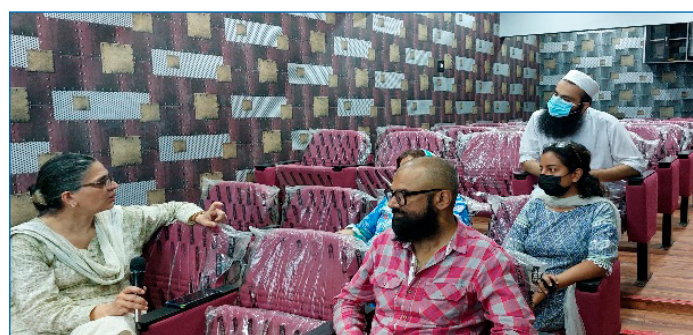
*Senior Research Assistant, Section of Chemical Pathology
Department of Pathology and Laboratory Medicine
Aga Khan University Hospital, Karachi, Pakistan*

As part of a current research project headed by Dr. Lena Jafri, titled “Alterations in phosphate homeostasis in transfusion dependent children with Beta-thalassemia”, the investigating team from the Section of Chemical Pathology, Aga Khan University recruits patients from the thalassemia OPD of a non-profit organization called Fatimid Foundation that provides blood transfusions to the affected beta-thalassemia (β -TM) patients. Regular blood transfusion is inevitable in patients with moderate to severe thalassemia and growth retardation, bone pains and fragility fractures are common in them. For our research objective, the study participants are tested for biochemical parameters that serve to explore the relation of FGF-23 to iron overload and phosphate homeostasis. Iron overload due to chronic blood transfusions disturbs the osteoblasts and osteocytes by iron accumulation in bones, resulting in impaired FGF-23 production. Our study hypothesis claims that those derangements initiate a cycle of destructive bone disease, detectable by raised serum phosphate, and altered serum vitamin D and calcium levels. Of the initial cohort of patients tested, the majority were Vitamin D deficient with extremely high ferritin levels (mean = 3424.12 ng/mL) and variable response of parathyroid gland to hypocalcemia and vitamin D deficiency including secondary hyperparathyroidism and hypoparathyroidism and altered calcium phosphate product. Our team of investigators recognized the need to raise the awareness on recognition of metabolic bone disease and understanding of the interplay of biomarkers, and guide the healthcare providers at Fatimid about appropriate intervention for the correction of vitamin D deficiency.

For this purpose, Professor Aysha Habib Khan, along with senior research assistant Dr. Arsala Jameel Farooqui, visited the Fatimid Foundation in April 2022 and held a Continuing Professional Development Education (CPDE) activity with the medical officers on Metabolic Bone Disease in Thalassemia. The learning objectives of the interactive session were to understand



Prof. Dr. Aysha Habib Khan, Dr. Ruhul Quddus (consultant hematologist), Dr. Khajista, Dr. Shoukat (medical officers), IT officer, and Dr. Arsala Jameel Farooqui (senior research assistant) at Fatimid Foundation



Prof. Dr. Aysha Habib Khan discussing pathogenesis of metabolic bone disease in thalassemia with the consultant hematologist and medical officers at Fatimid Foundation

Article continued on next page

the pathophysiology of metabolic bone diseases in β -TM and apply this knowledge on interpretation of biochemical investigations. Professor Khan also discussed the consequences of impaired calcium and phosphate metabolism and vitamin D deficiency and altered parathyroid gland functioning on the bone health of these children. Active discussion of vitamin D toxicity also took place. Participants discussed the various types of available vitamin D formulations, the need of re-examination of optimal vitamin D levels, and use of higher doses lending potential for an increased incidence of vitamin D toxicity. The session was successful in elaborating the participants' concepts regarding metabolic bone disease in β -TM and highlighted the critical importance of delivering collaborative evidence-based care to the patients in real time. A proposal for case-based discussion using tele-health was also discussed.



Report from the 47th ACBICON 2021, Kolkata, India: "Towards a Better Tomorrow"

by Subir Kumar Das
Professor, Biochemistry
College of Medicine & JNM Hospital, WBUHS

The 47th National Conference of the Association of Clinical Biochemists of India was organized by the Department of Biochemistry, College of Medicine & JNM Hospital Kalyani, WBUHS, West Bengal, India. The conference was attended by over 800 delegates from all over the world. The conference was a four-day event where the pre-conference workshops and the inaugural program were held on 12th December 2021 and the main scientific program was held on the 13th to 15th December 2021 in hybrid mode.

The workshops were held on a. Next Generation Sequencing, b. Flow cytometry, c. Statistics in Biomedical Research, d. Early Clinical Exposure, e. Pre-analytical Requirements and Ensuring Quality of Examination. A pre-inaugural scientific session on Glycemic Control was organized on 12th December 2021 and the speakers were Prof. Abhijit Das., Dr. Ankan Pathak, Dr. Abhishek Ghosh and Dr. Deblina Sarkar. The Presidential Address was delivered by the ACBI President, Prof. L.M. Srivastava, The General Secretary Report was presented by Prof. Rajiv Ranjan Sinha.

The Dr. Taranath Shetty Memorial Oration was delivered by Prof. Dr. Suhrita Pal, on "Personalized medicine: An overview". The 2nd day Scientific program started with Plenary lecture by Dr. Anant Mohan on COVID-19, K.L. Gupta Memorial Oration Award talk on "Recent advances in cancer diagnosis and precision medicine" by Padma Shri Prof. Mammen Chandy and Dr. Barnali Das delivered the Seth G.S. Medical College & K.E.M. Hospital Oration Award talk on "Clinical Chemistry & Immunoassay Test Results: Harmonization and Standardization of Discordant Notes".

A total of 8 symposia were organized in three parallel sessions, in hybrid mode, on the 13th of December 2021. Dr. Rahul Dev Sarkar, Dr. Ranajit Das, Dr. Sohini Sengupta Dr. Indranil



Enthusiastic audience participation during the conference

Halder spoke on various issues related to laboratory diagnosis of COVID 19 and management which was chaired by Tanmay Saha. Day 2 international speakers were Dr. Bernard Gouget and Prof. Damien Gruson who spoke on “smart technologies to tackle COVID-19 and use of AI companions for data integration in laboratory medicine. Day 3 was Awadhesh Saran Memorial Oration Award lecture by Prof. Saumitra Das, on “Hepatitis C Virus: Life in the liver”. Dr. Shyamali Pal delivered a lecture on “Proficiency Testing - Purpose and Perspective” for the Dr. T. N. Pattabiraman Oration Award. Other eminent speakers for liver disorders were Prof. Pramod Garg, Dr. Shyam Prakash and Dr. Savneet Kaur. In the Symposium by AACC-India Section on “Technology Advances & Challenges” Stephen R. Master, from Philadelphia, USA, Dr. Joe El-Khoury, from the Yale School of Medicine, and Dr. Lakshmi V. Ramanathan, from New York, USA delivered excellent lectures.

Molecular Genetic topics were covered by Dr. Ashwin Dalal, Dr. Anju Shukla and Dr. Govindraj.

In the education symposium, sessions were taken on e-learning by Dr. Hikmet, Prof. Rania El Sharkawy, Dr. Adrian Park and Dr. Prasenjit Mitra.

In the POCT and laboratory quality symposium, Prof. Dibyajyoti Banerjee, Dr. Neeraj Jain, Dr. Jawahar (Jay) Kalra participated and it was chaired by Dr. Tester F Ashvaid., Prof. T Venkatesh. Inherited metabolic disorders symposium were covered by Prof. K Vaidyanathan, Dr. Anibh M Das, Dr. Kallol K and Prof. James R Bonham. In the symposium on “Medical Ethics” the speakers were Dr. Sirshendu Chaudhuri, Dr. Kamala Vijay, Prof. Suman Kr Roy and Dr. Sucheta P. Dandekar. In the symposium on Leadership & Management, discussion was held by eminent speakers Dr. Seema Bhargava, Dr. Col. D.K. Mishra and Dr. Ramy Assaad Khalil. Dr. Sadanand S. Naik organized a symposium on “Vegetarian Indians-Vitamin B12 status”. The final day (15th December 2021) program started with Dr. G P. Talwar Oration Award Lecture by Prof. Partha P. Majumder, National Science Chair, Govt. of India & Distinguished Professor from National Institute of Biomedical Genomics, Kalyani, on “Genomics of



Session in progress

Immune-Response to Typhoid and Cholera Vaccines". Prof. LM Srivastava and Dr. Jitendra Sharma chaired the symposium on IFCC-TFYS, with opening remark by Dr. Santiago Fares Taie. Dr. Himanshu Sharma, Dr. Ankita Singh, Dr. Roopali Rajput were the other speakers. Dr. Shantanu Panja, Dr. Saugata Hazra and Dr. Ramesh S Ve spoke on various aspects of Artificial intelligence in clinical diagnosis. Prof. DN Rao chaired the symposium on Clinical Immunology. Dr. Ashok Sharma, Dr. Kalpana Luthra, Dr. Moinuddin spoke on the same. Dr. Samuel D Vasikaran spoke on Diagnosis of Primary aldosteronism, Prof. Manidip Pal discussed on PCOS and its Biochemical Correlation and Dr. Ravinder J Singh discussed on Steroid Testing by LC-MS/MS for Diagnosing Adrenal Disorders. Dr. Amitava Dasgupta, Prof. BD Banerjee, Dr. Uttam Garg covered various topics in the Toxicology and Therapeutic drug monitoring symposium. IFCC-CCLM Symposium on Laboratory Management and Leadership, was chaired by Prof. Seder Yenice. Prof. Praveen Sharma acted as convener of this symposium and delivered a talk on

"Value based Laboratory Medicine Practice: Opportunities and Challenges". Dr. Ed Randell discussed on "High Impact initiatives that improve laboratory utilization", highlighting the ways to improve laboratory testing processes to improve patient outcome. Dr. Raja Elina Raja Aziddin emphasized the significant role of laboratory medicine specialists in clinical decision making. Dr. Merve Sibel Gungoren, addressed the potential benefits of laboratory data and informatics tools for test utilization management. In addition, there were free paper sessions by 36 delegates in this conference. Thirteen young investigators presented their work in different Oral Award categories. 236 delegates presented their work through poster presentations and participated in poster presentation awards. Medical post graduate students in Biochemistry also enthusiastically participated in AFMC Quiz contest. Different corporate bodies participated in Industrial Workshop and Scientific activities. The conference was finally concluded with the valedictory ceremony on 15th December, 2021.



ACBICON 2021 organizing team



News from the Japan Society of Clinical Chemistry (JSCC): the 2021 JSCC Article Award

by *Hideo Sakamoto, PhD*
International Exchange Committee of JSCC



Ms. Yoshie Goto

The Japan Society of Clinical Chemistry (JSCC) Article Award was given to a person who had made outstanding academic research in clinical chemistry. In 2021, Yoshie Goto, BLS was the winner of the Article Award. The award presentation was held at the 61st Annual Meeting of JSCC in Fukuoka, Japan, from November 5-7, 2021. At the award presentation, award winner Ms. Goto was congratulated by Dr. Takashi Miida, president of JSCC for her outstanding work in clinical chemistry.

In this issue, we would like to introduce the winner of the Article Award to distribute her outstanding work.

Yoshie Goto, BLS (Department of Clinical Laboratory Medicine, Tohoku University Hospital) is the winner of the 2021 JSCC Article Award, entitled with “Evaluation of IFCC standardization method in alkaline phosphatase (ALP) measurement”.

Japan Society of Clinical Chemistry (JSCC) decided to change the JSCC-based reference method to measure alkaline phosphatase (ALP) to the International Federation of Clinical and Laboratory Medicine (IFCC)-based method from April 2020, allowing a one-year transitional period. JSCC proposed the conversion formula of $y = 2.84x$, $x = 0.35y$ (x : IFCC, y : JSCC) for ALP values. However, both methods could show differential reactivities to specific ALP

isozymes, such as placental and intestinal isozymes, which may cause dissociation between converted and measured values. In this study, Ms. Goto focused on the potential impact on ALP values, especially placental and intestinal isozymes, caused by the changes in the reference method.

When the samples placental and the intestinal isozymes were excluded for the analysis, the conversion formula derived from measured value was $y = 2.90x + 2.15$ (x : IFCC, y : JSCC). In addition, correlation between converted and measured value was $y = 1.02x + 2.15$ (x : IFCC \times 2.84, y : JSCC).

Ms. Goto next investigated the relationship between the emergence of placental isozyme and gestational weeks, demonstrating that placental ALP isozyme could be detectable from 21 weeks of gestation and to persist 5 days postpartum. For intestinal isozyme, she evaluated the effect of food intake as well as blood type. It is known that the increase in serum intestinal ALP activity occurred in subjects with blood groups B and O, especially after fatty food intake. She demonstrated that intestinal ALP activity was higher in subjects with blood groups B and O than in other blood types in outpatient settings. When compared between outpatient and inpatient settings among subjects with blood groups B and O, the intestinal ALP activity was higher in outpatients than inpatients, presumably due to the effect of food intake before blood sampling.

Collectively, Ms. Goto’s results will provide useful information for all medical staff.



News from SEQC^{ML}: update on Covid-19 and its aftermath

*by Mercè Ibarz Escuer, PhD
SEQC^{ML}, IFCC National Representative
Laboratori Clínic ICS Lleida
Hospital Universitari Arnau de Vilanova
Lleida, Spain*

SEQC^{ML}

Sociedad Española de Medicina de Laboratorio

Within the framework of the XIX Conference of the Scientific Committee of the Spanish Society of Laboratory Medicine (SEQC^{ML}), which was held in virtual format from March 28-31, 2022, updates were provided on various topics of great interest. The available evidence on COVID-19 was analyzed and the role of the Clinical Laboratory in addressing it was described, as well as various topics related to the SARS-CoV-2 virus infection, in the course **'Update on COVID-19. And after the pandemic?'**

It is estimated that 10-15% of patients who have been infected by SARS-CoV-2 do not fully recover and develop persistent COVID (also known as Long COVID), which would represent around one million affected people in Spain. This can affect anyone regardless of their age, sex or condition, although in general it affects patients who, in 50% of cases, are between the ages of 36 and 50, and female (79-80%). The majority did not have associated comorbidities prior to COVID-19.

The clinical guide for patient care for Long/persistent COVID, in whose writing the SEQC^{ML} collaborated, defines this condition as a multi-organ systemic complex that affects those patients who have suffered from COVID-19 and who remain with symptoms after the acute phase of the disease, up to 4 or even 12 weeks, with symptoms persisting over time.

As explained by Dr. Pilar Rodríguez Ledo, coordinator of the persistent COVID area of the Spanish Society of General and Family Physicians (SEMG), among the

symptoms that generate the greatest disability are asthenia, headache, and myalgia, as well as the appearance of psychological and emotional symptoms. This multi-organ involvement - which can be expressed in 201 different symptoms - produces a serious disability in patients, which is seen most intensely in the work, family, and leisure areas in more than 70% of those affected.

For the correct approach to a disease with multi-organ involvement such as persistent COVID, a comprehensive approach is necessary counting on the participation of different specialties, including Laboratory Medicine, according to Dr. Luis García de Guadiana Romualdo, course coordinator and member of the SEQC^{ML} Commission on Biological Magnitudes Related with Medical Emergencies. Thus, the initial exploration of the patient is completed with complementary tests, including laboratory tests.

Currently there are no specific laboratory diagnostic tests available for the diagnosis of Long COVID, but laboratory tests can be useful tools to rule out other possible diagnoses and organ-specific sequelae of a severe COVID-19 infection. In addition, markers such as KL-6 (Krebs von den Lungen 6) are being investigated to assess their usefulness in patients who develop post-COVID pulmonary fibrosis.

Regarding the causes of persistent COVID, in the absence of studies that provide evidence on its etio-pathogenesis, Dr. Rodríguez notes that three mechanisms involved in it have been proposed.

First, due to the persistence of the virus in the body, the COVID infection causes a latent or chronic infection. Second, the acute infection could trigger an inflammatory storm or "cytokine storm" due to the complete virus or its fragments in its acute or confined phase. This event is an immunopathological characteristic of

Article continued on next page

COVID-19 associated with the severity of the disease in its acute phase and the persistence of symptoms. And, finally, it could be due to an immune dysfunction generated by the development of COVID-19 autoantibodies that can act against immunomodulatory proteins and cause a deterioration of virological control. In addition, different studies also suggest the implication of diverse nutritional (omega 3, vitamin B12, vitamin D, among others), metabolic and microbiota alterations associated with persistent COVID / Long COVID.

IMMUNE RESPONSE AGAINST SARS-COV-2

The role of the immune response against SARS-CoV-2 was also analysed in the course. Specifically, Dr. Eva María Martínez Cáceres, Vice President of the Spanish Society of Immunology (SEI), addressed the role of specific immunity in the fight against COVID-19, probably a forgotten aspect in contrast to “antibody-centrism”, a concept coined by some researchers to refer to the importance given to humoral immunity to the detriment of innate immunity.

Knowledge of this type of immunity and of the techniques for its evaluation will probably contribute to the improvement of vaccination strategies and

allow the identification of those patients who require booster doses, thus contributing to the improvement of vaccine management.

IMPACT OF THE PANDEMIC ON LABORATORIES

And what has COVID-19 meant for clinical laboratories? Dr. García de Guadiana assures that the pandemic has had a major impact on various aspects related to the organization of laboratories: the incorporation of new tests in the Emergency services, the high pressure to carry out diagnostic tests, and the reorganization of staff resources.

In addition, Laboratory Medicine has been able to “re-invent itself” to provide its activity in COVID-19 monographic hospitals such as the Nurse Isabel Zandal Emergency Hospital in Madrid or the COVID-19 Emergency Hospital in Seville.

Within the framework of the conference, Dr. José Ángel Noval, member of the SEQC^{ML} Committee on Point of Care Laboratory Testing, presented his personal experience in the implementation of a laboratory in a COVID-19 hospital and the importance of the Point of Care Testing methodology in it, as well as the possibility that the model could be a possible alternative solution to the traditional laboratory in future scenarios.

Spanish Society of Laboratory Medicine (SEQC^{ML})

The Spanish Society of Laboratory Medicine (SEQC^{ML}) —founded in 1976— is an active member of the international and European Federations of Clinical Laboratory, IFCC and EFLM.

It currently encompasses almost 3,000 professionals and its main objective is to bring together all interested scientists in the Clinical Laboratory field, promote the dissemination of scientific and technical publications, organize national and international meetings, courses and congresses, and cooperate with other scientific societies.

Likewise, the Society wishes to contribute to studying and recommending standardized methods and establishing guidelines and recommendations for training in the field of Laboratory Medicine.

For more information: www.seqc.es.



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News from the Bolivian Society of Clinical Biochemistry

by Dr. *Álvaro Justiniano Grosz*
President of COLABICLI

~ Bolivian Society of Clinical Biochemistry assumes second mandate in the Executive Committee of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI) For the term 2022 – 2024 ~

BOLIVIAN SOCIETY OF CLINICAL BIOCHEMISTRY

Historical aspects

The BOLIVIAN SOCIETY OF CLINICAL BIOCHEMISTRY was founded on February 16, 1969, with the participation of biochemical representatives from the nine departments of Bolivia; It was in the city of Santa Cruz de la Sierra where our National Entity was born, with the sole objective of forming an association that would bring together all the Biochemical, Biochemical – Pharmacist professionals in the country, who would dedicate themselves to the Clinical Analysis Laboratory.

The BOLIVIAN SOCIETY OF CLINICAL BIOCHEMISTRY has completed 53 uninterrupted years of existence. It has an organic statute and several regulations that govern the activity not only of the scientific entity, but also the life of biochemical professionals in our country, in aspects related to professional practice, categorization and others that apply to professionals who provide their services, both in the private area and in public institutions in Bolivia.

Throughout its history, XVII Ordinary National Congresses, National Scientific Conferences for professional updating, Courses, Seminars and Workshops with the participation of National and International Professionals were organized. It is an active member of the International Federation of Clinical Chemistry (IFCC), the Latin American Confederation of Clinical Biochemistry (COLABIOCLI), and the Spanish Society of Clinical Chemistry (SEQC).

Our Entity in recent years has held positions as 1st and 3rd Member; Vice presidency; Presidency of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI), and currently, for the 2022-2024 Management, Bolivia will assume its second consecutive term as head of the COLABIOCLI Executive Committee.

The Bolivian Society of Clinical Biochemistry, is a scientific, academic and union entity that brings together Biochemical, Biochemical-Pharmacist professionals, with Academic Diploma and National Provision Title. Without political, racial and religious purposes, its members will have the rights and obligations established in its Statutes and the Political Constitution of the Plurinational State of Bolivia, laws, decrees and other related provisions.

Institutions and organizations dependent on the Bolivian Society of Clinical Biochemistry are:

- a. External Quality Assessment Program (PEEC).
- b. Clinical Laboratory Accreditation Committee (CALC)
- c. Committee for Technical Standardization of Clinical Laboratories (CNTLC)
- d. Biochemist Profession Certification Committee (CCPB)
- e. Bolivian Continuing Education Program (PROBOECO)

SOBOBIOCLI's Mission

It is the scientific, academic entity that brings together Biochemical and Biochemical-Pharmaceutical professionals, which promotes the study, progress, scientific and academic development of Biochemistry, thus promoting the improvement and continuous training of its members, under principles of conscience, professional ethics and a broad spirit of solidarity, actively participating in the development of projects that support national health plans, thus contributing to the prevention, promotion and protection of the health of the Bolivian population.

SOBOBIOCLI's Vision

It is to become the national scientific-academic entity with the greatest leadership and representativeness of Bolivian Biochemical professionals.

THE NEW EXECUTIVE COMMITTEE OF THE LATIN AMERICAN CONFEDERATION OF CLINICAL BIOCHEMISTRY (COLABIOCLI)

Bolivia, after a complex management for all Latin American entities in general, and the LATIN AMERICAN CONFEDERATION OF CLINICAL BIOCHEMISTRY (COLABIOCLI) in particular as a consequence of the COVID-19 pandemic; again, and with the support of all the countries of the region, it will occupy the Presidency of COLABIOCLI, the same that has once again been entrusted to Dr. Álvaro Justiniano Grosz.

In the Ordinary Assembly that the Latin American Confederation of Clinical Biochemistry held within the framework of the XXV Latin American Congress of Clinical Biochemistry in the city of León-Guanajuato, Mexico, on April 1 of the current year, COLABIOCLI proceeded to renew its Executive Committee for the period 2022 – 2024, in accordance with the provisions of its statutes and regulations



By a large majority of votes of the assembly members present, the Bolivian Entity, Bolivian Society of Clinical Biochemistry (SOBOBIOCLI) was re-elected as National Executive Entity for a second term, the Executive Committee of COLABIOCLI being constituted as follows:

Executive Committee

Dr. Álvaro Justiniano Grosz (Bolivia)	President
Dr. Luiz Fernando Barcelos (Brasil)	Vicepresident
Dra. Carola Briançon Ayo (Bolivia)	Secretary General
Dra. Lisandra Morales Jurado (Bolivia)	Treasurer
Dra. Marlene Vélez de la Vega (Colombia)	Vocal 1°
Mgter. Gloria Saucedo B (Panamá)	Vocal 2°
Bqca. María Cecilia López (Argentina)	Vocal 3°

Review Committee of Accounts

M. en E. QFB. María Jezabel Vite Casanova (México)
Dra. Tamara Andrade (Ecuador)
QFMB Fernando Antúnez (Uruguay)

COMITE EJECUTIVO 2022 - 2024



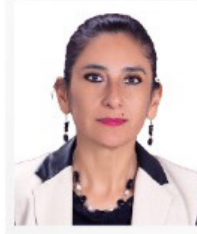
Dr. Alvaro Justiniano Grosz
Presidente



Dra. Carola Briañon Ayo
Secretaria General



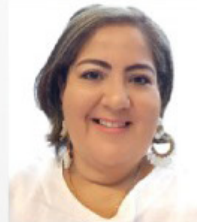
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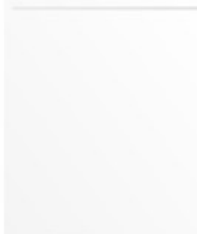


Bqca. Maria Cecilia López
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Casanova



Dra. Tamara Andrade



Q.F.M.B. Fernando Antúnez

THE LATIN AMERICAN CONFEDERATION OF CLINICAL BIOCHEMISTRY (COLABIOCLI), will address the lines outlined in its COLABIOCLI STRATEGIC PLAN for the coming years. It is intended to work with an objective vision of our entity, which reflects the power to develop issues immediately, in the medium and long term, which would be reflected as follows: An organization that promotes continuous improvement of quality, development of the clinical laboratory, with strong leadership, setting agenda items and with the participation of the national entities that are members of COLABIOCLI.

This vision allows the elaboration of a global framework of strategies, activities that will make it possible to translate them into an action plan that defines concrete actions, responsible parties and deadlines for the fulfillment of the goals set. Within the general framework of the plan, nine fundamental pillars were defined:

1. Strengthening of the institutional image of COLABIOCLI.
2. Strengthening of COLABIOCLI member associations and other professional associations.
3. Emphasis on the participation of young professionals within the Confederation.
4. Promoting the strengthening of national regulations and regulatory frameworks, aimed at the recognition of quality management systems in clinical analysis laboratories in Latin America.
5. Strengthening national structures of the member countries of COLABIOCLI, which promote the continuous improvement of quality.
6. Strengthening the role of laboratory professionals as a fundamental part of the health team.
7. Identifying agenda items within COLABIOCLI, to expand the scope of the laboratory in Latin American countries.
8. Developing continuous training programs, facilitating the access of the different member countries of COLABIOCLI.
9. Strengthening relations with universities and scientific institutions.

All these defined strategies will be the fundamental basis of the new actions of our entity in Latin America, elements that will allow our institution to fulfill a new role, more agile and dynamic, attuned with the entities of the different countries in Latin America.



Executive Committee of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI) and the International Federation of Clinical Chemistry renewal of the cooperation agreement during the XXV Latin American Congress of Clinical Biochemistry Leon - Guanajuato Mexico



Executive Committee of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI) and the International Federation of Clinical Chemistry renewal of the cooperation agreement during the XXV Latin American Congress of Clinical Biochemistry Leon - Guanajuato, Mexico



Different countries participating in the regular assembly of the Latin American Confederation of Clinical Biochemistry, during the XXV Latin American Congress of Clinical Biochemistry Leon - Guanajuato, Mexico

News from the IFCC Website

IFCC Webinars

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2022

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Don't miss the next IFCC webinar on:

“Reliable biological variation estimates - where to find them and how can they safely be applied?”

June 8, 2022

IFCC Live Webinar on
Reliable biological variation estimates - where to find them and how can they safely be applied?



Moderator

Reliability of Biological Variation Data:
The Biological Variation Data Critical
Appraisal Checklist (BIVAC) and
the EFLM Biological Variation Database

Utility of biological variation data
in clinical and laboratory practice

Estimating personalized reference
intervals using biological variation
data



Dr. Bill Bartlett
[UK]

Clinical Biochemist within the NHS
laboratories in London, Birmingham and
Dundee
Honorary Senior Lecturer in Undergraduate
Medical Education



Dr. Aasne K. Aarsand
[Norway]

Director of the Norwegian Porphyria Centre
and a consultant medical biochemist at
Department of Medical Biochemistry and
Pharmacology, Haukeland University Hospital
and Norwegian Organization for Quality
Improvement of Laboratory Examinations



Dr. Sverre Sandberg
[Norway]

Director of the Norwegian Organization
for Quality Improvement of Laboratory
Examinations (NOKLUS)



Dr. Abdurrahman Coskun
[Turkey]

Professor of Medical Biochemistry at
Acibadem Mehmet Ali Aydinlar
University School of Medicine, Istanbul

Date: June 8, 2022

Time: 7 AM (Eastern Standard), 2 PM (Central European), 8 PM (China Standard)



[Click here to register.](#)



Call for Nominations



EDUCATION AND MANAGEMENT DIVISION

- ➔ **Committee on Clinical Molecular Biology Curriculum (C-CMBC):** one member position
 - Deadline to send nominations and supporting documents: **4th July 2022.**

Applications for these positions should be submitted by IFCC members (National Societies or Corporate members). If you are interested, please refer to your National Representative or Corporate Representative for information on procedures for nominations. Find your representative [here](#).

For further information on IFCC open Calls for Nominations, please visit the [IFCC Call for Nominations page](#).

IFCC Webinars

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IFCC Live Webinar on Data-driven Operations and Machine Learning Applications in Clinical Laboratories



Moderator



Prof. Sedef Yenice
[Turkey]

Professor of Biochemistry and Clinical Laboratory Medicine, MBA in Executive Management, Executive Member and VLP Chair in IFCC Education and Management Division

The role of digital transformation in improving clinical laboratory management



Dr. Merve Sibel Güngören
[Turkey]

MD-PhD, EMBA; Specialist in Medical Biochemistry, Full member of the IFCC Committee on Clinical Laboratory Management

The Pursuits of Data Analytics and Machine learning applications in laboratory operations



Dr. Deniz İlhan Topçu
[Turkey]

MD - Ph.D. in Medical Biochemistry, BSc in Computer Engineering, EuSpLM, Full member of the IFCC Committee on Internet and eLearning (C-IeL)

Implementation of laboratory results in machine learning-based clinical decision support systems



Dr. Hikmet Can Çubukçu
[Turkey]

MD, Consultant in Medical Biochemistry, EuSpLM, PhDc in Ankara University Stem Cell Institute
Member of EFLM Working Group: accreditation and ISO / CEN standards and IFCC Taskforce on Global eLearning/eAcademy

Date: May 23, 2022

Time: 9 AM (Eastern Standard), 4 PM (Central European), 10 PM (China Standard)



Available on demand. [Click here](#) to access the recording.

IFCC WELCOMES A NEW CORPORATE MEMBER

Sansure Biotech Inc.



SANSURE BIOTECH INC. is a comprehensive solution provider for in vitro diagnosis with independent innovation gene technology as the core, integrating diagnostic reagents, instruments, and independent-clinical laboratory services. Sansure has developed a series of core technologies for precise prevention, diagnosis, and treatment of diseases, and has more than 400 products whose performance exceeds the advanced level, at home and abroad.

Sansure's nucleic acid test products and relevant solutions have been introduced to more than 160 countries and regions around the world, and has over 10,000 benchmark/first class hospitals and Labs. During the COVID-19 pandemic, a total of nearly 250 million RMB worth of anti-epidemic materials have been donated to domestic and foreign countries, making the "Sansure Solutions" the leading solutions for nucleic acid testing in many countries around the world.

Website:

www.sansureglobal.com.



IFCC'S CALENDAR OF CONGRESSES, CONFERENCES & EVENTS

Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses

June 8, 2022	 <p>International Federation of Clinical Chemistry and Laboratory Medicine</p>	<i>IFCC Live Webinar on : Reliable biological variation estimates - where to find them and how can they safely be applied?</i>	Live webinar
July 22, 2022	 <p>International Federation of Clinical Chemistry and Laboratory Medicine</p>	<i>IFCC Live webinar on: Experts' insights and experiences for clinical laboratory investigators: building translational research programs</i>	Live webinar
June 25 - 26, 2022	 <p>International Federation of Clinical Chemistry and Laboratory Medicine</p>	<i>IFCC Forum for Young Scientists</i>	Seoul, KR
June 26 - 30, 2022	 <p>IFCC WorldLab SEUL 2022 24th International Congress of Clinical Chemistry and Laboratory Medicine</p>	<i>XXIV IFCC WORLDBLAB Seoul 2022 XVI APFCB Congress Seoul 2022</i>	Seoul, KR
New date TBA	 <p>ARAB FEDERATION OF CLINICAL BIOLOGY AFCB</p>	<i>AFCB Congress 2022</i>	Beirut, LB
May 21 - 25, 2023	 <p>21-25 May EUROMEDLAB ROMA 2023</p>	<i>XXV IFCC - EFLM WorldLab EuroMedLab - Rome 2023</i>	Rome, IT

Calendar continued on next page

April 2024		XXVI COLABIOCLI 2024	Cartagena, CO
October 19 - 22, 2024		APFCB 2024 Sydney	Sidney, AU
2024 Date TBA		XXVI IFCC WORLDLAB Dubai 2024	Dubai, AE
2025 Date TBA		XXVI IFCC-EFLM EUROMEDLAB 2025	Venue to be selected
2026 Date TBA		XXVII IFCC WORLDLAB 2026	Venue to be selected
2027 Date TBA		XXVII IFCC-EFLM EUROMEDLAB 2027	Venue to be selected
2028 Date TBA		XXVIII IFCC WORLDLAB 2028	Venue to be selected

2029 Date TBA	 International Federation of Clinical Chemistry and Laboratory Medicine	XXVIII IFCC-EFLM EUROMEDLAB 2029	Venue to be selected
2030 Date TBA	 International Federation of Clinical Chemistry and Laboratory Medicine	XXIX IFCC WORLDBLAB 2030	Venue to be selected

Other events with IFCC auspices

Jun 5 - 8, 2022	<i>CSCC 2022 Annual Conference</i>	Niagara Falls, CA
Jul 5, 2022	<i>Corporate member event: Laboratory Medicine Case Contest</i>	Mindray virtual conference
Jul 18 - 23, 2022	<i>29th AMBICON 2022</i>	Bangalore, IN
Sept 12 - 14, 2022	<i>XXII Serbian Congress of Medical Biochemistry and Laboratory Medicine and 16th Symposium for Balkan Region</i>	Belgrade, SRB
Sept 12 - 14, 2022	<i>XLIV National Congress of Clinical Chemists and ExpoQuím Guadalajara</i>	Hybrid event Guadalajara, MX
Sept 18 - 21, 2022	<i>20th International Congress of Therapeutic Drug Monitoring and Clinical Toxicology - IATDMCT 2022</i>	Prague, CZ
Sept 19 - 20, 2022	<i>6th Slovenian Congress of Clinical Chemistry and Laboratory Medicine</i>	Portoroz, SI
Sept 21 - 23, 2022	<i>28th AACC International CPOCT Symposium – Meeting Evolving Patient Needs Using Point-of-Care Testing</i>	Montreal, CA
Sept 22 - 24, 2022	<i>XVI Baltic Congress in Laboratory Medicine</i>	Tallin, EE

Sept 22 - 24, 2022	<i>22èmes Journées Marocaines de Biologie Clinique</i>	Casablanca, MO
Sept 28, 2022	<i>International Conference on Laboratory Medicine "Moving laboratory medicine beyond the pandemic: from disruptive technologies to innovation"</i>	Padua, IT
Sept 28 - Oct 1, 2022	<i>10th Congress of the Croatian Society of Medical Biochemistry and Laboratory Medicine</i>	Zagreb, HR
Sept 29 - Oct 2, 2022	<i>XXXI World Congress of the World Association of Societies of Pathology and Laboratory Medicine (WASPaLM)</i>	Punta del Este, UY
Oct 2 - 5, 2022	<i>2nd AFCB-EFLM Conference Laboratory Medicine for Mobile Societies in the Mediterranean Area</i>	Heraclion - Crete, GR
Oct 4 - 9, 2022	<i>FEBS Advanced Course: 360-degree Lysosome; from structure to genomics, from function to disease-update</i>	Izmir, TR
Oct 5 - 7, 2022	<i>5emes Journées Francophones de Biologie Médicale (5e JFBM)</i>	Hybrid event Saint Etienne, FR
Oct 14 - 17, 2022	<i>46th ISOBM Congress</i>	Bled, SI
Oct 26 - Nov 15, 2022	<i>How to write and publish: a good scientific & professional article</i>	Online event
Nov 30, 2022	<i>14th International Scientific Meeting: Implementation of metrological traceability in laboratory medicine: where we are and what is missing</i>	Sesto San Giovanni Milan, IT



IFCC Executive Board 2021-2023



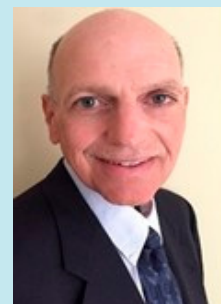
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Arab Federation of Clinical Biology (AFCB)
 African Federation of Clinical Chemistry (AFCC)
 Asia-Pacific Federation for Clinical Biochemistry
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 European Federation of Clinical Chemistry
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 Latin America Confederation
 of Clinical Biochemistry (COLABIOCLI)
 North American Federation of Clinical Chemistry
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 Mexico: Federación Nacional de Químicos Clínicos (CONAQUIC A.C.)
 Nepal: Nepalese Association for Clinical Chemistry (NACC)
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 Spain: Andalusian Society for Clinical Analysis and Laboratory Medicine (SANAC)
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 Sri Lanka: College of Chemical Pathologists of Sri Lanka (CCPSL)
 Turkey: Society of Clinical Biochemistry Specialists (KBUD)
 Ukraine: Association for Quality Assurance of Laboratory Medicine (AQALM)
 United Arab Emirates: Genetic Diseases Association (UAEGDA)

Publisher

Communications and Publications
Division (CPD) of the IFCC

The Communications and Publications Division publishes ten editions of the e-News per year, including two double issues.

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N° 3 – March: *by mid February*

N° 4 – April: *by mid March*

N° 5 – May: *by mid April*

N° 6 – June: *by mid May*

N° 7/8 – July/August: *by mid June*

N° 9 – September: *by mid August*

N° 10 – October: *by mid September*

N° 11 – November: *by mid October*

N° 12 – December: *by mid November*

If you want to submit an article or advertisement to be published in the eNews, send it to:
Katherina Psarra, Editor, IFCC eNews
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