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International Federation of Clinical Chemistry and Laboratory Medicine



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## EDITORIAL

### Message from the eNews Editor

*by Katherina Psarra*  
eNews Editor

Dear colleagues,

It is one of the most difficult times of the year. We are back from the holidays, summer is leaving us, the cities seem full of COVID related problems, and it is not all that funny these days. I hope you are managing to find pleasure in our really contributing to better health job even in these strange times.

In this issue our president Prof. Khosrow Adeli is discussing with all of you the IFCC strategic plans, new taskforces are announced, the first series of LIVE IFCC webinars will be starting in September.

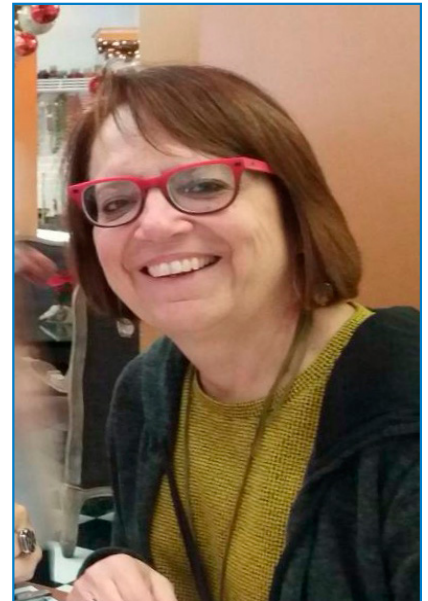
Most of you have met late Prof. Donald S. Young, who passed away recently. The entire IFCC community mourns his passing. His life is a perfect example of somebody dedicated to our job but at the same time to LIFE itself. He will be missed as Prof. Peter Wilding writes in his excellent article.

Two interesting opinion articles on the new “meetings world” in the pandemic times are presented in this issue. Go through them and think and respond: What do you think of the virtual meetings? Are face-to-face meetings necessary? Are they valuable? Shall we live in a virtual world?

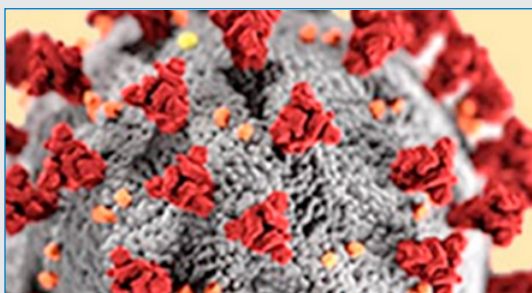
Take notice and respond, please, to the call for manuscript submission for a thematic eJIFCC issue on “Measurably better Healthcare”. If you wish to understand better the meaning of this title, go through the conversation with this issue editors Dr. Ellie Dow and Dr. Tim James about leading healthcare excellence.

“A dose of AI in developing vaccines at pandemic speed “. What a title! Dr. Bernard Gouget is offering a lot of interesting information on the AI use in vaccines development.

Keep healthy dear colleagues! And do try to entertain yourselves!



*Katherina Psarra*



The IFCC is pleased to publish an online resource providing key information on laboratory guidelines, biosafety, and other important resources to assist member societies around the world and their clinical laboratories as they face the challenges posed by the COVID-19 outbreak.

**The page is constantly updated  
with the most recent information.**

**The next update will be available on 15 September 2020, and updates will continue on a biweekly basis.**



## THE VOICE OF IFCC

### IFCC President's message – September 2020

*by Khosrow Adeli*  
IFCC President



Prof. Khosrow Adeli  
PhD, FCACB, DABCC, FAACC

My sincere greetings to you all during these challenging times around the world. I hope everyone has had an enjoyable summer and has had a great time with family and friends. I am pleased to inform you that the new IFCC strategic plans (as discussed in the June and July issues of the eNews) have now been formally approved by the IFCC Executive Board.

I have also received a lot of excellent feedback from the membership which have helped improve some of our initial proposals. We are now in a position to initiate the first steps in executing these plans over the coming months and years.

New Calls for Nominations will be issued in September, to invite scientific and industry leaders and experts from around the world to serve on these new taskforces:

#### ***a) IFCC Taskforce on Global Newborn Screening:***

To provide scientific oversight of a new IFCC program to advocate and initiate newborn screening programs in developing countries in collaboration with WHO, Gates Foundation, and industry partners. The lack of newborn screening programs in many member societies/developing countries is leading to major health consequences and a burden on healthcare delivery and costs. Development of new programs in developing countries will significantly enhance child health and reduce infant mortality.

#### ***b) IFCC Taskforce on Global Lab Quality:***

To provide scientific oversight of the new IFCC program on global lab quality which includes:

- I)** an IFCC External Quality Assurance Program in developing countries,
- II)** an IFCC Internal Quality Assurance on-site training program in developing countries and
- III)** Global Reference Interval Consortium: An IFCC global database of adult and pediatric reference intervals as a key resource for laboratories around the world.

#### ***c) IFCC Taskforce on Global eLearning/eAcademy:***

To develop and execute a new strategy to develop and deliver webinars via a new platform (WorkCast) with LIVE global webinars (monthly) starting in September 2020; biweekly live webinars in 2021 and future years; as well as recorded webinars for the eAcademy. Distance learning/eLearning is a major mandate of the IFCC organization to provide both live and recorded webinars given by experts around the world. This is an important way by which IFCC can give back to the national societies around the world and their members especially young scientists and trainees.

*Article continued on next page*

As a pilot, the first series of LIVE IFCC webinars will be starting in September and will continue throughout the fall and over the coming years.

The **first live webinar, on September 23, 2020** will be focused on **New IFCC Guidelines on Molecular, and Serological Testing of SARS-Cov-2 as well as Biochemical and Hematological Monitoring of COVID-19 patients.**

Each of these live webinars will be presented by a panel of 2-3 speakers and will include a discussion session. I invite you all to participate in these live webinars,

which will be broadcast around the world, initially live and then recorded and rebroadcast again based on different time zones.

I look forward to interacting with many of you over the coming months both virtually but hopefully soon in person once the COVID-19 crisis is behind us.

Feel free to email me at: [president@ifcc.org](mailto:president@ifcc.org) with your feedback, questions, or concerns.

*Till next time 😊*  
*Khosrow*

## IFCC Live Webinar Series – fall 2020

The IFCC is pleased to present the **IFCC Live Webinar Series** starting in the fall 2020: A series of scientific webinars offered freely by the IFCC on a number of important topics delivered by subject matter experts from around the world.


Distance learning/eLearning is a major mandate of the IFCC organization to provide both live webinars and recorded webinars via the eAcademy. This is an important way by which IFCC can give back to the national societies around the world and their members and young scientists, students, and trainees.

A new platform (WorkCast, the leading provider of webinars globally) will be used to deliver LIVE IFCC webinars broadcast around the world. Each of these live webinars will be presented by a panel of 2-3 speakers and will include a discussion session. Recorded webinars will be developed for the eAcademy as well. The first series of LIVE IFCC webinars will be starting this September and will continue throughout the fall.

**The first live webinar will be held on September 23, 2020.**

It will be focused on ***New IFCC Guidelines on Molecular and Serological Testing of SARS-Cov-2 as well as Biochemical and Hematological Monitoring of COVID-19 patients.***

YOUR DETAILS:	
Email *	<input type="text"/>
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Country *	<input type="text"/>



**IFCC Live Webinar Series**  
- Fall 2020  
**IFCC COVID-19 Guidelines on  
Molecular, Serological, and  
Biochemical/Hematological  
Testing**  
**23 September, 2020**

**Speaker Panel:** Giuseppe Lippi (Italy), Rita Horvath (Australia), and Khosrow Adeli (Canada);

Chair: Khosrow Adeli

- IFCC Guidelines on Molecular Diagnostic Testing of SARS-CoV-2 Viral Infection (GL)
- IFCC Guidelines on Serological Testing of Anti-SARS-CoV-2 Antibodies (KA)
- IFCC Guidelines on Biochemical and Hematological Monitoring of Patients with COVID-19 (AH)

**Schedule:** 20 min per speaker plus 20 min panel discussion

**Time Zones:** Live presentations starting at 8 AM Eastern Standard Time; 2 PM European Time; and 10 PM in Sydney (Australia). Recorded webinars to be re-broadcast on demand.

*A link will be circulated soon to help everyone register and participate in this event.  
A limit of 5000 attendees.*

**Don't miss it!**  
**Mark on your agenda: future fall webinars**

**October 14, 2020**

***Advancing Global Lab Quality: Initiatives on Internal & External QA and Reference Intervals***

- Internal and external quality assurance in clinical laboratories around the world: State of Affairs
- The Critical Need for a New EQA Program for Developing Countries
- Internal Quality Assurance in Developing Countries: A New IFCC Strategy
- Global Reference Interval Consortium: Development of an International Ref Interval Database

**November 4, 2020**

***IFCC Newborn Screening (NBS) Initiative: Reducing Infant Mortality Through Early Diagnosis***

- Worldwide Gaps and Challenges in NBS
- A New IFCC Strategy on Global NBS
- Proposed model for NBS Implementation in Developing Countries

**November 25, 2020**

***Value and Impact of Laboratory Medicine in Patient Care: Developing the Evidence***

- Critical role of the clinical laboratory in healthcare delivery: What is the Evidence?
- The Essential Need for New Retrospective and Prospective Outcome Studies
- A New IFCC Strategy to Develop the Evidence in Key Areas of Clinical Medicine

*Details for these three webinars will be available in due time.*

## Call for manuscript submissions for a thematic eJIFCC issue on “Measurably Better Healthcare”

Guest Editors for the special issue: Ellie Dow and Tim James

*The clinical laboratory has always played an essential role in high quality healthcare. Appreciating the link between clinical data and medical decision making has been widely communicated for decades. Less frequently recognized, however, is the power of the clinical laboratory to drive measurable benefits for patients, payers and entire health systems.*

*Best practices of measurably better healthcare exist across the globe, and tend to involve coordinated, cross-disciplinary, and evidence-based collaborations for the implementation and activation of new clinical care pathways.*

- *Have you partnered with clinical colleagues to achieved measurably improved outcomes?*
- *What key performance indicators (KPIs) were improved and how?*
- *Who received the benefit and how was it measured?*

*This is your chance to publish your best practice*

- *How did laboratory data improve patient outcomes?*
- *What clinical algorithms helped identify at-risk individuals before they become “patients”?*
- *What biomarker-guided processes have enabled new strategic approaches to diagnostic optimization, disease management, therapeutic intervention, care optimization or improved population health?*

*Submit a paper on “Measurably Better Healthcare” to be published in this thematic issue of the eJIFCC that is a PubMed listed, platinum open access journal with a CiteScore of 0.8*

### **Important deadlines and Next Steps**

- Deadline for all submissions (original articles, critical reviews and case studies): **November 15, 2020**
- Manuscripts to be submitted by e-mail to [ejifcc@ifcc.org](mailto:ejifcc@ifcc.org) with a copy to [ejifccspecialissue@gmail.com](mailto:ejifccspecialissue@gmail.com)

### **Guest Editors**

- Ellie Dow, LRCP, MRCS, Ph.D., FRCPath, Consultant in Biochemical Medicine, Blood Sciences, NHS Tayside, Dundee, Scotland
- Tim James, Ph.D., Head Biomedical Scientist, Clinical Biochemistry Department, John Radcliffe Hospital, Oxford, England





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



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Acute Kidney Injury	β <sub>2</sub> -MG, Albumin, *NGAL
Coagulation Disorder	D-Dimer

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## IFCC: THE PEOPLE

### In memory of Donald S. Young



Prof. Donald S. Young

The entire community of IFCC mourns the passing of Prof. Donald Young, who served as the 7th President of IFCC from 1985 to 1990.

IFCC has been blessed with the service of sixteen presidents and I have been fortunate to know nearly all of them including Prof. Earl J. King, the first president, who served from 1952 to 1960. However, of all the presidents, Donald was the only one that I worked with closely for 17 years and knew for over 50 years.

Dr. Young was born in Belfast, Northern Ireland, and completed his Bachelor of Medicine at the University of Aberdeen in Scotland in 1957. In 1962 he was granted a PhD in Chemical Pathology from the University of London. Donald's service to clinical chemistry and IFCC is testament to his devotion to our

*by Peter Wilding*

*Professor Emeritus*

*University of Pennsylvania School of Medicine*

profession and explains the wide spread of involvement that he played in so many spheres of the discipline. His baptism in clinical chemistry started early due to his father's role as a professor of pathology at the universities of Edinburgh and Aberdeen in Scotland, but which was expanded into full blown artistry by his training with Prof. Earl J. King at the Royal Post Graduate Medical School, Hammersmith in London from 1951 to 1965. It was during this latter period that I first met Donald, as he actively participated in meetings of the Association of Clinical Biochemists (UK).

His early promise was recognized in 1965 by the National Institute of Health in Bethesda, MD, USA and resulted in his recruitment and subsequent promotion to Chief of the Clinical Chemistry Service at NIH where he worked until 1977. By this time his flair for committee activities related to clinical chemistry and publications were evident. Most notable were his interests and involvement in editorial functions for AACC, an activity which engaged him for over 20 years. For many close colleagues of Donald, one of the most distinguishing talents he displayed was his genuine enjoyment in 'proof reading' and editing.

From 1977 to 1984, Donald served as Head of the Section of Clinical Chemistry in the Department of Laboratory Medicine at the Mayo Clinic, Rochester, Minnesota. It was during this period that his role in AACC grew and which resulted in his election as President of AACC in 1980. However in 1984 Donald made his final move to become Chairman of the Division of Laboratory Medicine at the University of Pennsylvania School of medicine, a role he would hold until his retirement and appointment as a Professor Emeritus in 2009.

*Article continued on next page*

Throughout this exceptional career, Donald's continuously involved himself in multiple roles in IFCC, AACC, the World Health Organization and others, while at the same time spearheading the developments in automation, clinical laboratory data handling and point-of-care testing at the University of Pennsylvania. One outstanding facet of the activities was his profound interest in the 'effect of drugs on clinical laboratory tests', which resulted in the publication of numerous volumes that document these phenomena. The book series on this topic were translated into several languages and were employed as key reference points for clinical chemists around the world.

Donald's reputation world-wide was most impressive as he knew almost every clinical chemist of note in the world, and he had visited scores of countries as a lecturer and teacher. I observed Donald at international meetings on many continents, where his stature as a leader in the profession was always obvious.

His quiet disposition, his avoidance of conflict and his willingness to discuss issues were qualities he demonstrated during his tenure at the University of Pennsylvania and around the world. These accomplishments resulted in numerous prestigious national and international awards.

For the hundreds, or thousands, of colleagues and friends that Donald made during his visits to numerous countries, he was a sympathetic listener, a wise counselor and a mentor to innumerable young clinical chemists. He will be missed.

*Peter Wilding*

*International Federation of Clinical Chemistry (IFCC)*  
1976-84 Expert Panel on Evaluation of Diagnostic Reagents  
1976-85 Expert Panel on the Theory of Reference Values  
1992-97 Committee on Analytical Quality Assurance  
1992-99 Education & Management Division (Chair 1998-1999)  
2013-15 IFCC Historian

## In memory of Jan-Olof Jeppsson



Jan-Olof Jeppsson

by **Gunnar Nordin**  
**Anders Helander**  
**Jos Wielders**  
**Joyce Carlson**  
**Andrea Mosca**  
**Cas Weykamp**  
**Garry John**

The world of clinical biochemistry lost one of its most talented scientists on 14 May 2020 when Jan-Olof Jeppsson, Associate Professor and Chief Physician in Clinical Chemistry at the University Hospital in Malmö, Sweden, passed away at the age of 83. It is rare in life to meet a true gentleman, even rarer if this gentleman is also an accomplished scientist; Jan-Olof was such a person and he inspired all who had the privilege of knowing him.

Always a Swedish patriot Jan-Olof was born up in Nybro and studied medicine at Umeå University. Jan-Olof always knew that he wanted to follow a scientific career and undertook a PhD at Umeå University, the research was on the structure of transferrin; he was awarded the PhD in 1967.

His interest in protein and protein structures lead him to relocate to the Department of Clinical Chemistry in Malmö in 1970 where Carl-Bertil Laurell had achieved international recognition. Jan-Olof first explored genetic structural changes, using iso-electric focusing for the detection of Haemoglobin variants, and identified a novel type, subsequently called Haemoglobin Malmö (Clin Chem Acta 1972; 40(1):153-158). This method was then applied to view the numerous variants of Antitrypsin (Anal Biochem 1976; 74:227-241), followed by Jan-Olof's identification of the amino acid substitution in  $\alpha$ 1-antitrypsin (A1AT) (FEBS 1976; 65:195-7) causing severe deficiency.

Together with Robin Carrell and others he published the amino acid sequence of A1AT in 1982 and in 1983 identified the active site of A1AT, leading to Carrell's significant concept of the "serpin" family of serine protease inhibitors.

Jan-Olof became administrative head of the Malmö laboratory in 1979. His talent for acquiring resources enabled introduction and ongoing development of automation as well as ambitious standardisation projects. He was a founder of the Swedish Protein Group, a forerunner for what is now the External Quality Assessment for Laboratory Medicine in Sweden (EQUA-LIS). It was perfectly obvious that Jan-Olof preferred the laboratory bench to the conference table, but he understood that committee work in national and international working groups would be required if new developments were to be translated into general clinical practice, a typical quote of Jan-Olof being: "The chemistry is solved. Now ten years of politics await!"

Intrigued by the effects of metabolism on the secondary structure of proteins, Jan-Olof began optimizing a Mono-S HPLC method to measure glycosylated haemoglobin, (HbA1c) in diabetics. In 1986, this method became the anchor for a phenomenally successful Swedish standardization program in collaboration with endocrinologists to revolutionise the clinical monitoring of diabetic patients. In 1994, Jan-Olof joined an IFCC working group with the aim of developing a reference method that could be used to standardize HbA1c methods globally.

Together with Uwe Kobold, he developed the method that in 2002 was approved as the Reference Measurement procedure for HbA1c (CCLM 2002;40:78-89). This method is now used in a Network of Reference Laboratories across the world and has enabled global standardization of HbA1c.

In the last decades of his scientific career Jan-Olof returned to his interests as a young man, studying transferrin. Carbohydrate-deficient transferrin (CDT) is a transferrin derivative glycoform, and Jan-Olof was fundamental to the concept that this derivative was related to chronic abuse of alcohol. By 1993 he had developed an HPLC method for CDT quantification of abuse (Clin Chem 1993; 39:2115-20).

Jan-Olof embarked on another global exercise establishing the IFCC working group on standardization of the alcohol biomarker CDT. As for HbA1c, this working group was successful, leading to a CDT Laboratory Network running an IFCC approved updated version of the original HPLC method (CCA 2017; 465:91-100). Globally results from all methods can be standardised as CDTIFCC. This analysis also has significantly altered both the clinical and legal treatment of alcohol overconsumption.

Throughout his professional life Jan-Olof achieved success through calm, diplomacy, and inspiration, all based on solid scientific knowledge. A number of clinical biochemists were trained under his guidance and have passed on his values to new generations of scientists. Jan-Olof was old school, faithful to his science, without tolerance for haste, and always helpful and supportive.

Outside his professional life, Jan-Olof had a passion for orchids, both in the wild and through cultivation. He also enjoyed spending his free time at the summer house on the Baltic island Öland, together with his family and friends.

Jan-Olof is survived by his wife, Kerstin, and two children.

Those who worked with Jan-Olof remember him with warmth and affection; a gentleman who will never be forgotten.



# IFCC: THE YOUNG SCIENTISTS

## Mentorship interview

*Presented by the IFCC Task Force for Young Scientists*

AN INTERVIEW WITH DR. ANN GRONOWSKI (THE MENTOR)  
AND PROFESSOR ZHEN ZHAO (THE MENTEE)

### THE MENTOR

#### *Background*

Dr. Ann Gronowski works as a Professor in the Department of Pathology; the Medical Director of non-infectious serology, special chemistry, automation, and front-end processing; and a co-director of the ComACC-approved Clinical Chemistry post-doctoral training program at Washington University School of Medicine (WUSM) in St. Louis, Missouri. She has been at WUSM for over 25 years.

#### *Being a mentor*

Dr. Ann Gronowski has had the privilege of mentoring students for 25 years and regards this as one of the best parts of her career. According to Dr. Gronowski, mentor-mentee relationships can last for many years, even after an official professional mentorship has ended. Dr. Gronowski elaborated on this when asked about the most valuable aspect of her mentor and mentee relationship with Professor Zhen Zhao:

*Even though Zhen has been gone from WUSM for 9 years, she does a great job of keeping in touch. I think we meet at every AACC meeting. Sometimes she asks for mentoring, sometimes it's just to catch up on family and job. I really like that about our relationship.*

Lasting relationships like this are not uncommon for this seasoned mentor. When asked about how to build and maintain positive mentoring relationships, Dr. Gronowski offered:

*I think there are lots of misunderstandings about mentoring. You do not have to be an expert in the same field to serve as someone's mentor. You really just have to be willing to listen and help. Every mentoring relationship is unique, so there is not a single approach. I would say that a good mentor-mentee relationship is*



*Article continued on next page*



Mentor: **Dr. Ann Gronowski**

PhD

Medical Director

BJH Core Laboratory Services

Professor

Pathology & Immunology

*Washington University School  
of Medicine*

Mentee: **Dr. Zhen Zhao**

PhD

Director

Central Laboratory and Clinical

Chemistry Service

Associate Professor

Clinical Pathology and

Laboratory Medicine

*Weill Cornell Medicine*

Interview conducted by:

**Dr. Joe El-Khoury**, DABCC, FAACC

Core Member IFCC-TFYS

Associate Professor,

Laboratory Medicine

*Yale University*

Director,

Clinical Chemistry Laboratory

Co-Director,

Clinical Chemistry Fellowship Program

*Yale New Haven Health*

*a two-way street. It takes effort on both parts. Even though Zhen and I don't meet frequently, when she needs advice, she explains the situation in advance, and I have some time to think about it. Then when we meet (by phone or in person), I can come prepared.*

### **Asking for help**

"The biggest common challenge that young scientists face," says Dr. Gronowski, "is not knowing when to ask for help—whether that's with mentoring, collaborations, or something else." Dr. Gronowski acknowledges that making connections and building trusting relationships takes time and effort. This onus, she believes, should be on those with more experience. "I think it is the responsibility of more senior scientists," she begins, "to introduce themselves to junior people and make sure they try to help them make connections."

Dr. Gronowski cannot speak highly enough of the value of a mentorship program and having as many mentors as one needs. On how formal programs that carefully match mentees to mentors help young scientists and laboratorians in their careers:

*Formal mentorship programs usually help match a mentor and mentee. This is terrific because junior faculty and trainees are often afraid to ask for mentorship or they don't know who to ask. Often people use more than one mentor during their career. So even if you are involved in a formal mentorship program, don't hesitate to seek out additional mentors. It's OK to have more than one.*

### **Advice from a mentor for Young Scientists**

Closing the interview, Dr. Gronowski finishes with the following advice for young laboratorians:

*Collaborate, collaborate, collaborate! Collaborative people publish more, build stronger relationships, and get invited to become involved more.*

*Never be afraid to ask for advice. Sometimes, younger people feel intimidated to ask for advice. They are afraid that asking questions shows they are somehow deficient. NOT TRUE. Asking questions shows you are thinking, and you are inquisitive. Go ahead and ask!*

She concludes, "At the same time, be confident. You probably know more than you give yourself credit for!"

## THE MENTEE

### Background

Zhen Zhao, who was able to work under Dr. Gronowski in a formal mentorship, is now an Associate Professor of Clinical Pathology and Laboratory Medicine at Weill Cornell Medicine. She is also the Director of Central Laboratory and Clinical Chemistry Service at the New York-Presbyterian/Weill Cornell Medical Center.

After receiving her BS in Biology from Xiamen University and her Ph.D. from Northwestern University, she fulfilled her Clinical Chemistry postdoctoral fellowship training at Washington University in St. Louis. Zhao is now board certified by the American Board of Clinical Chemistry. Previously, she served as the Director of General Chemistry and Immunoassay and the Associated Director of the clinical chemistry fellowship postdoctoral training program in

the Department of Laboratory Medicine of the National Institutes of Health.

### My relationship with my mentor

Zhen Zhao was mentee to Dr. Ann Gronowski for two years during Zhao's fellowship training from 2009 to 2011. As Gronowski mentioned, this relationship has stood the test of time and Zhao continues to receive professional guidance and advice from her former mentor. On meeting her mentor for the first time:

*I first "met" with Dr. Ann Gronowski by reading her research and publications in maternal-fetal medicine when I was working on my Ph.D. thesis in the field of reproductive endocrinology in graduate school. I met Dr. Gronowski in person in my interview for the clinical chemistry postdoctoral fellowship training at Washington University in St. Louis where Dr. Gronowski is one of the fellowship directors.*

Now, the level of respect and understanding between Zhao and her mentor Dr. Gronowski is admirable and inspiring. When asked for details about her relationship with her former mentor, Zhao offers the following response:

*Dr. Gronowski is extremely ethical, honest, and fair as a mentor. I always feel motivated and inspired when I interact with her, either talking directly in person or through emails/phone calls. She provides open, direct, positive, critical, and sincere feedback. I feel that she really cares, listens, and understands my concerns, challenges, difficulties, and goals.*

*When I took a new job, I shared with her my challenges in a new environment. She shared her own feelings and offered emotional support. She was engaged with analyzing the problems and guiding me to find the solutions. She shared her experiences, resources, and connections to help me with balancing work and family, adjusting to a new environment, and building confidence and leadership. For instance, I have read career advice books recommended by her and interacted with and learned from other wonderful professional people who she has connected me with.*

According to Zhao, Dr. Gronowski is "sincerely happy and excited about [her] progress, improvements, and achievements." Much to the appreciation of said mentee, this esteemed mentor encourages her mentee when she is on the right track, sharing her own experience to guide her on what is right and what is wrong. Zhao adds:

"An excellent mentor like Dr. Gronowski imparts experience, wisdom, encouragement, scientific rigor, and support to the mentee. She not only helps me navigate my career but also teaches me professional and life skills, which totally transformed me along the way."

— Dr Zhen Zhao

*She would provide objective views and tell me about my strengths and weaknesses. For example, there was a time when I was uncertain about my professional progress, I sought her help and asked if she could look at my CV. She has identified the areas to improve and provided actionable recommendations, which really guided me to put the effort and focus on improving those areas. Her support has encouraged me to step outside my comfort zone for growth.*

But Zhao's relationship with her mentor goes beyond professional advice. Of Gronowski's continued support, she says the following:

*It is not only career development, but Dr. Gronowski also teaches me the life skills of being a good human being and a mother. She shared her experience from a female professional's perspective on work-life balance, child education, and healthy lifestyles. She loves reading books. My habit of reading books with my kids is actually learned from her.*

### **The qualities of an ideal mentor**

Zhao considers herself to be extremely lucky to have a "fruitful, effective and long-term mentor-mentee relationship with Dr. Gronowski." She goes on to say of Gronowski, "She has been and remains a trustworthy, wise, and altruistic mentor and role model for me. She has shown all the admirable qualities of an ideal mentor with respect, ethics, integrity, honesty, accessibility, and extraordinary commitment. It isn't just that she is an excellent mentor but that she herself followed all the principles and precepts that she teaches me."

Professor Zhao remarks that Dr. Gronowski has remained approachable, available, and accessible even though the two are now working at different institutions. They correspond via email and phone calls to keep in contact and meet in-person at national meetings within their field. Zhao fondly states that Dr. Gronowski is always there for her to offer advice.

Zhao's respect for her mentor is clear when she praises the qualities that made Dr. Gronowski a superior mentor and professional:

*She holds the highest level of ethics and professionalism. She always provides honest suggestions and clear directions. I feel very comfortable to openly share my successes and failures. She provides me not only praise but also constructive suggestions and corrections.*

### **Mutually beneficial collaborations**


Any strong mentor-mentee relationship has plenty of examples of mutually beneficial collaborations to share, and Dr. Gronowski and Professor Zhen Zhao are no exception. The two have been able to work together on research manuscripts, study designs, and more. Zhao could not be more grateful for the help that her former mentor has given and continues to give her throughout her growing career:

*Dr. Gronowski and I have published three peer-reviewed research manuscripts and two review articles in the areas of women's health and maternal-fetal medicine, in which we shared the common research interests. I learned tremendously from working with Dr. Gronowski on these projects, through which I had a better understanding of biomarker discovery and rigorous method development and validation.*

*Dr. Gronowski has also shown me how to design and organize multi-center studies in collaboration with other scientists. Since I am very interested in cell-free DNA studies, Dr. Gronowski has connected me to the world-renowned scientists in this field. I had an opportunity to collaborate and write a review article with them.*

*I have benefited from her excellent mentoring and support, and our research has won multiple awards including the National Academy of Clinical Biochemistry (NACB)'s Distinguished Abstract Award, Outstanding Abstract Award from AACC Endocrinology Division, and Poster Award from the Society for Gynecologic Investigation.*

"Never be afraid to ask for advice. Sometimes, younger people feel intimidated to ask for advice. They are afraid that asking questions shows they are somehow deficient. NOT TRUE. Asking questions shows you are thinking, and you are inquisitive. Go ahead and ask!"

 Dr Ann Gronowski

Zhao explains that Dr. Gronowski has also provided scientific input and editing assistance for several manuscripts despite not being added to these as a co-author. The mentee recounts that her mentor insisted that she did not need to be on the author list and was simply happy to be acknowledged, which strengthened Zhao's own scientific rigor and code of ethics. Professor Zhao then remarks, "I know that I am not the only mentee who has benefited from her keen eye and editor's pen."

### **Advantages of working with a mentor**

Zhao, of course, highly recommends that young professionals work with a mentor when given the opportunity. Mentors like Dr. Gronowski are not only capable of but passionate about providing guidance to younger colleagues on similar paths as their own.

*Dr. Gronowski's passion for helping the young generation of clinical chemists and faculty shine through in many settings including fellow and resident training, Clinical Chemistry Trainee Counsel of AACC, and her current role as Vice-Chair for Faculty Affairs and Development at Washington University in St. Louis. I believe that I am in a long line of mentees who benefit tremendously from Dr. Gronowski's mentoring. She really cares about the mentee's development and is proud of our accomplishments.*

Experienced mentor Dr. Gronowski has been able to guide many of her mentees through various stages of their careers. In the words of Zhao:

*An excellent mentor like Dr. Gronowski imparts experience, wisdom, encouragement, scientific rigor, and support to the mentee. She not only helps me navigate my career but also teaches me professional and life skills, which totally transformed me along the way.*

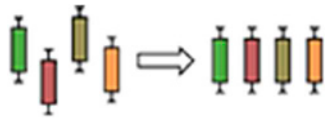
*Dr. Gronowski has helped me enormously by sharing vast experience and knowledge, promoting career development, creating professional opportunities, and providing connections and networks. She has been watching me and helping me grow from a fellow to a mature clinical chemist and academic faculty. I've observed her generously do the same thing to help countless other talented professionals. I feel extremely fortunate to be one of Dr. Gronowski's trainees and mentees who have been born under her wing.*

### **Advice from a mentee for Young Scientists**

Professor Zhao offers advice to young scientists considering entering a mentoring relationship. "Mentors are vital to mentees' career success," she begins. "The mentee should be proactive to initiate the mentoring relationship and maintain contact. It is natural to carry on the mentor-mentee relationship with the previous supervisors. Mentors can also be the current colleagues who are more senior and peers who have been working in the same institution longer. I also learned a lot and received valuable advice from scientists who share the same research interests."

She concludes by saying:

*Being mentees, we should hold a huge amount of respect for the mentor's time, effort, and commitment to mentoring. When asking for help, it is important to give advanced notice and make an appointment, set up the agenda with a list of topics, be clear and honest during the communication, and be open to feedback.*



**International Consortium  
for Harmonization of Clinical Laboratory Results**



## **Workshop on overcoming challenges to global standardization of clinical laboratory testing: reference materials and regulations**

**During the JCTLM Members and Stakeholders Meeting**

**BIPM in Paris, 6-7 December, 2021**

The workshop will develop and publish recommendations how the laboratory medicine community can address challenges related to reference materials and regulations to achieve standardized results more effectively on a global basis. Demonstrating commutability of matrix-based certified reference materials (CRMs) remains a significant challenge, and CRMs that have not been validated for commutability with clinical samples may invalidate calibration hierarchies of end-user measuring systems. In addition, matrix-based CRMs from different providers are expected to demonstrate equivalent performance in calibration hierarchies. Increasing availability of commutable and equivalent matrix-based CRMs for more analytes remains a key challenge. Regulations to enable use of IVD devices differ between countries and frequently do not include a simplified process for recalibration to achieve standardized results worldwide. Developing harmonized and simplified regulations that will enable faster and less costly recalibration of end-user measuring systems to conform to internationally agreed standardization/harmonization initiatives will improve patient care and safety.



Draft program:

## Part 1: Challenges for laboratory medicine

- Introduction; workshop goals.
- What are the medical needs for standardized results from laboratory tests?
- How does the laboratory meet the medical needs; what are the challenges to achieve standardized results?
- How do IVD manufacturers implement metrological traceability?
- Availability and suitability of matrix-based CRMs; an IVD industry view.
- Discussion of preceding.

## Part 2: Challenges for reference systems

- National Metrology Institute challenges; how to coordinate effort.
- Reference system development and how to collaborate with IVD manufacturers.
- New metrological traceability tools; ISO 21151 harmonization protocol, IFCC recommendations for correction for non-commutability of matrix-based CRMs.
- Discussion of preceding

## Part 3: Challenges for regulatory organizations

- European Union regulations
- Food and Drug Administration, United States, regulations
- National Institutes for Food and Drug Control, China, regulations
- International Medical Device Regulators Forum
- Discussion of preceding

Part 4: Develop workshop recommendations for publication and follow up actions.

Organized by the IFCC Scientific Division and the International Consortium for Harmonization of Clinical Laboratory Results. Organizing committee: Philippe Gillery, Christa Cobbaert, Greg Miller, Gary Myers, Joe Passarelli, Robert Wielgosz, Ian Young, Elvar Theodorsson.

Version: 11 July 2020

## CONTRIBUTE TO THE IFCC eNEWS

### Leading Healthcare Excellence: a conversation with Dr. Ellie Dow and Dr. Tim James



Dr. Ellie Dow  
Ninewells Hospital and Medical School Tayside  
(Dundee, Scotland)



Dr. Tim James  
John Radcliffe Hospital  
(Oxford, England)

As steward of analytical health, the clinical laboratory is uniquely positioned to lead and/or contribute to strategic integrated clinical care initiatives that drive measurably better healthcare.

Two leading experts with globally recognized best practices in this area are Dr. Ellie Dow, Consultant in Biomedical Medicine, Blood Sciences at Ninewells Hospital and Medical School Tayside (Dundee, Scotland) and Dr. Tim James, head biomedical scientist in the Clinical Biochemistry Department at the John Radcliffe Hospital (Oxford, England).

Among many commonalities, both leaders are active champions with proven success on the power of laboratory medicine to drive advancements in patient care, clinical decision-making, strategic problem solving and healthcare excellence. In 2019, both were independent and elite recipients of the 2019 UNIVANTS of Healthcare Excellence Awards and have more recently, joined as guest editors for a special issue in the eJIFCC on Measurably Better Healthcare Performance.

For those interested in learning more about the special issue or submitting a manuscript on this topic, please email your manuscript to [ejifccspecialissue@gmail.com](mailto:ejifccspecialissue@gmail.com) and [ejifcc@ifcc.org](mailto:ejifcc@ifcc.org) by November 15, 2020. For those interested in learning more about the UNIVANTS of Healthcare Excellence Awards and/or the globally-recognized best practices associated with the healthcare excellence program, including those from Dr. Ellie Dow and Dr. Tim James, please visit [www.UnivantsHCE.com](http://www.UnivantsHCE.com).

*Article continued on next page*

## How important is the clinical laboratory in healthcare today?

**Tim:**

*There is no better evidence of the importance of laboratories in healthcare today than our integral role in responding to the COVID-19 pandemic. Initial diagnosis, management of patients through the escalation of treatment, and population assessments are all dependent on the clinical laboratory. Equally, as we emerge from the COVID-19 peak, the agenda for re-establishing the 'new' normal will require re-engagement of what laboratory services can offer in re-engineered patient pathways. I believe this is a great opportunity for all of us.*

**Ellie:**

*The clinical laboratory is the engine hidden under the hood of care – without this, the car doesn't go anywhere. Clinicians can still use their clinical acumen and diagnostic skills, but there is no reassurance or confirmation without laboratory diagnostic testing. Last year, we had a lightning strike that completely took out our local laboratory service, and without the ability to send samples to a nearby sister hospital, which retained some functions, it is likely that our hospital would have closed to acute admissions. Our medical staff were flying blind, and truly valued when we were able to resume service as usual.*

## What advice do you have for clinical laboratory teams who are aiming to be more strategically involved in their health systems?

**Tim:**

*Make yourself available to service users and ensure that you are easy to contact. When I look at some websites, I struggle to find the contact names for the laboratory – almost as if by design. This is true even for laboratory-based websites, so if someone wanted to discuss any issue with the lab team, there are immediate barriers already. Equally as important is pro-actively and positively following up with all contact opportunities whenever possible, whether it is within clinical, management or academic settings.*

**Ellie:**

*It's really about getting out of the office and out of the lab, making and expanding those cross-discipline connections, and building those networks. In addition, in-person contact – as much as possible - cannot be under-estimated for establishing rapport and trust. If in-person meetings are not possible or restricted during this pandemic, face to face contact over video calls is still more ideal than the remote use of emails.*

## What critical success factors have worked best for you and your teams?

**Tim:**

*Following through with what you say you would do. When resources are stretched, it can be difficult to keep up with all the commitments asked of us, but if you deliver on them, it builds trust and confidence in your services. More critical, however, is the importance of the teams –building them, sharing difficulties and making sure that successes are communicated and positively reinforced.*

**Ellie:**

*Lots of regular contact, often face to face including informal "drop-in" meetings and exchanging ideas; these collective factors help ensure that everyone on the team feels valued in their role.*

## What is the first step to getting started?

**Tim:**

*Be realistic and deliver on a small number of user engagements well. Do not take on too much too soon and don't be disappointed in yourself if it doesn't always work...but rather learn from all you do through reflection.*

**Ellie:**

*If you're new to your institution, or new to this style of working, then I would recommend getting out the lab and talking to people at as many local meetings as you can – whether clinical, managerial or academic meetings. Be approachable and keen, show that you have a “can-do” attitude and want to make things work and solve problems. Speaking at local grand rounds is also excellent for expanding networks and participating (or even driving) new team discussions!*

## How have your best practices made a difference to your patients, health systems or to you and your teams personally?

**Tim:**

*The work we have undertaken on pre-eclampsia markers has had a high profile because of the short time between our study work (mainly the INSPIRE study) and translation into routine practice. This resulted in follow up interactions from around the world to both the lab and the obstetric teams, helping others establish similar services. The effort has therefore not only benefit patients in our hospital, but across the UK and globally. I think our entire team has each had a “feel-good” factor as a consequence of our work together.*

**Ellie:**

*We know that patients in Tayside are getting properly investigated for abnormal liver function, and the strength of the programme is recognized nationally. We're getting the right patients at our liver clinics. For the team, we have more confidence, and are known to our senior management. The core laboratory team all play a role in making our programme work smoothly and share in its success. For me personally, I've had lots of opportunities to travel globally while presenting on the team outcomes and meeting many wonderful people.*

## What types of manuscripts would you like to see submitted to the eJIFCC special issue on Measurably Better Healthcare?

**Tim:**

*Manuscripts that capture quality improvements well in terms of outcomes. This may be a quality metric within the lab, but it would be stronger if it showed shared involvement with clinical teams. Early in my career, probably 30 years ago, we worked on improvements to communication of test results with our clinical teams with a primary outcome of an 80% reduction in phone calls which both clinicians and the laboratory felt were unnecessary. The manuscript describing this never got published, as reviewers felt we could not identify the relative contribution of the concurrent changes that we had made. Scientifically, I understand that position completely now, but as a poster presentation, it raised more discussion and engagement than anything else I have done subsequently. So, I guess I am interested in capturing scientifically sound manuscripts which share good ideas and open discussion.*

**Ellie:**

*Manuscripts that show the strength of clinical and laboratory teams working together to improve healthcare, no matter in what setting, with measurable KPIs appropriate to the project and setting, whether that's rural Africa or a clinic in Europe. Demonstrably better healthcare together!*





# UNIFY FOR SOMETHING GREATER



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## Graham Beastall passes on his staff and his mantle at the JCTLM

by *Elvar Theodorsson*  
Linköping University



Graham Beastall

Humans are social “animals”. The ability to create and maintain environment for confident cooperation at the campfire including the sharing of ideas, conflict resolution and loyalties, have been keys to human development, wellbeing, and survival throughout the ages. Some individuals are particularly well suited for these important tasks. They are the quiet and altruistic glue that provides coherence to society. Frequently, members of this group clear new roads despite personal risks involved both in the personal- and in the professional spheres.

To me, Graham Beastall is clearly amongst this group of special individuals. In addition to his numerous formal professional roles of high standing in the ACB, EC4, IFCC and in the Joint Committee for Traceability in Laboratory Medicine (JCTLM) he has taken the time to inspire the rest of us to shoulder responsibilities that we sometimes were neither competent nor capable of shouldering on our own. Well lead and together with each other, projects were brought to fruition.

Some ten years ago and under the heading “Inspiring minds”, Misia Landau summarized the history, life and career of Graham in a uniquely factual and warm manner (Clinical Chemistry 56:5 867–868 (2010)). Graham’s altruism shines appropriately through her text.

The reader will know that the *Joint Committee for Traceability in Laboratory Medicine* (JCTLM) is an international consortium with headquarters at the BIPM in Paris that promotes the global standardization of clinical laboratory test results, and provides information on reference materials, reference measurement methods and services that are available from around the world. The JCTLM was established in 2002 in response to the implementation of the European Community Directive 98.79/EC on in vitro medical devices. JCTLM supports global comparability and reliability of measurement results in laboratory medicine. Graham Beastall has since 2016 served as the first chair of the *JCTLM Traceability Education & Promotion Working Group* tasked with producing educational materials and activities promoting the value of traceability in laboratory medicine and raising awareness amongst stakeholders. Amongst Graham Beastall’s many lasting accomplishments in this role is the creation of the web presence of the JCTLM (<http://www.jctlm.org>), educational materials and the semi-annual JCTLM meetings/workshops arranged at the BIPM in Paris. The next such meeting is planned for December 6th and 7th, 2021 (<http://www.jctlm.org/media/1149/workshop-on-challenges-for-standardization-web-20200711.pdf>).

All of us in the JCTLM Traceability Education & Promotion Working Group that have had the favor of working with Graham Beastall thank him for his productive leadership and friendship over the years and wish him all the best in his continued endeavors.

Free **Educational Webinar**

# Impact of the New European IVDR on Medical Laboratories and Related Stakeholders

Thursday 17th September  
12:00 BST / 13:00 CEST / 07:00 EDT



**PRESENTER**

**Prof. Dr. Folker Spitzenberger M.D.R.A.**

Regulatory Affairs for Medical Devices  
Technical College Lübeck University

The current regulatory rules governing in vitro diagnostic medical devices (IVDMD) in the European Union are mainly represented by the European Directive 98/79/EC dating back from 1998. The new Regulation (EU) 2017/746 (“IVDR”) will have to be fully applied by May 2022 and will significantly change the regulatory requirements for manufacturers and other stakeholders such as notified bodies and competent authorities. It will also largely impact medical laboratories that play different roles as users of IVDMD, as manufacturers of “in-house” IVDMD (also called “laboratory developed tests, LDT”) and as institutions involved in analytical and clinical performance evaluation of new devices.

This webinar will give an overview on the changes and challenges derived from the IVDR with a special focus on medical laboratories. It will introduce the participant into the extended scope of the IVDR, the new risk-based classification system for IVDMD and the performance evaluation concept. A special focus will be laid on a discussion of the new EU requirements for “in-house testing” (referring to devices manufactured and used within one single health facility = LDT).

## Key Learning Objectives

- Obtain an overview on the new EU regulatory framework for medical devices and IVD medical devices.
- Get prepared for the new EU IVDR requirements in the field of laboratory-developed tests (LDT) and for possible solutions to comply with these requirements .
- Be informed about the opportunities and challenges related to the market access of IVDMD under the new EU IVDR.

[Register Here](#)



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## A dose of AI in developing vaccines at pandemic speed



Dr. Bernard Gouget

*by Bernard Gouget*

*Chair-IFCC Committee on Mobile Health  
and Bioengineering in Laboratory Medicine (C-MHBLM)*

*co-Chair IFCC -TF on History  
SFBC-International Committee*

*President-Human Health Care Committee-Cofrac*

*President-Committee for selection of the French Reference  
Laboratories, Ministry of Health*

It has become the quest for a new Grail. Faced with the extent of the pandemic and at risk for a second wave of COVID-19, the search for a coronavirus vaccine is billed as a major objective for responsible politicians and researchers around the world. While coronavirus continues to spread, concern is rising due to the increase in positive cases. Mandatory mask wearing is imposed more frequently, and lab tests may be required at borders. Lifting restrictions has led to the virus spreading more easily in all the countries that experienced the first wave, but it seems that the upsurge is faster than expected. Countries that did not shut down enough have lost control, like Brazil or the US.

The most alarming thing is that the infection now affects countries with health systems that are incapable of resisting for a long time, such as South Africa or India. We believed in the miracle of a virus that did not like the sun; that's over. In other bad news, the antibodies that are developed disperse quickly. Protection is temporary. Knowledge of the virus is a "work in progress" and shows us that science is made up of rationality, complexity, and uncertainty. It is necessary to make the best of a bad situation and to think quickly about the consequences of the virus in all forms of organization, on work, consumption, globalization, politics and health in order to make the best of things in the future.

One of the solutions for actively fighting this virus is found in Artificial Intelligence. AI provides very effective means to manage, inform, treat and detect areas where patients are at risk, with a precise map of the epidemic, tracing its geographical and temporal progress, and eventually offering an effective treatment or a vaccine, or to stop the spread outright. According to experts around the world, AI could be able to solve the most complex challenges of our century.

It is necessary to be able to rely on analytical techniques that can identify rare but significant events. Several sources of information are thus mixed into analytical data sets (official incidence reports, data from emergency departments, medical records, social media, absenteeism at work or school, drug sales, targeting of the scientific literature, etc.). AI can therefore define the characteristics of a potential new viral epidemic such as coronavirus COVID-19. This technology is establishing itself in a large number of other fields, such as digital or augmented clinical trials, which make it possible to retrieve data collected by connected objects or patients' medical devices and to learn more, for example, about the effect of a vaccine or therapy under study. Thus, AI allows carrying out simulations and understanding biological data as never before, as well as understanding how a drug or vaccine works.

Currently, there is a real competition around vaccines. The demand for vaccine risks being colossal and businesses are seeking to optimize their production. Advanced clinical trials have started all over the world. Faced with the economic damage of the pandemic, the cost of the vaccine becomes almost a secondary

*Article continued on next page*

point. Large drug companies have launched communication operations, admittedly with an impact on stock prices, but communication does not mean lying and it is necessary to communicate well to obtain financing with intensifying competition. Research, clinical trials, and production are very costly and if it doesn't work, the inventory will have to be destroyed. But keep in mind that the world economy will lose 12.5 trillion in 2020 and 2021 according to the IMF. Faced with this, it is urgent to find and distribute a vaccine, regardless of the cost.

AI is currently used at every step of development, manufacture, and marketing of vaccines, all in a strictly controlled regulatory context. The activity is tested during and after the manufacture of vaccines using an AI and batch quality is supervised via a plethora of techniques (analysis of images or even shelf life). AI facilitates the work conducted in the context of clinical trials because it ensures that the antiviral vaccines designed are safe and effective. Moreover, once the vaccine is administered to the population, its potential adverse effects are collected, analyzed, and recorded to verify safety. Some analytical approaches used to detect rare side effects are like epidemiological surveillance.

This crisis is a real challenge for research. All deadlines have been shortened and the diversity of strategies (from inactivated virus to messenger RNA genetic technologies) increases the chance of having several vaccines on arrival. There is a fierce and stimulating technological competition, coupled with a battle that crosses geopolitical borders. By entering into agreements with various pharmaceutical companies, governments seek to secure their supplies as quickly as possible and diversify their risks in the event of failure.

While Latin America is still failing to contain the virus, the Chinese CoronaVac vaccine from Sinovac Biotech has already been tested on 9,000 Brazilians. The Anglo-Swedish group AstraZeneca, which relies on research at Oxford, has already vaccinated more than 10,000 people in the UK, 5000 in Brazil and 2000 in South Africa with a study in progress in India and eventually aiming for a phase 3 program of 360,000 people vaccinated by the fall. According to P. Soriot,

CEO of AstraZeneca, the first results give hope for protection of at least a year. The US biotech company Moderna has launched the last phase 3 clinical in late July in the US on 30,000 participants. Novavax received 1 billion USD from Washington to develop a vaccine. Johnson and Johnson announced that they are in negotiation with the European Union. Germany is also well advanced with its US partner and Biotech and Pfizer (US) have conducted conclusive first trials. GSK (UK), Sanofi (FR), the Institut Pasteur and other organizations in China have made progress, for their part. In Russia, a promising vaccine project is on track. The financial stakes are enormous; billions of USD have been invested in the 140 vaccine projects counted by the WHO in research and production.

The extent of the need has made this an extremely coveted market. It may reach 100 billion USD and generate 40 billion in profit according to the predictions of Josh Slimmer, an American analyst. The cards could be further reshuffled depending on the phase 3 results of the main players. The rapid development of a vaccine is a global imperative with a real competition around vaccines to offer them by late 2020 to mid 2021. However, the urgency must not overshadow safety and it is up to national regulatory authorities or agencies responsible for vaccine strategies to validate vaccine candidates.

Then, who should be vaccinated and according to what protocols? To prevent the vaccine race from turning into international fist fight, WHO has once again pleaded against vaccine nationalism, pleading for pooling of tools to allow the planet to fight COVID-19 and ensure equitable distribution. More than 170 countries have already indicated their interest or joined a future scheme for global access to COVID-19, known as COVAX The WHO recommends first targeting healthcare workers or those with jobs with high exposure risk, or 3% of the global population, then those above age 65 and vulnerable individuals (20%).

The question of access will remain. Beyond the logistical and regulatory challenges, North/South inequalities will reappear. International initiatives are already reserving doses for disadvantaged countries. The challenge is to transform the sprint into a collective long-distance event with clear rules and stated



objectives. Some drug companies are guaranteeing sale at cost during the emergency phase, others refuse to do so. This vaccine should be a global public good, but national ego is at work and the world is quickly returning to a place of bidding for profit!

While the course of vaccine development intensifies, the pandemic has reached nearly 809,108 deaths as of August 24 worldwide since late December. A COVID-19 vaccine offers real hope, but willingness to become vaccinated must be built up. Communication will

especially be one of the conditions for success of the vaccine campaign. It must be transparent regarding the procedures that allowed marketing to be accelerated without being detrimental to safety and regarding the uncertainties and scientific foundations of the recommendations. Communication should be differentiated according to the target audiences and evoke a form of social contract calling everyone to take responsibility. It can only benefit from a participatory approach, open and transparent, of the citizen forum type, especially involving patient associations.

## News from the IFCC Website



### New Documents in Spanish in RIA

The IFCC Working Group Ibero-American Nomenclature and Translations (WG-IANT) is happy to announce the availability of two new documents. El Grupo de Trabajo de Iberoamérica de Nomenclatura y Traducción (WG-IANT) se complace en anunciar la disponibilidad de dos nuevos documentos: • La metrología y sus herramientas aplicables a la bioquímica y medicina del laboratorio • Codificación de Pruebas de Laboratorio con Nomenclatura Sistemática en Español.

[Read more](#)

## Opinion: *Carpe diem* - Let's seize the moment in this pandemic

*by Joseph Lopez*

*Kuala Lumpur, Malaysia*

The Covid-19 pandemic has wrought untold havoc throughout the world and brought it to its knees. It has caused economic devastation and has touched the lives of almost everyone on this planet. Even after about 6 months, the pandemic shows no sign of retreating anytime soon. It is now a time for reflection. Why did the pandemic happen? Can we in the laboratory help in preventing another one?

All human activity adversely impacts the environment and this, in turn, has been held responsible for climate change. There is now general agreement among scientists that climate change has reached a crisis point. Amidst the near saturation coverage of the pandemic by the media, respected voices have made compelling

arguments that the degradation of the environment and the consequent climate change are possible causes for the current pandemic (see References 1 to 6).

Laboratories have a societal responsibility. They serve their communities, but in doing so, they need to ensure that any undesirable consequences of their actions are minimised. Like doctors, those who work in the laboratory are morally bound by the dictum *primum non nocere* (Latin, "first do no harm").

The IFCC first took cognizance of the environmental impact of laboratories as far back as 2010. Its initial efforts resulted in the publication of a set of proposals for the mitigation of the environmental impact of clinical laboratories (7). A subsequent paper by the

*Article continued on next page*



same authors and other colleagues gave examples on how this could be done (8).

There does not appear to have been much uptake of these proposals. The apparent neglect of environmental issues by laboratories asks for answers to several questions. Are laboratories aware that in performing their functions, they are harming the environment? If so, how many laboratories have designated someone to be put in-charge of introducing good environmental practices? Have laboratories tried to obtain the ISO certification for good environmental practices? In the evaluation of instruments, do laboratories consider the parameters and metrics that adversely impact the environment, such as waste production, single-use plastics, energy consumption and the packaging and transport of reagents? Have laboratories engaged with vendors and contractors about becoming greener? Have laboratories rewarded staff with incentives to make their individual activities greener? Is it possible to include good environmental practices into the laboratory accreditation process?

Laboratories are expected to adhere to locally legislated environmental practices. But so much more than this can and needs to be done. Clinical laboratories are huge consumers of energy and producers of waste. There are many ways by which they could become greener. Efforts in this direction should start small, with what is practical and achievable. Factors such as support from higher management, staff and additional costs always need to be considered.

This is an area where the IFCC can play an important leadership role by encouraging laboratories to become more environmentally conscious. There are several ways that this can be achieved. It may begin, for example, by the formation of a high-level Task Force to address this matter. To be successful, the IFCC should work in collaboration with its corporate partners.

And perhaps, in parallel, the IFCC itself could rethink of the way it conducts its business and scientific meetings. Why not go online for meetings? We now have excellent and secure online platforms for conferences, business meetings and courses. These should be used instead of flying in people. Imagine, too, the greater number of people who could benefit from virtual

scientific conferences without having to travel to them in an expensive way. It would reduce not just the carbon footprint of events but costs, at a time when finances are bound to be tight.

It is always easy to do nothing and maintain the *status quo*. But it takes courage to do something new. History has shown that major events are often the catalyst for bold and radical change. But first, it must begin with a change of the existing mind-set. This is an opportune time to reflect, ask tough questions and look to see how laboratories can do better to help reduce environmental degradation. Let us not waste this glorious opportunity.

### References

1. Damian Carrington. Deadly diseases from wildlife thrive when nature is destroyed, study finds. The Guardian, United Kingdom (UK), 5 August 2020.
2. Damian Carrington. Pandemics result from destruction of nature, say UN and WHO. The Guardian (newspaper), United Kingdom (UK), 17 June 2020.
3. Fiona Harvey. Covid-19 pandemic is 'fire drill' for effects of climate crisis, says UN official. The Guardian, UK, 15 June 2020.
4. Lisa Friedman. New research links air pollution to higher coronavirus death rates. New York Times, USA, 7 April 2020
5. John Vidal. 'Tip of the iceberg': is our destruction of nature responsible for Covid-19? The Guardian, UK, 18 March 2020
6. George Monbiot. Covid-19 is nature's wake-up call to complacent civilization. The Guardian, UK, 25 March 2020
7. Lopez JB and Badrick T. Proposals for the mitigation of the environmental impact of clinical laboratories. Clin Chem Lab Med, 2012; 50(9):1559–1564
8. Lopez JB, Jackson D, Gammie A and Badrick T. Reducing the environmental impact of clinical laboratories. Clin Biochem Rev, 2017; 38(1):3-11.

*(The writer is a past President of the of the APFBC and a past member of the IFCC Executive Board)*

## “Getting together apart”: dealing with IFCC meetings remotely - a personal reflection and some tips -

by **Tahir Pillay**

*Chair, IFCC CPD Executive Committee*

The Covid-19 pandemic has forced us to work remotely and this is reflected in the numbers of meetings and conferences that are now taking place online. There are clearly benefits as well as disadvantages to the increased numbers of meetings taking place online.

For me the increased use of online meetings has meant less travelling and even better attendance at my local institutional and national meetings. The new “normal” has made it possible for me to attend several meetings within one day, in different locations, when previously I would have had to choose one meeting over the others because I would have to physically travel to a meeting and give my apologies to the others. I do not have to do this anymore and can instead clock up a good attendance at many meetings because they are now online. It is even possible to attend meetings running simultaneously if they are on different platforms and you are using multiple devices, although this can be exhausting and dilutes your attention. So, this has brought us “closer together” even though we are apart!!

The CPD Executive Committee, like other IFCC committees has had the opportunity to meet more frequently, thereby enhancing the efficiency of the IFCC. Previously, we used to wait for a suitable physical opportunity that would suit all the committee members schedules. So, is this new “normal” here to stay and should we not have any more face-to-face physical meetings? I believe these are here to stay but should not replace face-to-face physical meetings. They are here to enhance and complement administrative, teaching and intellectual activities and functions.

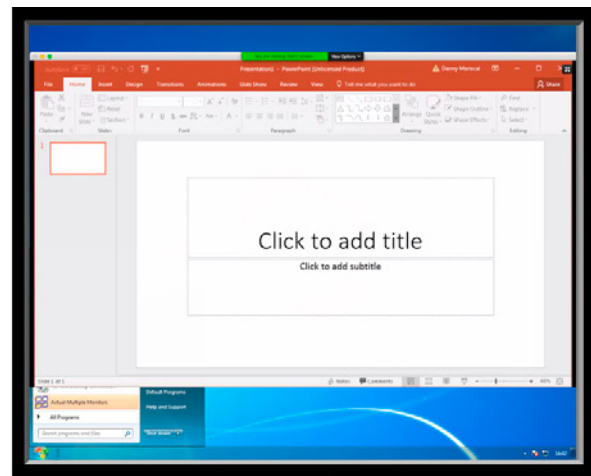
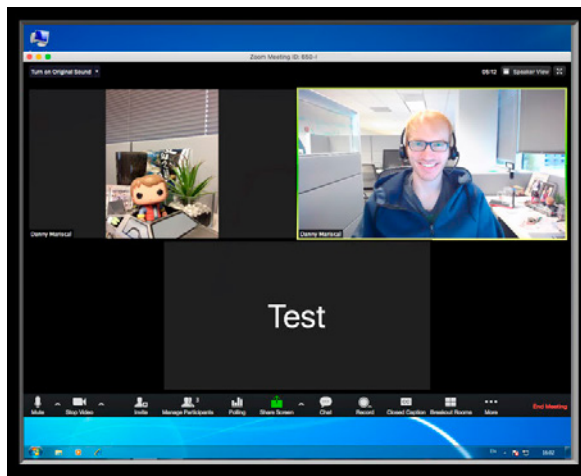
What is the best way to cope with the increased number of online meetings? I believe the best way is to have a good comfortable workstation and a good web camera. Your workstation should ideally have two large monitors (at least 27 inch) allowing you an extended desktop. This is a habit I picked up from an

astrophysicist colleague more than 10 years ago and have never looked back. The large monitor habit came from my 84 years old father who uses a large monitor for his photography work. One day I happened to sit at his desk and I realized how visually appealing it was to use large monitors. It gives you more desk space allowing you to preview documents and still keep your audience on the screen, something difficult to do on a normal screen or a laptop. An even better arrangement is to have curved monitors for an even better experience – these are becoming cheaper with each passing day. In addition, using earphones or a headset (wireless preferred) prevents the echo feedback that happens in online meetings. If you are spending a lot of time attending online meetings, then additional things to consider are a standup desk and some dumbbell weights for exercising briefly during breaks or when your camera is off.

What about the traditional meetings and conferences? I would argue that there is still value in the traditional face-to-face physical meetings notwithstanding the travel costs and expenses. Fundamentally, human beings can be categorized into three basic communication types based on studies in neurolinguistics programming: visual, auditory and kinesthetic. The acronym “VARK” (visual, auditory, reading and kinesthetic) is used to describe four modalities of student learning described in a 1992 study by Neil D. Fleming and Coleen E. Mills. We use one of these predominantly but still depend on the other two for a full communication and interaction experience.

Online meetings only provide visual or auditory input and if people have their cameras off, there is only auditory input, making it no better than a teleconference. How many of us have initiated or developed networking during face-to-face conversations, something that would be difficult to achieve on an online platform?

*Article continued on next page*



Essential tools for online meetings: dual monitors, standup desk and a pair of dumbbells (7 lbs/3.175 kg)

Therefore, my view is that the traditional meeting and conference cannot be replaced, but can be supplemented by online meetings since the experiences and impact of each is different because of fundamental human differences.

As an illustration, consider the difference in the level of rapport that you have with someone online when you only hear their voice compared to when they have their camera on. *(This is one reason that I prefer to ask online meeting attendees to keep their cameras on for better interaction).*

Now compare this with the same experience when the person is in the same room – this is the kinesthetic part combined with visual and auditory.

So, the “bandwidth” of a physical experience is immensely more powerful than a simple visual or auditory experience. Another challenge is that online meetings can be mentally exhausting, perhaps because of the impact of staring into a screen continuously and being seated all the time. Additional challenges arise when there are connection issues preventing one or more participants engaging fully. Online meetings work best for focused and targeted discussions but are less useful for long agendas.

In summary, online meetings are of proven value and are immensely useful but I believe that they will not replace the traditional meeting for the reasons discussed above but will be an immensely useful complement to the traditional face-to-face meeting.

## NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES



### News from the Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>)

This accreditation guarantees the quality of the work of clinical laboratories

# SEQC<sup>ML</sup>

The Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>) obtains ENAC accreditation as a provider of external quality assessment programs

- External quality assessment programs (EQAS) are used to measure the reliability of clinical laboratory results.
- The objective is the results of the clinical tests to be comparable to each other, regardless of the laboratory that performs them.
- Accreditation is distinguished from certification in that the former, in addition to ensuring compliance with the ISO standard, assesses the quality with which the work is carried out.

MADRID, JUNE 1, 2020

The Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>) has obtained accreditation from the National Accreditation Entity (ENAC) as a provider of the external quality assessment program (EQAS) for serum. The SEQC<sup>ML</sup> has among the objectives set by its strategic plan that its EQAS programs are leaders at the national level, and this accreditation guarantees the reliability of the laboratory results, giving a very important added value with respect to other non-accredited external quality evaluation programs. In Spain, there



are only two other entities accredited by ENAC in this area, in addition to the SEQCML.

The SEQC<sup>ML</sup> has extensive experience, since 1981, as a provider of external quality assessment programs in all areas of clinical biochemistry. It currently offers 11 programs in which the majority of the measurands analyzed in the clinical laboratory are compared. Continuing with the main objective of continuously improving the quality of its programs, the SEQC<sup>ML</sup> plans to gradually achieve ENAC accreditation of all its programs. This would guarantee the reliability of control materials used, of calculations performed, and the reports of results sent to participants.

Article continued on next page





Dr. Carmen Perich, President of the Committee for External Quality Programs of the SEQC<sup>ML</sup>



The SEQC<sup>ML</sup> office team

The objective of external quality assessment programs is to evaluate the reliability of clinical laboratory results, comparing them between laboratories or using pre-established reference values. For this reason, they are also known as intercomparison programs. The program organizer distributes samples of control material of unknown concentration to all participating laboratories, which analyze them and send their results to the organizer. This entity then evaluates these results and informs each laboratory of the degree of deviation with respect to the assigned value of the control material. There are external quality programs for most of the tests analyzed by the laboratories, whether at a national or international level.

ENAC is designated by the Spanish Government as the sole accreditation body. It is a non-profit, independent, impartial, and transparent public entity, whose decisions are based on exclusively technical criteria, with no commercial interest. As explained by Dr. Carmen Perich, president of the Committee for External Quality Programs of the SEQC<sup>ML</sup>, “being accredited by ENAC means recognition of the technical competence of an entity and its reliability, both nationally and internationally.” In the case of EQAS programs,

this means that their organizers meet the requirements established in the ISO 17043: 2010 standard, so that the control materials used, the calculations performed, and the result reports sent to the participants are reliable.

“It is important that the results provided by laboratories are comparable to each other, regardless of the laboratory that performed the analyses,” explains Dr. Perich, who adds that this fact redounds to the assurance that the patient will obtain the same diagnosis, or the same monitoring of a disease, regardless of the laboratory. At present, the SEQC<sup>ML</sup> accreditation covers 36 of the tests that are most frequently performed in blood analysis, and the objective of the Society is the gradual accreditation of all its external quality programs.

### **DIFFERENCE BETWEEN ACCREDITATION AND CERTIFICATION**

To highlight the importance of this recognition, Dr. Perich pointed out a series of differences between being an entity accredited by ENAC and one that simply accepts its certification.



“A certified entity implies that the fact that it performs its activities in accordance with established guidelines has been evaluated, following the requirements of the corresponding ISO standard, but it does not mean that it performs these activities in a technically competent manner, that they are reliable. On the other hand, an entity accredited by ENAC shows that the entity carries out its activities in compliance with the requirements of the corresponding ISO standard, but also that these activities are carried out in a technically competent manner, that is, that they are reliable”, the specialist pointed out. “Put simply: the certification assesses that the entity does what it says it does and the accreditation assesses that it does what it says it does and also does it well,” she adds.

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### **About the Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>)**

The Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>) -founded in 1976- is an active member of IFCC and EFLM. The SEQC<sup>ML</sup> currently encompasses more than

2,500 professionals, and its main objectives are to bring together all scientists interested in the field of Laboratory Medicine, promote the dissemination of scientific and technical publications, organize meetings, courses and congresses of national and international character, cooperate with other Scientific Societies, and defend and promote the specialties of the field of Laboratory Medicine as well as those of its members. Likewise, the Society wishes to contribute to studying and recommending methods and guides, and to establishing guidelines and recommendations for training in the field of Laboratory Medicine.

More information at: [www.seqc.es](http://www.seqc.es).



[@SEQC\\_ML](https://twitter.com/SEQC_ML)



[Residentes del Laboratorio Clínico - SEQC](https://www.facebook.com/ResidentesdelLaboratorioClinico-SEQC)



[SEQC-ML](https://www.linkedin.com/company/SEQC-ML)



[seqresidentes](https://www.instagram.com/seqresidentes)

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## AACB members embrace online learning



As the world grapples with COVID-19 and the loss of opportunities for face to face conferences and meetings the Australasian Association for Clinical Biochemistry and Laboratory Medicine members have shown a strong appetite for online events.

The AACB monthly webinar series for 2020 has attracted over 100 attendees for the live events and in some cases even more people viewing the recordings.

Our planned Annual Scientific Meeting in Brisbane has been postponed until 2021, but we are instead holding our first AACB Virtual Conference - ‘Get your head in the cloud’, from Tuesday, 27 to Wednesday, 28 October 2020.

*by Dr. Kevin Carpenter FFSc(RCPA), FHGSA  
Chief Executive Officer  
Australasian Association  
for Clinical Biochemistry and Laboratory Medicine*

Sessions are timed to be accessible to all members across different time zones and delegates will be able to watch presentations in real-time and ask questions. Presentations will be no longer than 30 minutes and will be recorded and available for delegates to view if they can not make the live session. The program will feature invited speakers, oral presentations selected from submitted abstracts, e-poster sessions, and a poster gallery. This format will provide a valuable opportunity for authors to present their work and share their knowledge more widely.

We are also excited to include a virtual trade exhibition and networking breaks for the chance to catch up with friends and colleagues in cyberspace.



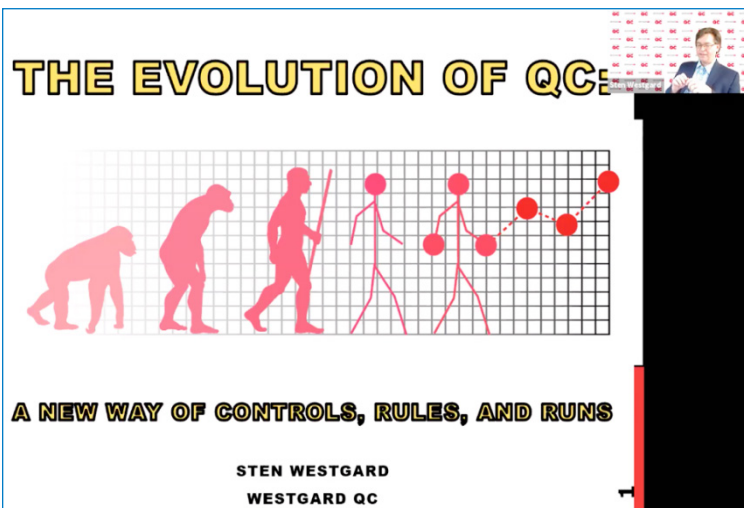
# Coping with the restrictions of the pandemic

## SAACB launches new online Expert Seminar Series during lockdown

*by Prof. Tahir Pillay*

*President, South African Association for Clinical Biochemistry and Laboratory Medicine (SAACB)  
Chair, IFCC Communications and Publications Division*

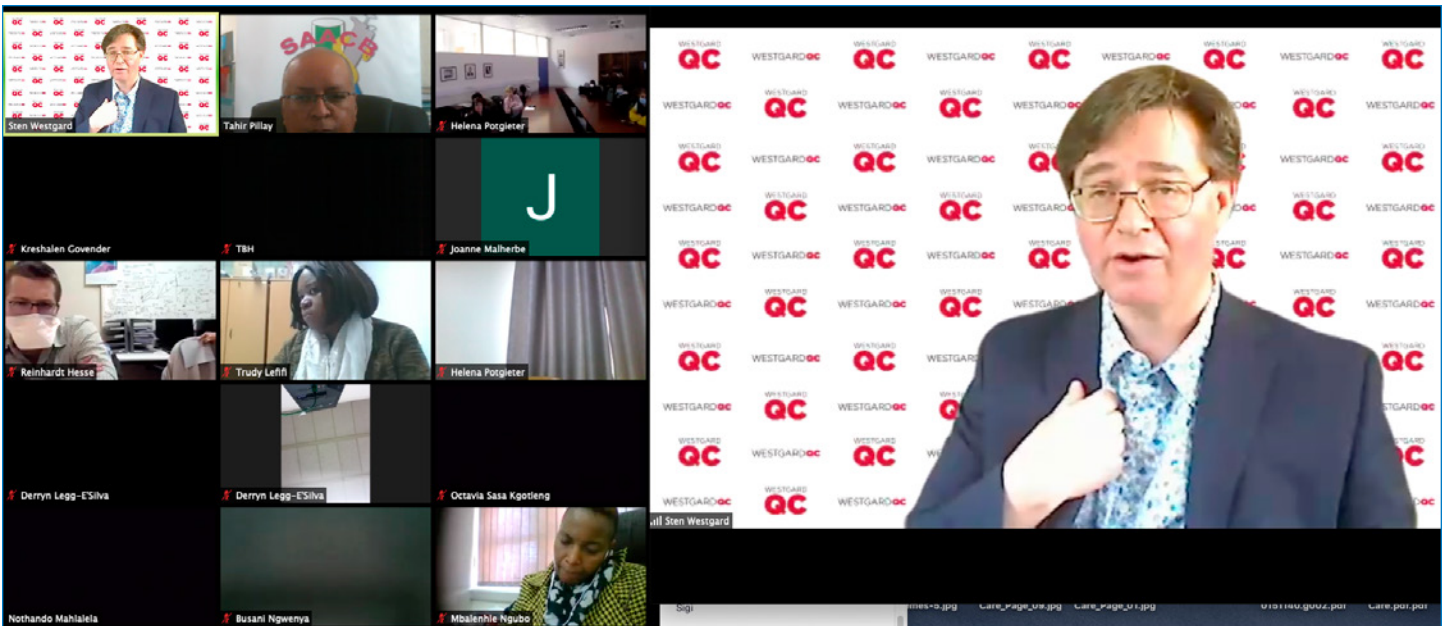
*“Pandemic separates us but also brings us closer together in the new normal”*



Dr. Sten Westgard during his presentation



I reflected to Dr. Graham Beastall that the pandemic has separated us with the restrictions on travel, but in some ways it has brought us closer together. How else could we get someone of the stature of Dr. Graham Beastall to come and speak to us from the comfort of his Glasgow home?

As with many other countries, since the onset of the pandemic, South Africa has been under lockdown for several months now and many conference activities have been cancelled. The SAACB has had to adapt and with this in mind, the SAACB Expert Seminar Series was launched. The idea was to invite eminent international speakers from abroad for the benefit of the national society.



Sten Westgard and participants


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**Traceability in laboratory medicine: what is it and why is it important for patients?**

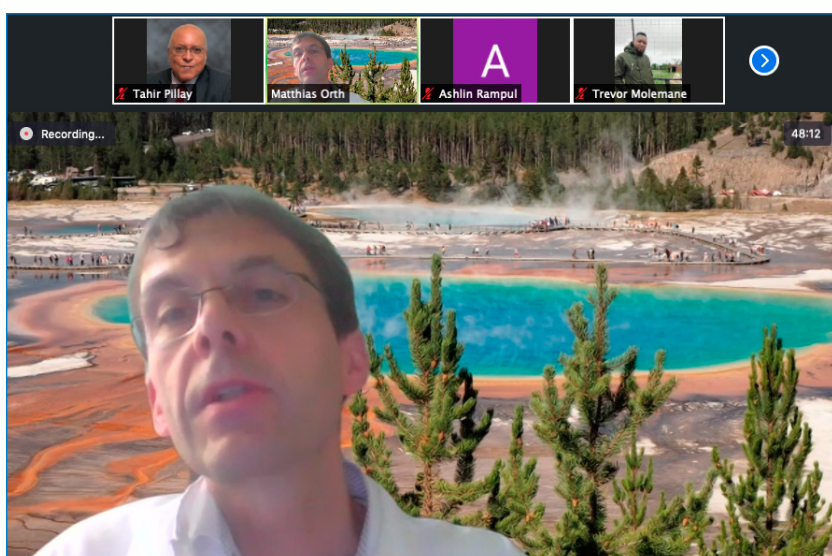
**Graham H Beastall**

[gbeastall@googlemail.com](mailto:gbeastall@googlemail.com)



Zoom presentation: 17 June 2020

Dr. Graham Beastall (Past President, IFCC) during his presentation



Prof. Matthias Orth



Prof. Damien Gruson

The programme of speakers was organized by Dr. Ashlin Rampul, a member of the IFCC Young Scientists Task Force.

The inaugural seminar on “The evolution of QC” was delivered on 4 June 2020 by Sten Westgard from the Westgard Corporation using the Zoom platform.

We have been using Zoom for a number of years in the Department of Chemical Pathology at the University of Pretoria, so we were able to adapt very quickly to the “new normal”! Part of the motivation for using Zoom was a result of my travel schedule much of it a result of IFCC-associated travel that took me away from my department for many days in the year – I started using Zoom in order to keep in touch with my staff and to ensure good governance when I was away.

Therefore when the pandemic and restrictions came, we were essentially set up and ready for online working and meetings and slowly we have been encouraging our fellow clinical departments to restart their teaching programmes with online teaching. This has worked very well with the local department of Endocrinology, with whom we have very close interactions and joint clinical meetings.

The programme has been well received. We hosted Dr. Beastall on 17 June 2020 for the seminar on “Traceability in laboratory medicine”.

Recent seminars have included Prof. Damien Gruson (Belgium) on 15 July 2020 and Prof. Matthias Orth (Germany) on 22 July 2020.

Prof. Gruson spoke on “Diabetes: from differential diagnosis to risk estimation” and Prof. Orth discussed ‘Normalizing data to aid continuity’.



We plan to embark on a more ambitious programme to involve other African countries and IFCC members in a programme of mini-conferences and seminars.

We are grateful to the speakers for their time and the fascinating topics they presented and also to Dr. Ashlin Rampul for his boundless enthusiasm and energy in recruiting the speakers.

The next speaker will be Prof. Joris Delanghe, Editor-in-Chief, Clinica Chimica Acta.



Prof. Damien Gruson and participants





### Critical appraisal and meta-analysis of biological variation studies on glycosylated albumin, glucose, and HbA1c.

Ricós C, Fernández-Calle P, Gonzalez-Lao E, Simón M, Díaz-Garzón J, Boned B, Marqués-García F, Minchinela J, Perich MC, Tejedor-Ganduxé X, Corte Z, Aarsand A, Asland B, Carobene A, Coskun A and Sandberg S

*Adv Lab Med* 2020; <https://doi.org/10.1515/almed-2020-0029>

Reported by Adina Huțanu, corresponding member EFLM Working Group-Promotion & Publications

The objectives of the study were to perform a systematic review and critical evaluation of BV estimates for glucose, HbA1c, and glycosylated albumin using the Biological Variation Data Critical Appraisal Checklist (BIVAC). The BV studies were graded as A to D in decreasing order according to the level of compliance with 14 quality items of BIVAC. Overall CVi and CVg estimates were derived from a meta-analysis of studies with similar study design: 30 for glucose (23 in previous systematic revision), 20 for HbA1c (17 in previous systematic revision) and 4 for glycosylated albumin (1 excluded from the meta-analysis). For glucose and HbA1c the BV estimates did not differ from those published previously (see infographic), however, for glycosylated albumin, there was a considerable dispersion of the CVi values, explained by the use of outdated analytical method in the earliest papers. Using BIVAC for critical evaluation of the publications provides international standard guidelines for the design, development of new BV studies, constituting a useful instrument for robust BV estimates in the future.

#### Critical appraisal and meta-analysis of biological variation studies on glycosylated albumin, glucose, and HbA1c [doi.org/10.1515/almed-2020-0029](https://doi.org/10.1515/almed-2020-0029)

To perform a systematic review and critical evaluation of BV studies for glycosylated albumin and to deliver updated BV estimates for glucose and HbA1c, including recently published EuBIVAS study.

The results are available in the  
EFLM Biological Variation  
Database  
(EFLMBVD)  
<https://biologicalvariation.eu/>

Overall estimation for BV components		
Parameter	CVi % (95%CI)	CVg % (95%CI)
Glycosylated albumin	1.4 % (1.2-2.1)	5.7 % (4.7-10.6)
HbA1c	1.2 % (0.3-2.5)	5.4 % (3.3-7.3)
Glucose	5.0 % (4.1-12.0)	8.1 % (2.7-10.8)

- ❑ Evaluation by the BIVAC: all the 75 studies (present and previous) revealed similar methodological weaknesses, most being graded as "C". These methodological deficiencies may affect the reliability of the results.
- ❑ In order to provide robust BV estimate, there is a need for more fully BIVAC-compliant studies.
- ❑ Using BIVAC for the design and development of studies may improve the quality and reliability of BV estimates in the future.

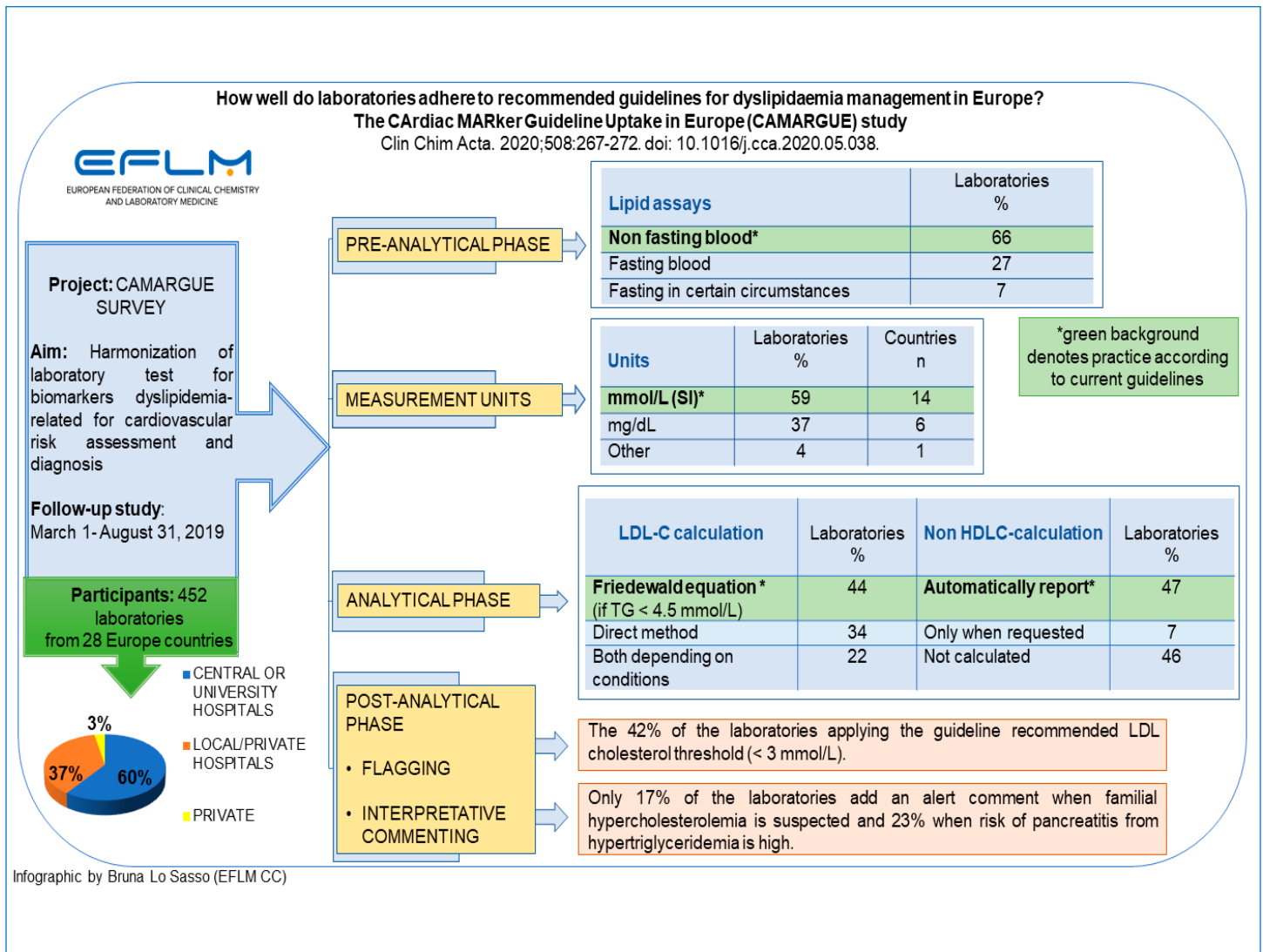
## How well do laboratories adhere to recommended guidelines for dyslipidaemia management in Europe? The CARDiac MARKer Guideline Uptake in Europe (CAMARGUE) study

De Wolf HA, Langlois MR, Suvisaari J, Aakre KM, Baum H, Collinson P, Duff CJ, Gruson D, Hammerer-Lercher A, Pulkki K, Stankovic S, Stavljenic-Rukavi A, Laitinen P.

*Clinica Chimica Acta* 2020; Available from: <https://doi.org/10.1016/j.cca.2020.05.038>

Reported by Bruna Lo Sasso, member of EFLM WG-Promotion & Publications

The European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Task Group on Cardiac Markers has promoted The CARDiac MARKer Guidelines Uptake in Europe (CAMARGUE) study for the purpose of verify concordance regarding the current use of evidence-based guidelines for lipid profile tests among 452 Europe laboratories. This survey study has clearly demonstrated an important gap between existing recommendations and laboratory practice in terms of measurement units, pre-analytical, analytical and post-analytical lipid management (for detail see infographic). The causes are several and immediately require professional strategies aiming at harmonized reporting of lipid tests with a better coordination of clinical laboratory activities in Europe. In addition, one of the objectives of laboratory medicine is to adopt evidence-based guidelines and provide interpretative comments of laboratory data in real time for better management of cardiovascular risk.



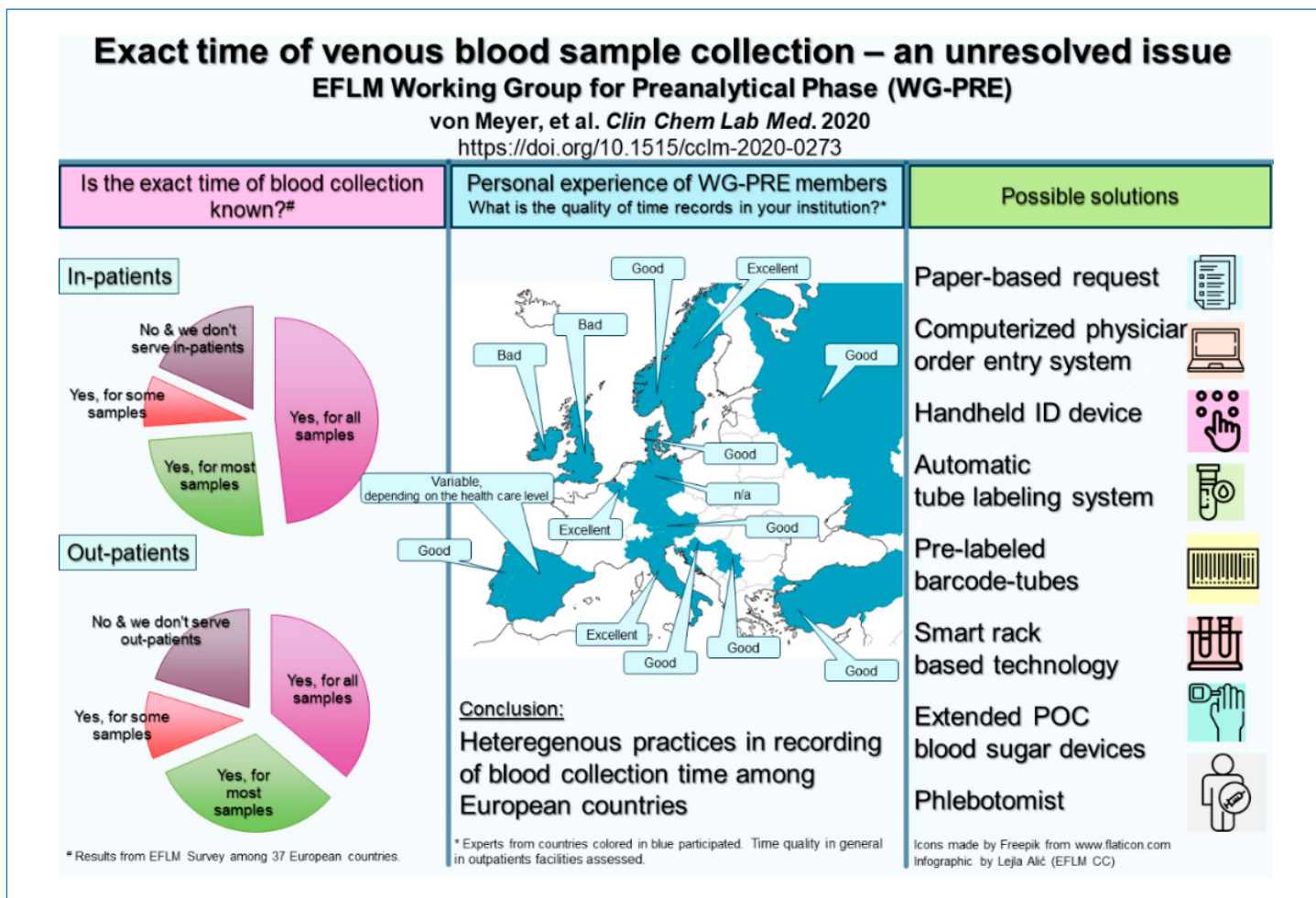
## Exact time of venous blood sample collection – an unresolved issue, on behalf of the European Federation for Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for Preanalytical Phase (WG-PRE)

von Meyer A, Lippi G, Simundic A-M, Cadamuro J.

*Clin Chem Lab Med* 2020; Available from: <https://doi.org/10.1515/cclm-2020-0273>

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

A new publication by the European Federation for Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for Preanalytical Phase (WG-PRE) reports the important results from the large study conducted previously by this group regarding preanalytical sample handling. Precisely, the publication deals with the practices among European laboratories concerning the records of the exact time of blood collection, which is important input data for proper analyte measurement and interpretation. The pilot survey has been conducted among Austrian laboratories first, which lead to the final survey among 37 European countries with the question: Are the exact date and time of blood collection provided with the samples? Additionally, a brief e-mail survey was conducted among the members of EFLM WG-PRE and its expert consultants about their experiences with the time recordings of blood sampling within their institutions. Although a high percentage of respondents (~85%) claim that the exact time of most blood samples has a good quality, authors conclude that the documentation of sampling time is heterogenous in European laboratories. Thus, authors propose and discuss a few solutions for appropriate time collection, such as paper-based solutions, computerized physician order entry system, handheld ID device, automatic tube labeling system, pre-labeled barcode tubes, smart rack-based technology, extended point of care blood sugar devices and trained phlebotomists.



## Thoughts and expectations of young professionals about the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

Bauçà JM, Imperiali CE, Robles J, Díaz-Garzón J, Vuljanic D, Begovic E, Tikhonov A, Alic L, Nikler A and Simundic AM *Clin Chem Lab Med* 2020; Available from: <https://doi.org/10.1515/cclm-2020-0717>

Reported by Lejla Alić, member of the EFLM WG-Promotion & Publications and Aleksei Tikhonov, member young scientist of the EFLM WG-Promotion & Publications

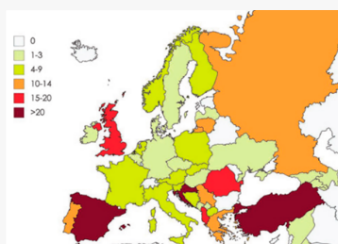
A new EFLM publication by Bauca JM et al. reports results of a large survey conducted among young laboratory medicine professionals (YLMP) from in total 53 European and non-European countries. Authors surveyed YLMPs' opinions and expectations from European Federation of Clinical Chemistry and Laboratory Medicine (EFLM). Results of a comprehensive survey showed that YLMPs knew little about EFLM's activities and would like to learn more but are aware of and attend EFLM events. The common denominator of their expectations from EFLM is for this organization to be included in the early stages of their career as well as to help in facilitating networking and connections among YMLPs. Accordingly, YLMPs have expressed readiness to participate in potential YLMP network and working groups within EFLM. Results from this survey can be a good input for EFLM's future strategy design particularly focused on increasing involvement of YLMP in various society activities that will improve and fortify the laboratory medicine profession.

### THOUGHTS AND EXPECTATIONS OF YOUNG PROFESSIONALS ABOUT THE EUROPEAN FEDERATION OF CLINICAL CHEMISTRY AND LABORATORY MEDICINE (EFLM)

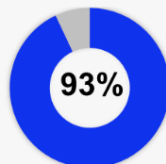
**Aim:** to assess the opinion and expectations of young laboratory medicine professionals (YLMPs) about their involvement in the activities of EFLM.

Survey conducted on Google Forms questionnaire and distributed throughout Europe.

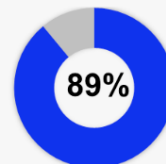
53 countries, 329 valid responses  
Highest response rates from Spain, Croatia and Turkey.



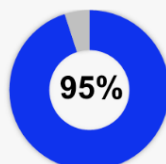
Respondents



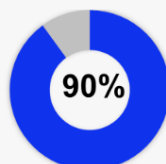
Would like to know more on EFLM



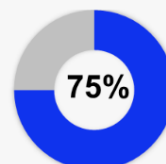
Think that EFLM should help in early stages of their career



Need networking and scientific exchange



Would dedicate their time to YLMP network within EFLM



Do not know about EFLM LabX program

YLMPs need **better connection** among them to gather and share concerns about their daily healthcare duties, to **keep updated** with new advancements and to face future challenges together. **EFLM should nurture and help** European young scientists grow from the very beginning and give them a platform to have their voices heard.

Infographic by Lejla Alić (EFLM CC)

Bauçà JM, et al. *Clin Chem Lab Med*. 2020  
<https://doi.org/10.1515/cclm-2020-0717>





## XIII Uruguayan Congress of Clinical Biochemistry

Virtual event: 15-17 October 2020

by *Q.F. B.C. Laura Yametti*  
Organizing Committee President  
*Q.F. Fernando Antúnez*  
ABU President

The Uruguayan Biochemistry Association (ABU) is organizing its XIII Uruguayan Congress of Clinical Biochemistry to be held from the 15th to the 17th of October this year. Due to the worldwide health emergency, this event will be held virtually. It is both a challenge and an honor for us to organize this event, allowing us to engage with other colleagues from different regions of the world, in order to exchange our opinions and experiences. We considered the possibility of not moving forward with the event, but as health care professionals we understand that this is the most important time to contribute by divulging scientific knowledge.

We propose not only to offer academic activities with first-rate speakers, in the form of conferences, symposia and courses; but also, to provide a virtual space to interact with representatives of the industry and with representatives of entities related to vocational training. We understand that today more than ever we must stay connected in order to mitigate the impossibility of face-to-face relationships and to allow the dissemination of knowledge.

We created the Virtual Expo, a robust platform that gives exhibitors enhanced opportunities to share information and engage with attendees, we really believe that this space can be very useful for the National Organization to promote their activities and to drive the education process in the scientific community.

The theme of our event is **“Talent, Technology and Time: The Key to Transformation”**. In this phrase, we refer to what the world is currently going through. Talent is essential in order to reach our personal and collective goals; technology is our greatest ally in the



face of adversity and time...gives us the opportunity to change and improve.

In the clinical laboratory, it is clear that the talent of people and professionals is what contributes to the high-quality standard needed for our clients, but we must not forget that it is technology which allows that to be possible, in less time.

**On the proposed agenda we offer two intra-congress courses:** Interference in immunoassay and platelet-rich plasma. We also have **conferences and symposia** related to quality assurance, molecular biology, autoimmunity, hematology, microbiology, endocrinology, among others.

Article continued on next page

We cannot hold an event of this magnitude, without addressing **the most important topic of the moment: The SARS- CoV-2 pandemic**. In this regard, we hope to be able to successfully carry out activities that summarize the measures implemented by our country and scientific community to minimize the spread of this virus in our environment and to carry out an early diagnosis. We have had the possibility of rapidly transferring knowledge for the application of molecular diagnosis and for the development of serological

tests, among others, which have allowed Uruguay to carry out the necessary studies on its population in a timely manner.

We look forward to seeing you in our first virtual congress, hoping that it will be an innovative and positive experience for all of you and that it will allow us to strengthen our ties as a scientific community.

We greet you cordially.  
<http://congresoabu2020.org>



## News from the Ethiopian Medical Laboratory Association (EMLA)

### 25th EMLA Annual Conference and CPD - 2020

*by Gizachew Taddesse Akalu*

*EB Member of EMLA*

*AFCC and IFCC National Representative*

Despite all odds of COVID19 pandemic, The Ethiopian Medical Laboratory Association (EMLA) convened its 25th annual conference and continuing professional development from 26-28 February 2020. The main theme of the conference was **“Laboratory Medicine for Better Biomedical Research and Human Health”**. During this annual conference, four subthemes have also been managed including: (1) Why the evolution and carrier of laboratory professionals remains uncertain in Ethiopia? (2) Improving the research capacity of medical laboratory scientists in Ethiopia; (3) Laboratory Stewardship: Ordering, performing and reporting laboratory test results and mitigating the risk of over diagnosis; and (4) Emerging molecular diagnostic platforms having the power to revolutionize modern medicine and continue to improve health system.

#### **JUSTIFICATION FOR THE MAIN THEME OF THE CONFERENCE**

#### ***Why Laboratory Medicine for Better Biomedical Research and Human Health?***



Laboratory generated data are used in support of several types of global health research. Routinely obtained clinical diagnostic data are used for disease surveillance, epidemiologic analysis of trends and health outcomes research.

Laboratory medicine is a critical component of disease prevention and management within this paradigm. Traditional disease classification and approaches symptom based and organ centered are no longer valid. The presentation of disease is changing and shared mechanisms such as inflammation and abnormal immune responses are recognized.

Growing knowledge demonstrates the need for a new approach to health and disease based on causative pathways that include genes, environment and lifestyle, generating big data even for individuals and health interventions that will soon become increasingly personal.

Biomedical research drives better health and patient care through innovation and implementation into practice of novel findings. In a changing society new challenges demand a new research and innovation framework and strategy. Improved health and wellbeing of the people is the ultimate goal of research. It is part of a vision of science and knowledge in a participative society.

Today, developed nations understood that research brings health and benefits to society. Achievements in health have been driven by research and innovation and by the high value placed on science in a free and open spirit of critical thinking. Research in the humanities, natural sciences and technology are one with health but, biomedical research is a holistic view of humankind. Most importantly, biomedical and health research bring economic value too.

Research and innovation have advanced medical diagnostics, therapeutics and technology in many fields, with major impact on both life expectancy and healthy life years. Society gains economic benefits from these additional years of good health and productivity. Innovation in biomedical and health research can create new companies and jobs while boosting the economy. On the other hand, health and disease are global. Changes in lifestyle, demographics and environment are leading to changing patterns of infectious and non-infectious disease globally. Human health and disease are intricately linked with health in animals, plants and agriculture requiring a new approach like 'One Health'.

Most importantly, preventing disease, prolonging life and promoting health is best achieved through the integrated and organized efforts of research and this requires not only national action, but intensified cooperation at continental and global levels. National research, cross border research, cross border consultation and comprehensive policies are required as all need scientific leadership at a scale that takes full advantage of the Ethiopian health research arena.

### *Newly elected EMLA EB members*

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2	Prof. Baye Gelaw	Member	<a href="mailto:tedybayegelaw@gmail.com">tedybayegelaw@gmail.com</a>
3	Gizachew Taddesse	Member	<a href="mailto:gtakalu@gmail.com">gtakalu@gmail.com</a>
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## IFCC WELCOMES A NEW CORPORATE MEMBER

### Wuhan Life Origin Biotech Joint Stock Co., Ltd. – Szybio

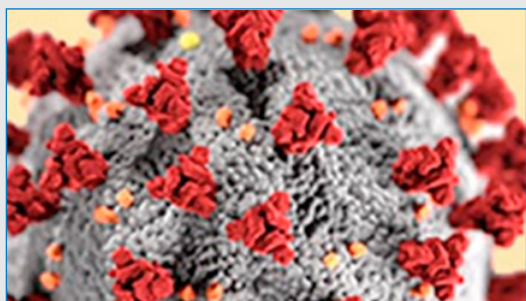


Wuhan Life Origin Biotech Joint Stock Co., Ltd. is a high-tech enterprise specialized in research and development, production and sales of IVD reagents for medical clinic. Our company owns research and development technology platforms such as chemiluminescence, conventional chemistry, latex turbidity and POCT.

Our company has more than 300 employees, more than 30 masters and doctors, and has built a nearly 1000 squares of “clinical in vitro diagnostic reagent research and development center” and purification plant. Our company has more than 80 item of medical device registration certificate, covering cardiac, renal, blood lipid, liver function and so on.

Website: <http://en.szybio.com/>.

#### News from the IFCC Website



#### IFCC Information Guide on COVID-19 – weekly updates – a Summary of the Guide in Spanish and Czech is also available

Coronavirus disease 2019, abbreviated to COVID-19, is an emerging global pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). As the number of individuals infected with COVID-19 continues to rise globally and healthcare systems become increasingly stressed, it is clear that the clinical laboratory will play an essential role in this crisis, contributing to patient screening, diagnosis, monitoring/treatment, as well as epidemiologic recovery/surveillance. This guide aims to organize relevant available information on laboratory screening, testing protocols, diagnosis, and other general information on COVID-19 for laboratory professionals, including links to helpful resources and interim guidelines. It will be continually updated as new guidelines and literature become available.

[Read more](#)

#### What is the role of breath analysis (volatolomics) in testing for COVID-19?

COVID-19 has changed all of our lives, and presented new diagnostic needs and opportunities. The IFCC WG on Volatolomics has surveyed the recent breath analysis literature (up to 8/2020) that is focused on COVID-19 testing. Universal concerns over contracting COVID-19, have meant that previous diagnostic test modalities may no longer be optimal. There is an increasing need, and also concomitant opportunities, for simple and rapid testing for COVID-19. Simplifying and increasing access to COVID-19 testing could become the new medical imperative and would also lay a foundation for addressing testing needs in future pandemics. Breath analysis (volatolomics) may provide a viable technology for rapid COVID-19 testing. Click [here](#) to read the survey.

[Read more](#)

## IFCC'S CALENDAR OF CONGRESSES, CONFERENCES & EVENTS

We advise readers to keep up-to-date about the evolving situation and possible rescheduled dates.  
Contact organizing secretariats for updates on upcoming events.

### Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses

Jan 5 - 6, 2021		<i>IFCC Young Scientists Forum</i>	Seoul, KR
Jan 6 - 10, 2021		<i>XXIV IFCC WorldLab Seoul 2020</i>	Seoul, KR
Mar 15 - 16, 2021		<i>POCT: Making the point</i>	Rome, IT
May 16 - 20, 2021		<i>XXIV IFCC - EFLM EuroMedLab Munich 2021</i>	Munich, DE
Dec 6 -7, 2021		<i>IFCC-ICHCLR Workshop on overcoming challenges to global standardization of clinical laboratory testing: reference materials and regulations</i>	Paris, FR

Calendar continued on next page

Mar 28 - Apr 2, 2022	 COLABIOCLI	<i>XXV COLABIOCLI Congress</i>	Leon, MX
Oct 15 - 18, 2022		<i>16th APFCB Congress 2022</i>	Sydney, AU
May 21 - 25, 2023		<i>XXV IFCC - EFLM WorldLab EuroMedLab - Rome 2023</i>	Rome, IT
<i>New date TBA</i>		<i>International Congress of Pediatric Laboratory Medicine - WorldLab Seoul 2020</i>	<i>venue TBA</i>
<i>New date TBA</i>	 International Consortium for Harmonization of Clinical Laboratory Results	<i>IFCC - ICHCLR Workshop</i>	<i>venue TBA</i>
<i>New date TBA</i>	 International Federation of Clinical Chemistry and Laboratory Medicine	<i>IFCC C-POCT Satellite Meeting</i>	<i>venue TBA</i>

## Corporate Member events with IFCC auspices

Sep 29 , 2020	<i>Latest IFCC Recommendations for Natriuretic Peptides in Heart Failure - Analytics and Clinical Considerations</i>	Online event
Oct 3, 2020	<i>Vietnam Chemical Pathology Course</i>	Online event
Oct 13 - 14, 2020	<i>Ten Million Reasons to Defeat Cancer, Abbott Global Oncology Summit</i>	APAC, China, Japan online event
Oct 14 - 15, 2020	<i>Ten Million Reasons to Defeat Cancer, Abbott Global Oncology Summit</i>	US, EU, Middle East, Latin America online event

## Other events with IFCC auspices

**We advise readers to keep up-to-date about the evolving situation and possible rescheduled dates. Contact organizing secretariats for updates on upcoming events.**

Feb 20 - Nov 15, 2020	<i>Virtual Diploma in Control of Analytical Quality in the Clinical Laboratory</i>	Mexico - online series of lectures
Jun 3, 2020 - Jan 3, 2021	<i>Virtual Postgraduate Course of Clinical Biochemistry</i>	Mexico virtual page
Jul 1, 2020 - Apr 30, 2021	<i>International Diploma in Quality Management According to ISO 15189</i>	Mexico online event
Sep 3, 2020 - Dec 15, 2020	<i>Course on Analytical Quality Control from ABC to SIGMA</i>	Mexico online event
Sep 9 - 11, 2020	<i>4th Conference of the Romanian Association of Laboratory Medicine</i>	Romania online event
Sep 23 - 25, 2020	<i>LMCE 2020 (Laboratory Medicine Congress and Exhibition) KSLM 61st Annual Meeting</i>	Incheon, KR virtual and offline congress
Oct 14 - 16, 2020	<i>4èmes Journées Francophone de Biologie Médicale</i>	Rennes, FR
Oct 15 - 17, 2020	<i>XIII Uruguayan Congress of Clinical Biochemistry</i>	Uruguay online event
Oct 15 - 17, 2020	<i>18th Greek Society National Clinical Chemistry Congress</i>	Athens, GR online event
Oct 23, 2020	<i>Pathology and Laboratory Medicine: The Promise, The Hope, The Peril</i>	Padova, IT

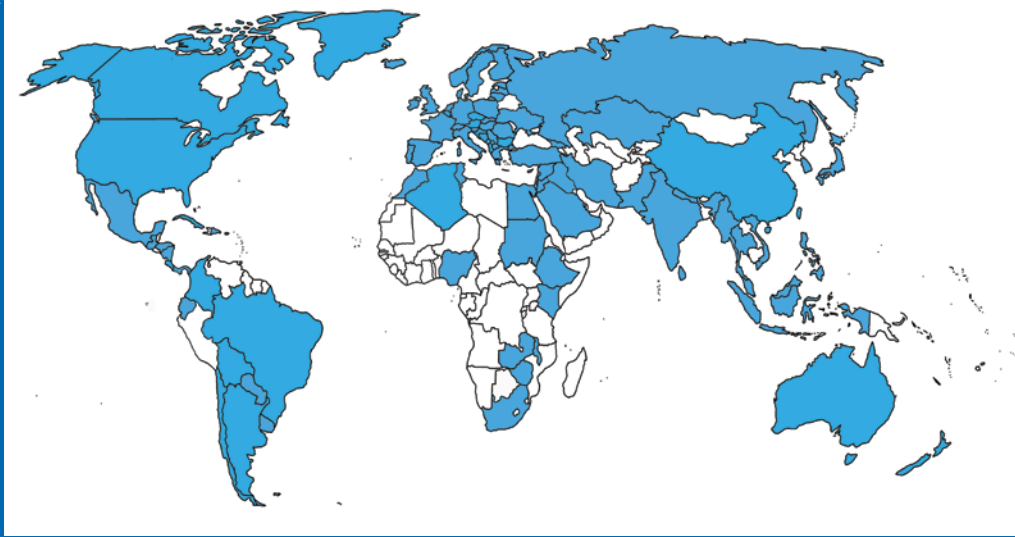


Oct 27 - 28, 2020	<i>AACB Virtual Conference</i>	Australasia online event
Nov 2, 2020 - Jul 4, 2021	<i>Virtual Diplomat in Selected Topics of Diagnostic Hematology for the Laboratory (Advanced Level)</i>	Mexico online event
Nov 4 - 5, 2020	<i>Journées de l'innovation en biologie (JIB 2020)</i>	Paris, FR
Nov 9 - 11, 2020	<i>16th National and 7th International Congress of Biochemistry and Molecular Biology</i>	Iran online event
Nov 30, 2020	<i>14th CIRME International Scientific Meeting "Implementation of metrological traceability in laboratory medicine: where we are and what is missing"</i>	Milan, IT
Dec 3 - 4, 2020	<i>IX Molecular Cytopathology - Across the Ocean</i>	Italy online event
Dec 4 - 5, 2020	<i>54 èmes Journées de Biologie Praticienne - JBP</i>	Paris, FR
Dec 7 - 8, 2020	<i>6th Serbian Biomarker Symposium (SERBIS): Lipid Metabolism in Health and Disease</i>	Belgrade, SRB
Dec 9 - 10, 2020	<i>7th Serbian Biomarker Symposium (SERBIS): Biomarkers of gastrointestinal diseases</i>	Belgrade, SRB
Feb 11 - 12, 2021	<i>International Congress on Quality in Laboratory Medicine</i>	Helsinki, FI
Feb 17 - 19, 2021	<i>1st EFLM-AFCB Conference – Laboratory Medicine for Mobile Societies (LM4MS) – 34th National Days of Clinical Biology</i>	Hammamet, TN
Mar 4 - 5, 2021	<i>XVIII Meeting of the SEQCML Scientific Committee</i>	Madrid, ES
Apr 14 - 16, 2021	<i>XXII Serbian Congress of Medical Biochemistry and Laboratory Medicine and 16th Symposium for Balkan Region</i>	Belgrade, SRB
May 24 - 27, 2021	<i>10th Santorini Conference "Systems medicine and personalized health and therapy" – "The odyssey from hope to practice: Patient first – Keeps Ithaca always in your mind"</i>	Santorini, GR
May 27 - 29, 2021	<i>II National Meeting Conquilab and Technological</i>	Mazatlan, MX
Jun 10 - 11, 2021	<i>8th International Symposium on Critical Care Testing and Blood Gases</i>	Biarritz, FR
Oct 7 - 10, 2021	<i>46th ISOBM Congress</i>	Bled, SI
<i>New date TBA</i>	<i>The 13th International &amp; 18th National Congress on Quality Improvement in Clinical Laboratories</i>	Tehran, IR
<i>New date TBA</i>	<i>VI Jornadas Bioquímicas de Cuyo 2020</i>	San Luis, AR
<i>New date TBA</i>	<i>LabMed Next</i>	Rome, IT
<i>New date TBA</i>	<i>24th International Conference on Laboratory Medicine and Pathobiology: An Expert Forum on Innovation in Clinical and Laboratory Medical Sciences</i>	Samos, GR

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Jordan: Society for Medical Technology & Laboratories (SMTL)
Kazakhstan: Public Association - Federation of Laboratory Medicine (FLM)
Mexico: Federación Nacional de Químicos Clínicos (CONAQUIC A.C.)
Nepal: Nepalese Association for Clinical Chemistry (NACC)
Philippines: Philippine Council for Quality Assurance in Clinical Laboratories (PCQACL)
Romania: Order of the Biochemists, Biologists, Chemists in Romanian Health System (OBBCSSR)
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Turkey: Society of Clinical Biochemistry Specialists (KBUD)
Ukraine: Association for Quality Assurance of Laboratory Medicine (AQALM)

## Regional Federations

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

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**Communications and Publications  
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**N° 4 – April:** *by mid March*

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**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*

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