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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,

We have arrived at the last issue of the eNews in 2020. This year has been really unprecedented for all of us. Sometimes it seems as if COVID-19 has erased the whole year. Laboratory people have worked hard, have accomplished a lot, and have proven how important laboratory work is for the health services so many rely on.

In this issue, IFCC president Prof. Adeli explains the program of the **IFCC Global Conference on COVID-19** to be held *virtually* between February 15-17, 2021. After the great success of the first IFCC webinars, our president invites all IFCC committees and working groups to organize webinars in 2021, which we all hope will be a much better year.

In this issue, Dr. Bernard Gouget sees some hope, some light at the end of the tunnel. Vaccines and new treatments offer this hope.

In this issue, hope also comes from the winning teams and participants of the UNIVANTS of Healthcare Excellence Award. Teamwork and cooperation have shown to be unbeatable, effective, full of hope.

Full of hope is also the report on a new wonderful mentor-mentee relationship; and full of hope seem the reports of the virtual conferences of the IFCC societies all over the world.

Let's hope, dear colleagues, let's hope for a brighter future, for bright luminous holidays, for a bright New Year!

Katherina Psarra

News from the IFCC Website

IFCC Live Webinar on demand

IFCC Webinars







IFCC Live Webinar on demand content will be soon available. Value and Impact of Laboratory Medicine in Patient Care: Developing the Evidence

Read more



THE VOICE OF IFCC

IFCC President's Message – December 2020

by Khosrow Adeli IFCC President



Prof. Khosrow Adeli PhD, FCACB, DABCC, FAACC

As the end of 2020 approaches, I would like to thank the entire IFCC community for its contributions and support in the fight against COVID-19. This year has been incredibly challenging for the laboratory medicine community, yet we have made invaluable strides towards bringing the end of the pandemic ever closer. To highlight such advancements, the **IFCC Global Conference on COVID-19** will take place *virtually* between February 15-17, 2021. The theme of this conference will be the **Critical Role of Clinical Laboratories in the COVID-19 Pandemic**, with the goal of bringing together leading experts on a global platform to present the latest advances in COVID-19 diagnostics and therapeutics. Specifically, attendees will have access to the following:

- Plenary sessions delivered by leading scientists, physicians, and public health authorities;
- Ten scientific symposia, covering physiology, diagnostics, therapeutics, and technology;
- Special presentations on the global response to COVID-19 in Africa, Asia-Pacific, Europe, Latin America, Arab Federation, and North America;
- An industry panel with presentations from industry leaders on latest IVD innovations;
- Twelve educational industry workshops;
- A young investigator forum with presentations from young scientists worldwide;
- Scientific e-posters and virtual industry exhibits.

For more details, please see the soon to be released scientific program on the IFCC website. Within the program, you will also find details on registration and abstract submission. Registration is free for all young scientists and trainees who are under 40 years old. I urge you all to register and take advantage of this low-cost conference, which will provide all attendees with invaluable learning opportunities.

Also planned for the New Year is the IFCC Webinar Series of 2021, which is a continuation of the successful IFCC Webinars Live Series Fall 2020. In the past few months, we have piloted the webinar series through the delivery of four live webinars:

- COVID-19 Guidelines on Molecular, Serological and Biochemical/Hematological Testing;
- Advancing Internal and External Quality Assurance on a Global Scale;
- Expanding Newborn Screening Globally: Reducing Infant Mortality through Early Diagnosis; and
- Value and Impact of Laboratory Medicine in Patient Care: Developing the Evidence.

Article continued on next page

These timely webinars each garnered an audience of 2500-3500 attendees for a total of over 10,000 participants in the Fall series. Participants joined around the world from over 110 countries, demonstrating the truly international nature of the Fall series.

Given the success of this program, IFCC will continue this series in 2021, with a focus on all aspects of laboratory medicine. A call for webinar proposals will soon be delivered, and I urge you to submit your proposals over the coming months. The IFCC Taskforce on Global eLearning/eAcademy and webinar coordinators will work with you to set up a successful event. Continuing these webinars is an important way in which the IFCC can give back to the national societies and their members around the world, with a focus on providing eLearning programs to developing countries and young scientists, students, and trainees. These webinars also support IFCC in its endeavor to become the largest provider of free eLearning programs in laboratory medicine globally, which will strengthen healthcare worldwide.

I hope we can all look forward to the new year, and these excellent educational opportunities that the IFCC has committed to providing. Feel free to email me at: president@ifcc.org with your feedback, questions, or concerns.

Till next time ☺ Khosrow

News from the IFCC Website



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 on a biweekly basis.

IFCC Information Guide on COVID-19 – biweekly 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.

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10th Beginners' Course in Molecular Diagnostics 1-6 March 2020 – La Paz, Bolivia

by Verena Haselmann

Chair, IFCC Committee on Clinical Molecular Biology Curriculum (C-CMBC) Institute for Clinical Chemistry, University Medical Center Mannheim, Medical Faculty Mannheim, University of Heidelberg, Mannheim, Germany

To start with the conclusion of the course - we are more than happy and proud that the 10th Beginners' Course in Molecular Diagnostics could take place and be carried out completely in 2020. Probably this would not have been possible at any earlier and certainly not at any later time and in no case without the support, will and perseverance of all those involved in the organization, to whom we would like to express our sincere thanks.

Each Beginners' Course in Molecular Diagnostics conducted by the Committee on Clinical Molecular Biology Curriculum (C-CMBC) of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) so far has presented the organizing team with new, special challenges, which on the other hand reflects the character of this program. The combination of internationally active tutors, participants who are eager to learn and are enthusiastic about molecular genetics, course venues which are rarely designed for such a course and usually unknown to the organizing team, requires an adaptation of the program to local conditions, making each course unique.



Teachers and participants in the IFCC 10th Beginners' Course in Molecular Diagnostics

WHO WERE THE ORGANIZERS AND TUTORS IN 2020?

The 10th Beginners' Course in Molecular Diagnostics took place at Plexus Laboratories from 1st till 6th of March 2020 in La Paz, Bolivia.

This course was locally supported and organized by the Bolivian Society of Clinical Chemistry (SOBOBIOCLI) and the Bolivian Program of Continuous Education (PROBOECO). Personally responsible for this course were **Dr. Alvaro Justiniano Grosz** as President of the Sociedad Boliviana de Bioquímica Clínica and **Dr. Aldo Vacaflores**, General Manager of Plexus Laboratories.

The following IFCC CMBC committee members were responsible for organization and teaching:

1. Verena Haselmann, MD, PhD, Deputy Director, Institute for Clinical Chemistry, University Medicine Mannheim, Medical Faculty Mannheim of the University of Heidelberg, Germany (chair C-CMBC)

2. Ettore Domenico Capoluongo, PhD, Professor, Director, Department of Molecular Medicine and Biotechnology, University Federico II, Naples, Italy (member C-CMBC)

3. **Orland Díaz Gibert**, PhD, Professor, Vall d'Hebron Institute of Oncology, Area of Clinical and Molecular Genetics, University Hospital of Vall d'Hebron, Barcelona, Spain (member C-CMBC)

4. Andrea Ferreira-Gonzalez, PhD, Professor, Department of Pathology, Virginia Commonwealth University, Richmond, Virginia (consultant C-CMBC)

5. **Parviz Ahmad-Nejad**, PhD, Professor, Director, Institute for Microbiology and Laboratory Medicine, University of Witten/Herdecke, Wuppertal, Germany (chair C-MD committee, C-CMBC supporting tutor)

WHAT WAS SPECIAL ABOUT THIS COURSE?



L-R: Prof. Parviz Ahmad-Nejad (Germany), Prof. Orland Díaz Gibert (Spain), Prof. Ettore Capoluongo (Italy), Dr. Aldo Vacaflores (Bolivia), Dr. Verena Haselmann (Germany), Prof. Andrea Ferreira-Gonzales (USA)

The 10th IFCC Beginners' course in Molecular Genetics was scheduled to take place as early as 2019, however it had to be postponed to 2020 due to the unstable political situation. Since the domestic political situation in Bolivia had stabilized in early 2020, while the situation was unclear in the medium term, the organizers decided to conduct the course on short notice. Accordingly, there were only approximately six weeks for finding a suitable course venue, conducting the pre-course, organizing the transport of the equipment and all consumables, applying for a visa and so on.

Dr. Aldo Vacaflores made his laboratory available to conduct the course and was appointed as the trainee by SOBOBIOCLI. As such, he spent one week at the Institute for Clinical Chemistry in Mannheim, Germany to familiarize himself with the schedule, the practical work of the course and to be able to organize everything on site in an optimal way. One of the main issues was the release of the laboratory equipment and the reagents required for the course by the Bolivian customs authorities. With the help of Prof. Maurizio Ferrari, Dr. Alvaro Justiniano Grosz and Richard Freiherr von Rheinbaben (Honorary Consul of Bolivia in Germany) we finally received the release from customs under the condition that everything was transported personally by a member of the IFCC - so this time the "Lab in a suitcase" became a "Lab in many suitcases". Carrying a PCR-cycler in a handbag around the world and explaining to airport security officers what it is definitely counts as a 'once in a lifetime' experience.

Finally, all of us IFCC tutors safely arrived in La Paz as of end of February 2020, and thus shortly before the WHO declared CoViD-19 infection as a world pandemic. Although we were allowed to conduct the course without any further safety precautions or restrictions, the worldwide health situation kept us busy every day, gave the course special significance and presented us with some difficulties on the return journey. It is worth mentioning that the

importance of molecular genetic diagnostics and of quality assurance, which were taught during the course, attracted public interest. Thus, Dr. Vacaflores and Dr. Haselmann were invited by breakfast television to give a short interview at the morning television program and all the tutors and Dr. Vacaflores additionally were allowed to give an interview for a more detailed report.



"Lab in my suitcases"



Dr. Haselmann & Dr. Vacaflores at TV

WHAT WAS TAUGHT AND WHO PARTICIPATED?

36 students participated in the course. The course was divided into a preliminary course at the first day, which gave a basic introduction to the topic of genetics/nucleic acids, and the actual 5-day Beginners' course in Molecular Diagnostics. Each day consisted of a wet-lab part in the morning, which took place at Plexus Laboratories, and a theoretical part, which was composed of different lectures and in-silico training in the afternoon. Each student additionally received a C-CMBC manual and an accompanying home-work book. The course was conducted in English, while Prof. Andrea Ferreira-Gonzalez and Prof. Orland Díaz Gibert as native Spanish speaker translated whenever absolutely necessary.

Comparable to previous courses, this course also started with a blood draw, so that every student could isolate his own genomic DNA. This DNA and additionally prepared characterized patient samples were used for all experiments within the week. The experiments included measuring DNA quantity, gel electrophoresis, simplex-PCR, duplex-PCR, nested-PCR, allele-specific PCR, and RFLP (restriction fragment length polymorphism) analysis for genotyping. Within the lectures, the principle of DNA isolation and quantification, basics of quality assurance and requirements for organizing a genetic laboratory, nomenclature of genetic variants and their annotation, pharmacogenetics, methods used for genotyping, molecular oncology, infectious diseases, qPCR and state-of-the art technologies were addressed and discussed in detail. During the in-silico-training, we focused on nomenclature, PCR-design, RFLP-design as well as on interpretation of direct-sequencing files (abi-files) and medical report writing. Although, the days usually lasted from 9:00 am till 7:00 pm, we had a lot of fun together and were able to spend some time together outside the laboratory.



Taking blood

Lab Day – it is loud ...

... and crowded

HOW IS IT GOING ON?

After an exhausting week, we had our final exam on the last day. Everyone was a bit nervous, but all of the students participated successfully. They received a certificate, a USB drive with all results of the course and lectures and before saying "Good bye", we nominated Rodrigo Pessoa Rejas as the next junior member. He will join us for the next course and will help us to improve the course even a bit more.

This course will be remembered by all of us. We learned a lot from each other, made new friends, and had unexpected experiences. So, in the end we are very happy to have conducted such a course in 2020 and we are now looking forward to new applications for next year.



Final exam

Farewell party

Committee & Junior Member

Update from the IFCC Committee on Clinical Laboratory Management (C-CLM)

by Praveen Sharma

Biochemistry, All India Institute of Medical Sciences, Jodhpur, India Chair, IFCC Committee on Clinical Laboratory Management (C-CLM) Chair, Congress and Conference Committee of Asia Pacific Federation of Clinical Biochemistry (APFCB)



Prof. Praveen Sharma PhD, FACBI, FAMS, FAACC

The IFCC Committee on Clinical Laboratory Management (C-CLM) is a special group focusing on and setting up activities in line with the common interests and needs of clinical laboratories, particularly in developing countries. Who knew that 2020 would mark the emergence of the COVID-19 pandemic that would completely change our thinking and vision towards the planning of all activities? COVID-19 is still on the rise in several countries with no signs of effective treatment as of now. The preventive strategies of social distancing, appropriate hand hygiene and wearing a protective mask seem to be the only solution till an effective vaccine is released.

The primary goals of the C-CLM are:

to provide education and training on good laboratory practice and on structuring laboratory management in compliance with the globally recognized framework of quality system essentials.

to help set standards/guidelines/requirements for quality manage-

ment implementation that impacts day-to-day work in the clinical or medical laboratories and, finds solutions to conformity assessment issues at fulfilling their regulatory requirements.

to promote good leadership and management practices in clinical laboratories and to assist with the development of these skills among clinical laboratories professionals.

to produce monographs and guides for those embarking on executing a quality management system and seeking accreditation.

The activities of the C-CLM have been hit badly due to COVID-19. The risks, as well as restrictions in travel, have compelled the members to re-think about their meeting participation. The C-CLM had one symposium and one full-day workshop (AACC University) in the IFCC WorldLab Congress, 2020 (Seoul) and the AACC Annual Meeting, 2020 (Chicago) respectively, which are now postponed. Most of the meetings scheduled in 2020 are either delayed, cancelled or have been shifted to the new virtual/hybrid mode. Thus, alternative routes for maintaining the workflow of the committee need exploration. The C-CLM members have also been affected by this pandemic and are presently busy in coping up with the new lifestyle, technology and changing environments. They are finishing up three monographs entitled "Practical Approaches to Quality Systems Set-up for Compliance with the Internationally Acceptable Requirements", "Basic Problem-Solving Tools or Basic Tools for Quality Improvement" and "Project Management Basics for Laboratory Leaders". The textual materials for a Laboratory Leadership Training Certificate Program are getting ready.

This pandemic has forced us to think outside the box and to set a new norm in terms of dissemination of scientific education, delivering training, conducting meetings and participating in conferences or congresses. The development of virtual routes of conducting webinars and conferences seem to be the new standard and will probably be the future until this pandemic subsides. The members are thinking of topics of interest for webinars in line with the new IFCC strategic plan, in which, the IFCC will strive to be the largest provider of free eLearning programs globally with a focus on developing countries as well as young scientists, students, and trainees.

News from the IFCC Website



eJIFCC Vol 31 n°4 - November 2020

eJIFCC Vol 31 n° 4 is now available!

In this issue, the focus is on ethics in laboratory medicine. The Guest Editor is Dr. Nilda Fink (Argentina), on behalf of the IFCC Task Force on Ethics (TF-E).

The field of ethics involves concepts and rules of right and wrong behaviour. Bioethics is defined as a branch of applied ethics that studies the philosophical, social, and legal issues arising in medicine and life sciences.

Presently it is mandatory for different areas of Medicine to comply with ethical standards, and the field of Laboratory Medicine is no exception.

This eJIFCC special issue presents a series of manuscripts that summarize relevant aspects of Ethics. Seven manuscripts are included; four of them are updating on classical ethical topics, two refer to more recent challenges in Ethics, and finally, but equally important, an opinion paper.

The issue is completed by four other articles, two of them on COVID-19.

Read more

IFCC: THE YOUNG SCIENTISTS

The 52nd Congress of the Italian Society of Clinical Chemistry and Laboratory Medicine (SIBioC) – Young Scientists session

cina di Labo,

by Giulia Sancesario

Co-Chair, IFCC Task Force for Young Scientists Chair, SIBioC Young Scientists Working Group Santa Lucia Foundation, Rome, Italy

Valeria D'Argenio

Member, SIBioC Young Scientists Working Group San Raffaele Open University, Rome, Italy CEINGE BiotecnologieAvanzate, Napoli, Italy

Santiago Fares Taie

Chair, IFCC Task Force for Young Scientists Co-Funder Lab-Surfing.com Laboratorio Bioquímico Mar del Plata, Argentina



SIBioC President Dr. Laura Sciacovelli and IFCC President Prof. Khosrow Adeli at the opening ceremony

For the first time in its history, the 52nd National Congress of the Italian Society of Clinical Biochemistry and Laboratory Medicine (October 6th-8th) took place in virtual mode, due to the SARS-CoV-2 pandemic.

The Congress was organized by the SIBioC President, Dr. Laura Sciacovelli, by the Board of the Society, with the auspices of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) and the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the institutional greetings of both the Presidents during the Opening Ceremony.

The theme of the Congress, "Laboratory Medicine: old and new interlocutors for a winning alliance", was chosen with the aim of highlighting the value of Laboratory Medicine by sharing objectives, strategies and practices with all its stakeholders. The Scientific Program gives an overview to focus on the importance of the culture of strate-gic alliances, in which there is a clear and transparent definition of roles, skills and practices for the achievement of common objectives, to achieve effective synergies to improve innovation and patients/citizens safety.

The management of COVID-19 emergency has been addressed by eminent speakers, as Proff. Giuseppe Lippi and Mario Plebani with the moderation of Proff. Sergio Bernardini, Maurizio Ferrari and Laura Sciacovelli. The scientific sessions and workshops ranged from various fields of Laboratory Medicine, such as the integration of Laboratory data in diagnostic-therapeutic paths, Big Data analysis to evaluate performance levels and support decisions.

The SIBioC YS-WG organized a joint session with the IFCC TF-YS addressing the issue of the possible alliance between Media and Laboratory Medicine. The talks of Proff. Eugenio Iorio and RossellaTomaiuolo focused on the role of the influence of the infosphere on disinformation, and the relationship between Social Media and Health Information. Finally, Marie Lenski and Claudia Bellini presented the Global Community of IFCC and SIBioC Young Scientists, the initiatives and opportunities offered through the use of media for personal and professional growth.

The SARS-CoV-2 pandemic has forced everyone to adapt and face new challenges, such as integrating into the digital era to continue being present. In this challenging period, the Congress offered an excellent opportunity for exchange and participation. All the YSs must look up and continue with value and positive energy to promote collaboration all over the world.

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Virtual joint Session SIBioC YS - IFCC TF-YS "Media and Laboratory Medicine: a possible alliance?" Speakers and moderators (L-R): Valeria D'Argenio, Eugenio Iorio, Giulia Sancesario, Claudia Bellini, Rossella Tomaiulo

Article continued on next page



Virtual joint Session SIBioC YS - IFCC TF-YS. Santiago Fare Taie (Chair TF-YS)(left), Giulia Sancesario (Co-Chair TF-YS, Chair SIBioC YS-WG), Valeria D'Argenio, Claudia Bellini, Marie Lenski (France YS Corresponding Member)(right, top-down)

News from the IFCC Website



APFCB News - Issue no. 2 of 2020

The Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine News 2020, issue 2, is now available. Despite these challenging times, Dr. Raja Elina, Chief Editor APFCB News, is pleased to bring you the second issue of the APFCB News 2020. Many countries around the world have been affected by COVID-19 pandemic. It has caused a global healthcare crisis and brought much sorrow. The COVID-19 pandemic has drawn attention to and shown the importance of clinical laboratory testing to the overall treatment outcome of the patient like never before. Many among us are directly or indirectly involved and have contributed to the COVID-19 crisis, ranging from establishing a diagnosis, prognosis, disease staging, therapeutic drug monitoring, and epidemiologic surveillance studies. Although clinical labora-

tory professionals provide crucial data to doctors, they are often the "forgotten warriors" in the fight to save a patient's life.

In this issue of the APFCB News, Mr. Joseph Lopez, past President of the APFCB, has contributed a lovely poem as a tribute to all Covid-19 fighters in healthcare and especially to those working in the laboratory. I take this opportunity to thank the IFCC for sharing the information on the various initiatives undertaken by the IFCC Global Taskforce on COVID-19. The work of this task force has been invaluable in supporting clinical laboratories around the world in the fight against COVID-19. Continuing with tradition, the cover-page of this issue of the APFCB News features the image of a painting graciously provided by Dr. Tan It Koon, founder and past President of APFCB. We are grateful to Dr. Tan It Koon for his unfailing support to the APFCB and for sharing with us his beautiful blue painting to view and enjoy in these difficult and troubling times.

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Ortho Clinical Diagnostics

Mentorship interview

Presented by the IFCC Task Force for Young Scientists

AN INTERVIEW WITH PROF. PETER KAVSAK (THE MENTOR) AND DR. SARANYA ARNOLDO (THE MENTEE)





THE MENTOR

Background

Dr. Peter Kavsak is a clinical chemist and professor in the Department of Pathology and Molecular Medicine at Mc-Master University. He is interested in cardiac and cancer care, especially as it relates to laboratory testing. Dr. Kavsak is situated at the Juravinski Hospital and Cancer Centre, a hospital part of Hamilton Health Sciences, and participates in regional coverage through the Hamilton Regional Laboratory Medicine Program.

Being a mentor

Dr. Kavsak has proudly mentored in McMaster University's postdoctoral training program in clinical biochemistry since 2006. He always has the pleasure to supervise and mentor many outstanding postdoctoral fellows. Besides postdoctoral fellows, he has also mentored graduate students and tutored medical students annually. The mentorship program has kept him in contact with students as they progress through various stages of their careers.

When asked about the most valuable aspect of his mentor and mentee relationship with Dr. Arnoldo, Dr. Kavsak found it difficult to narrow down to just one aspect since the relationship has grown overtime. Using his own words, he mentioned:

Throughout this mentorship program, Saranya and I both shared a strong commitment for testing excellence; with this serving as a springboard to many and on-going discussions regarding laboratory medicine. It's always a pleasure to read an email, hear a voice message, or have a conversation with Saranya as you know the topic will be important and hopefully our interaction will lead to better testing and patient care.

Mentor: Prof. Peter Kavsak

PhD, FCACB, FAACC, FCCS Professor

> Department of Pathology and Molecular Medicine *McMaster University*

Mentee: **Dr. Saranya Arnoldo** PhD

Clinical Biochemist Assistant Professor Department of Laboratory Medicine and Pathobiology University of Toronto

Interview conducted by:

Dr. Joe El-Khoury, DABCC, FAACC

Core Member IFCC-TFYS Assistant Professor, Laboratory Medicine Director, Clinical Chemistry Laboratory Medicine Co-Director, Clinical Chemistry Fellowship Program Yale New Haven Health Maintaining a long-lasting good mentoring relationship like in Dr. Kavsak's case doesn't come easily. He shared some of his tips:

The best advice from me to be a good mentor is to find great mentors. I have used the plural form here as I have had many outstanding mentors advising me on clinical chemistry, clinical management, clinical studies, research grants, teaching, administration/ management etc.. Mentor-mentee relationships are important and every relationship is unique; however, these relationships are most rewarding for people who are involved. I have been lucky to be a participant on both sides.

Common challenges faced by Young Scientists

Dr. Kavsak has seen some young scientists try to do too much and learn too much too soon. He believes that the info-omics age has put a lot of pressure on trainees who have the desire to start and continue research programs. "The clinical chemistry service and research are a team effort," he further elaborated, "and in this environment, it's always good to ask for help, seek clarification, communicate, and build relationships."

Advice from a mentor for Young Scientists

Dr. Kavsak strongly recommends young scientists seeking advice from more experienced laboratory professionals during times of uncertainty since the field of clinical chemistry and laboratory medicine is changing. He also pointed out that the more trusted information obtained, the more likely the young scientists can make an informed decision to grow in their training and career.

On how young scientists seek out mentors, Dr. Kavsak suggested:

Don't limit yourself to just one mentor because many different approaches are available. However, a suggestion would be to avoid those individuals who only take and don't give, who are too busy, who are unresponsive, etc. It's a relationship. Your time is valuable, so only seek advice from someone who is committed.

Dr. Kavsak concluded his advice for young scientists by suggesting embracing critical thinking and positioning yourself as a problem solver and a facilitator for high-quality laboratory testing.

THE MENTEE

Background

"The best advice from me to be a good mentor is to find great mentors. ... Mentor-mentee relationships are important and every relationship is unique; however, these relationships are most rewarding for people who are involved."

< Dr Kavsak

Dr. Saranya Arnoldo is an assistant professor in the Department of Laboratory Medicine and Pathobiology at the University of Toronto. She is also a clinical biochemist at William Osler Health System. There she provides oversight of the Core Laboratory, Special Chemistry, and Point-of-Care testing (POCT) programs. Currently, her responsibility has been expanded to oversee the specimen management area.

Previously, she worked as a medical laboratory technologist after obtaining her bachelor's degree in allied health sciences in Thailand. She won the Royal Golden Jubilee Ph.D. Scholarship and pursued her Ph.D. in immunology in Thailand. Later, she got accepted into the clinical biochemistry training program at McMaster University. She has been working with Dr. Kavsak in a formal mentorship during her time at McMaster University.

Mentee-mentor relationship

Dr. Saranya Arnoldo was a mentee to Dr. Peter Kavsak for two years during Dr. Arnoldo's training from 2012 to 2014. The mentorship journey is rewarding, and the bond formed between them lasted beyond her training. After graduating from McMaster University, Dr. Arnoldo continued working with Dr. Kavsak on a few projects. Dr. Arnoldo said the mentor-mentee relationship continues to evolve from a professional relationship to friendship

Reach out to different mentors to decide who is the right mentor... identify mentors who show passion for teaching and are willing to find time for mentees.

Dr Arnoldo

This is what she recalled for their first meeting:

Dr. Kavsak and I first met at the interview for the clinical biochemistry fellowship program in February 2012. During the interview, I felt like I didn't do well but the interview panel, including him, provided positive feedback simply with the smiles on their faces. After a few weeks of nervousness, I finally got accepted into the training program. It has been a turning point for my career, from medical laboratory technologist to clinical biochemist.

According to Dr. Arnoldo, she would continue working with Dr. Kavsak and reaching out to him when she has questions. The timely exchanges on topics ranging from specific subject matter expertise to career advice have brought invaluable benefits to her career. Dr. Arnoldo is grateful for Dr. Kavsak's "24/7 response through email" and continual "real-time" support.

Guidance to accomplish projects

Dr. Kavsak has guided Dr. Arnoldo in many projects within the areas of clinical services and research. When Dr. Arnoldo was a fellow doing clinical services, she once discussed with the clinical leads at William Osler

Health System about the necessity of dual reporting when changing manufacturers for the serum tumor marker assays. She asked Dr. Kavsakfor for advice and they had a discussion on possible next steps. Oncologists were appreciative of the collaboration because the joint effort allowed them to catch falsely low results due to some immunoassay interference.

Dr. Arnold is also thankful for how her mentor guided her in getting sponsorship for research. She went on:

For research, Dr. Kavsak guided me to reach out to manufacturers for sponsorship. We evaluated the impact of various sample types for different high-sensitivity cardiac troponin assays. With his guidance, we were able to receive sponsorship. Eventually, our findings have been published.

She is certain that she will have opportunities to work with Dr. Kavsak in the future.

Advantages of working with a mentor

Dr. Arnoldo praised highly of her mentorship program. Dr. Kavsak always encourages her to share her thoughts, present at scientific conferences, and write manuscripts. Under his support, Dr. Arnoldo became competent and proficient in knowledge transfer. Dr. Kavsak has become one of her role models when it comes to work, teach, and support/guide young staff.

Dr. Arnoldo saw advantages of working with her mentor, Dr. Kavsak, through his enthusiasm and passion and ability to start fun discussions. Arnoldo highlighted the following examples:

- Enthusiasm/passion: As a mentor, he is always willing to teach what he knows, which is above and beyond fellow's expectations. He accepts mentee from where they currently are in their training program, either just starting or about to finish. His teaching style is not only "talk the talk," but "walk the walk." He leads by example. For instance, you will see him in the lab. He sometimes spends hours in discussing with the laboratory team. His door is always open for everyone including laboratory assistants, medical laboratory technologists, managers, fellows, and other colleagues. This open-door policy provides an approachable atmosphere that is appreciated by all.
- Creating fun discussions: Residents/fellows love reaching out to him and enjoy working with him. He can spend 4 hours on one specific topic in our weekly tutorial. All fellows are amazed about how many publications he can cite and how precise each citation is.

Advice from a mentee for Young Scientist

Dr. Arnoldo encourages young scientists to reach out to different mentors to decide who is the right mentor. "Asking someone to mentor you is nerve-racking, especially if the mentor is already well-known in the field," she admits.

She encourages Young Scientists to identify mentors who show passion for teaching and are willing to find time for mentees. Dr. Arnoldo feels very fortunate that her mentor Dr. Kavsak is always available for mentees even though he is well recognized worldwide for his work in cardiac biomarkers and he has received many awards and grants.

HEM©HECK[®] Hemolysis free blood sampling.

Point of care detection of hemolyzed blood samples can increase patient safety and create major time and cost savings for healthcare

Hemolysis – the most common pre-analytical error

Hemolysis is well documented as the globally most common pre-analytical error in laboratory medicine. The incidence of hemolyzed blood samples varies and is normally most common in emergency departments often having a hemolysis rate of 5-12%.

Hemolyzed blood samples in vacuum tubes are usually detected in central laboratories, often resulting in a delay of 60-120 minutes in acute situations for correct test results, as the blood samples must be recollected. This can lead to increased waiting times and costs and a patient's condition not being treated in time, which might have severely negative consequences for patient safety in individual cases.

Although it is proven that hemolysis is common in blood gas samples and that several analyzes performed are significantly affected by hemolysis, there is no built-in hemolysis control in any blood gas instruments on the market. Healthcare staff will therefore regularly risk basing clinical decisions on incorrect test results or repeating analyzes or sending supplementary samples to the laboratory, which increases lead times and costs and reduces the value of the blood gas analysis.

Unique POC-concept for hemolysis detection

Hemcheck has developed a CE-marked solution for fast detection of hemolysis in whole blood samples in vacuum tubes (v-Test) and blood gas syringes (s-Test). Learn more about the concept



The user-friendly system is small, robust and portable and can be used anywhere, but is especially valuable for units having a high rate of hemolyzed blood samples and where the clinical impact and cost of each hemolyzed sample is high.

The v-Test enables hemolysis detection and direct sample retake in connection with blood collection and aims to improve the flows of samples and patients, reduce turnaround time, waiting times and patient length of stay, decrease staff workload, increase patient safety and save costs. The s-Test enables hemolysis detection either in connection with bloodsampling or blood gas analysis, and aims to contribute to more informed, reliable and timely clinical decisions and thereby improved patient safety.

Cost/benefit analysis shows substantial time and cost savings

Clinical studies show that the tests can effectively identify hemolyzed blood samples and, in case of vacuum tubes, greatly reduce the number of hemolyzed blood samples that reach the laboratory. The total cost for a rejected blood sample has been estimated in scientific articles to be above EUR 100 per sample and implies that Hemcheck's products are cost-effective even at lower levels of hemolysis. The positive effects of the concept in terms of reduced patient length of stay and cost savings, can be evaluated using the interactive, customized cost/benefit model.

Perform your own cost/benefit analysis

High user satisfaction and several new and ongoing customers

A user survey targeting all nurses enrolled in a clinical study at Capio S:t Göran hospital in Stockholm showed 100% user satisfaction with the products. The products are implemented in clinical practice at for example Tartu University Hospital in Estonia for usage at the oncology and hematology clinic and SYNLAB Sweden in primary care. Hemcheck is looking for other interesting projects and collaborations and offers healthcare providers the possibility to test the concept free of charge.

For further details, please contact: peter.andersson@hemcheck.com

Facts about Hemcheck

• Hemcheck produces and commercializes a unique concept for point of care detection of hemolysis in venous and arterial blood samples, contributing to more efficient and patient-safe care.

- The products are CE-marked and developed in Sweden together with healthcare staff.
- The technology has patent protection in Europe and the USA.
- The company is listed on Nasdaq First North Growth Market since 2017.

www.hemcheck.com



CONTRIBUTE TO THE IFCC eNEWS



Twenty-four teams receive global recognition for Healthcare Excellence in 2020

The UNIVANTS of Healthcare Excellence Award Program has recently announced their 2020 winners. Foundational principals across all winning teams include "UNIFYING" across the care continuum for the development and implementation of "AVANTE-GARDE" processes with measurable differences to clinical care. Winning best practices embrace collaboration and the power of laboratory medicine to drive successful outcomes across the healthcare ecosystem.

The 2020 submissions included hospitals, commercial laboratories, reference laboratories, clinics and rural community care. Applications included best practices across key areas of unmet needs, with representation from every region of the world, spanning both emerging and established markets. Following comprehensive judge review, the outcomes revealed three top winners, nine teams of distinction, and 12 teams of achievement. These teams are changing the healthcare industry in innovative ways for patients, clinicians, health administration systems, and payors.

The program is made possible by eight leading healthcare organizations who have partnered together to inspire and recognize integrated clinical care teams who have achieved exceptional outcomes in healthcare. The founding program partners include the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), AACC, EHMA (European Health Management Association), Modern Healthcare, Healthcare Information and Management Systems Society (HIMSS), National Association of Healthcare Quality (NAHQ), and the Institute of Health Economics (IHE); each in partnership with Abbott Laboratories.

More details about the UNIVANTS of Healthcare Excellence program or 2020 best practices can be found on the program's website at www.UnivantsHCE.com or by following the program on social media, including on LinkedIn: #UNIVANTS.

The success stories are especially meaningful in 2020 during unprecedented times for patients, communities and healthcare professionals. They are definitive proof that there is a core of vital partnerships and healthcare providers that work together and accomplish better patient care. It is with great honor that we congratulate all participating teams while celebrating strategic activation and insights from clinical and health systems.

The details for the teams that received the prestigious UNIVANTS of Healthcare Excellence Award are outlined on the following three pages.

UNI	UNIVANTS OF HEALTHCARE EXCELLENCE GLOBAL WINNERS							
K.	Reducing Patient Risk and Enhancing Care through the Development and Implementation of a New Chest Pain Pathway, Expedited by and for the COVID-19 Era Canterbury District Health Board * ASIA PACIFIC AREA WINNER	Martin Than Jacques Loubser John Pickering	Chris Florkowski Sally Aldous					
	Early Diagnosis and Improved Management of Patients with Diabetes through Strategic and Automated Test Algorithms via Primary Care Hospital Universitari Sant Joan d'Alacant * EUROPE AREA WINNER	Maria Salinas Emilio Flores Beatriz Massa	Maite López-Garrigós Francisco J. Pomares-Gómez					
(*)	Kidney Check: The Next Generation of Surveillance for Hypertension, Diabetes and Chronic Kidney Disease Chronic Disease Innovation Centre, Seven Oaks General Hospital * NORTH AMERICA AREA WINNER	Paul Komenda Barry Lavallee Binh Nguyen	AbdulRazaq Sokoro Adeera Levin					

University of Alabama Birmingham Hospital

	* NORTH AMERICA AREA WINNER							
UNI	UNIVANTS OF HEALTHCARE EXCELLENCE RECOGNITION OF DISTINCTION							
	Reducing Medical Errors and Enhancing Patient Care through Pathology Lead Strategic Activation of Point-of-Care Testing in an Emerging Market Aga Khan University Hospital, Nairobi	John Waigwa Serafino Gatwiri Gregory Muruga	Nancy Kunyiha Daniel Maina Samuel Ng'aaru					
	Early Detection and Management of Gestational Diabetes Mellitus for Improved Outcomes of Mothers and their Babies Hospital Clínico San Carlos	María José Torrejón M. Cruz Cárdenas Miguel Ángel Herráiz Martínez	Alfonso L. Calle-Pascual Nuria García de la Torre Lobo					
	Reducing Catastrophic Adverse Events in Patients with Hemorrhagic Shock through Early Recognition of Risk and System-Wide Automatic Alerts Hospital Israelita Albert Einstein * LATIN AMERICA AREA WINNER	João Carlos de Campos Guerra Priscilla Bento Matos Cruz Derogis Michele Jaures	Roseny dos Reis Rodrigues Carlos Eduardo dos Santos Ferreira					
	Reduction of Inpatient Daily Blood Draws with Data Science and Clinical Collaboration St. Paul's Hospital	Janet Simons Deborah Shaw Mirjana Besir	Astrid Levelt Camille Ciarniello					
	Reducing Post-Operative Complications in Cardiac Surgery Patients Hospital Virgen Macarena	Isabel Rodríguez Martín Jesús Villanueva Mena-Bernal Francisco Javier González Fernández	Juan Galán Páez José Garnacho Montero					
	Use of Faecal Immunochemical Tests (FIT) Unlocks the Door to Efficient and Effective Investigation of Patients with New Bowel Symptoms NHS Tayside	Judith Strachan Ian Kennedy Andrew Cowie	Craig Mowat Lynne Taylor					
	Novel Collaborative Approach among Public and Private Sectors for Streamlined SARS-CoV-2 Testing towards Optimized Patient Outcome during COVID-19 Pandemic Dubai Health Authority * MIDDLE EAST & AFRICA AREA WINNER	Rana Nabulsi Hussain Al Samt Mohammed Daoud	Hanan Al Suwaidi Laila Al Dabal					
*	Improved Safety for Patients with Indeterminant Pulmonary Nodules through Optimized Diagnostic Pathways for Lung Cancer The First Affiliated Hospital, Sun Yat-sen University	Canmao Xie Yanbin Zhou Suilin Mo	Honghe Luo Min Liu Lixia Huang					
	Enhanced Identification and Care for Patients with Undetected HCV and/or HIV via Opt-Out ED Screening with Active Education and Linkage to Care	Joel Rodgers Sherry Polhill	Sonya Heath Sherichia Hardy					

Ricardo Franco

Wendy Tissier

UNIVANTS OF HEALTHCARE EXCELLENCE RECOGNITION OF ACHIEVEMENT

	Improving Patient Experiences via Reliable Pre-Surgical Biomarker Risk Assessments in Patients Undergoing Eye Surgery St. Petersburg Hospital Number Two	Timur Akhmedov Vadim Nikolaenko	Alexandr Pushkin Alexey Lebedev
	Improving Population Health through Screening for Hepatitis C to Enable Treatment for Undetected Viral Infections Biomédica de Referencia	Clara Corona de Lau Dana Lau Corona Evelin Nájera López	Emma Alicia Arana Grimaldo María Concepción Gutíerrez Ruíz
	Improving Care and Overall Experience for Patients who Present to a Tanzania Clinic with Suspected Cardiovascular Diseases Faith Medical Tanzania Clinics	Joyce B Mung'ong'o Muzuma Felician Kibacha	Pendo Kibona Saum Seif
	Optimized Detection and Management of Thyroid Dysfunction During Pregnancy for Improving Maternal and Offspring Outcomes Hospital Virgen de la Luz	Enrique Prada de Medio Dulce María Calderón Vicente Andrés Moya Plaza	Vanesa Martínez Madrid Sandra Serrano Martínez
	Procalcitonin: A Successful Clinical Formula for the Early Recognition and Management of Sepsis in the Emergency Department The Princess Alexandra Hospital NHS Trust	Helen Pardoe Andrea Annoni	Nicholas Kroll Marie Parsons
	Maintain High Quality Patient Care During the COVID-19 Pandemic Institut für Medizinische und Chemische Labordiagnostik, Mein Hanusch Krankenhaus	Nazanin Sédille-Mostafaie Johann Bartko Andreas Krauter	Elisabeth Zwettler Felix Keil Andrea Schlögl
(*)	Maximizing Delivery Method and Clinical Resources for Timely Patient Communication of COVID-19 Status Nova Scotia Health	Jamey Martell Amy MacDonald Pam Butler	Don Doiron Linda Plummer
学授NN	Laboratory-Led Company-Wide Screening Programs for Safe, Back to Work Strategies during COVID-19 Pandemic in Saudi Arabia Dr. Suliman Al Habib Medical Group	Faisal Abdullah Al-Owaidi Abdullah Nasser Al-Jurayyan	Tarif Imadeddin Bizrah Nasser Mohammed Al-Huqbani
	COVID-19: Using Data, Innovation, and Collaboration to Support Better Patient Outcomes North West London Pathology	Saghar Missaghian-Cully Paul Nacmanson Paul Randell	Gabriel Roberts Panos Pantelidis
۲	Increased Detection of Acute Myocardial Infarction in Women Using Sex-Specific Upper Reference Limits in Clinical Pathways for Patients Presenting with Suspected Acute Coronary Syndrome Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute	Barnali Das Jamshed Dalal Sanjay Sm Mehta	Prashant Nair Santosh S Shetty
	Strategic SARS-CoV-2 Testing for Risk Mitigation and Optimal Health of Healthcare Workers and Patients Marienhospital	Matthias Orth Markus Bauer	Stefan Reinecke Sr. Karin Johanna Haase
	Enhanced Discovery of Unidentified Comorbidities and Diagnosis Through the use of Diagnostic Logics Empowered by Laboratory Medicine and Informatics Seirei Hamamatsu HP	Kentaro Naoda Keiko Oba Osamu Yonekawa	Kenta Usui Hidenori Nakamura Akira Yamamoto

UNI	VANTS OF HEALTHCARE EXCELLENCE AREA WINNERS		
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Reducing Patient Risk and Enhancing Care through the Development and Implementation of a New Chest Pain Pathway, Expedited by and for the COVID-19





UNIVANTS of Healthcare Excellence Global Winner Canterbury District Health Board, New Zealand

Pictured from Left to Right: Jacques Loubser, Chris Florkowski, Martin Than, John Pickering, Sally Aldous

The novel Corona Virus or COVID-19 has changed the world from what we once knew. It has required all industries to pivot, and in some cases, shutdown. Healthcare, like so many of our vital services, has been forced to become even more agile, reshaping itself to not only fight the virus, but to ensure high standards of patient care.

Of critical importance is the continued availability of emergency services, with safe and effective triage. The ability to continuously provide excellent emergency care to patients, while reducing and mitigating risk of transmission has been a key focus at Canterbury District Health Board, New Zealand.

Patients presenting with symptoms of a heart attack need immediate care. They represent common presentations to the Emergency Department (ED) and are also the most common cause of hospital admissions (~15%). Thus, the burden is substantial.

Recognizing that there would be added and significant resource pressure on the ED, including marked risk of potential cross-infection to patients when the COVID-19 virus arrived in New Zealand, an integrated care team involving the ED, Cardiology, Laboratory Medicine, and Management and Clinical Data Sciences sought to safely reduce time spent in the ED by maximizing early ED discharge and reducing the number of patients who are admitted to the hospital. Collectively, this approach sought to reduce transmission risk, while also ensuring safe and effective triage and treatment for patients with chest pain.

This was achieved through evaluation of laboratory data in conjunction with patient diagnosis, thus enabling strategic redesign of patient care pathways according to predicted risk of major adverse cardiac events (MACE) within 30 days.

Strategic and expedited implementation of this accelerated diagnostic protocol resulted in a 55% increase in the number of patients safely ruled-out for a heart attack using a single troponin result. Consequently, fewer patients require multiple troponin results for ruling-in heart attacks, leading to 45% and 35% increase in the total number of patients safely sent home within 2 hours and 3 hours of presentation respectively, and without the need for prolonged further workup. On average, patients spend approximately 30 minutes less time in the ED since implementation of their novel protocol, elevating care while also reducing exposure to COVID-19 and potential transmission.

More remarkable is that despite a 25.2% increase in patients presenting to the ED with chest pain during COVID-19, the ratio of 'cardiac admissions ultimately not diagnosed as a MACE' to 'patients presenting with chest pain' has decreased by an impressive 8%. This substantiates impressive and cohesive implementation while further reducing the risk of exposure and transmission of COVID-19.

These impressive outcomes are the collective result of the agility, forethought and teamwork of the integrated care team at Canterbury District Health Board. Although many interdisciplinary team members have played an integral part in the implementation of this strategic protocol, special congratulations are due to the innovators and recipients of the 2020 UNIVANTS of Healthcare Excellence Award for Outstanding Health Outcomes at Canterbury District Health Board: Martin Than, *MD, Emergency Medicine*, Sally Aldous, *MD, Cardiologist*, Chris Florkowski, *PhD, Consultant Biochemist*, Jacques Loubser, *MD, Emergency Medicine* and John Pickering, *PhD, Data Scientist*.

THREE KEY TAKEAWAYS

- 1. Leveraging the analytical sensitivity of high-sensitivity troponin assays can enable early rule-out strategies in the ED
- 2. Implementation of evidence-based acute coronary syndrome protocols can substantially reduce patient risk, especially during the COVID-19 era, reduce admissions, and reduce costs, while safety providing emergency care to those with suspected heart attacks.
- 3. Cross-disciplinary involvement is essential for ensuring safe, rapidand cohesive activation of strategic diagnostic protocols



Kidney Check: The next generation of surveillance for Hypertension, Diabetes and Chronic Kidney Disease

Chronic Disease Innovation Center, Seven Oaks General Hospital, Manitoba, Canada

Paul Komenda MD Nephrologist Chronic Disease Innovation Center, Seven Oaks General Hospital



Barry Lavallee MD Manitoba Keewatinawi Okimakanak Inc.



Binh Nguyen eQoL



Abdul Razaq Sokoro PhD Executive Director Provincial Laboratory Operations, Shared Health



Andeera Levin MD Nephrologist Can-Solve CKD Network

Chronic kidney disease (CKD) is a debilitating illness that has asignificant impact on not only quality of life, but also longevity. Additionally, healthcare costs associated with treatment and dialysis are substantial at >\$60,000/ patient per year. Modifiable risk factors for CKD include hypertension and diabetes. As such, early detection and management of these conditions can substantially reduce CKD risk and improve outcomes.

Maximizing kidney health can be achieved through comprehensive screening and treatment programs that focus on early recognition and treatment in high-risk groups. Unfortunately, challenges can exist in ensuring equitable access to ongoing and long-term care for patients in rural remote communities. An integrated care team from Winnipeg, Manitoba identified an opportunity to improve CKD awareness, detection and treatment of CKD in patients living in rural First Nations Communities in Northern Manitoba through a novel program called 'Kidney Check".

Kidney Check is a comprehensive screening, triage, and treatment initiative that brings preventive kidney care to rural and remote First Nations communities across Canada. This is achieved by utilizing the portability of pointof-care testing (POCT) to identify CKD, diabetes, and hypertension in individuals ages 10 and up, regardless of pre-existing risk factors. Using the Kidney Failure Risk Equation (age, sex, eGFR and proteinuria) high-risk individuals are identified and linked to appropriate care.

Since inception, Kidney Check has reached >5500 registered on-reserve adults, across 11 communities. Strong collaboration withpatient partners has resulted in more than 1700 First Nations People opting-in for screening, of which, 1168 patients have been identified as high-risk for CKD and subsequently linked to appropriate care. Importantly, 21.8% of screened children had at least one risk factor for CKD identified, thus enabling an opportunity for early intervention and prevention or mitigation of downstream complications.

In a climate where mistrust and apprehension are often associated with traditional medicine, 100% of patients first seen in these rural communities have been referred for appropriate follow-up care and/or have extended invitations for the care team return to the communities for further care.

With such strong initial success, it is not surprising that the Kidney Health program has expanded to four additional Provinces across Canada. This subsequent expansion is the next step in improving the health trajectory of patients in Canada who are at risk for CKD.

Although many interdisciplinary team members across several partnering organizations have played an integral part in implementation of this screening initiative, a special congratulation is extended to the innovators and recipients of the 2020 UNIVANTS of Healthcare Excellence Award for Outstanding Health Outcomes at Seven Oaks General Hospital: Paul Komenda, *MD*, *Nephrologist*, CDIC, Abdul Razaq Sokoro, *PhD*, *Executive Director*, *Provincial Laboratory Operations, Shared Health*, Barry Lavallee, *MD*, *Manitoba Keewatinawi Okimakanak Inc.*, Adeera Levin, *MD*, *Nephrologist*, Can-SOLVE CKD Network, Binh Nguyen, eQoL

THREE KEY TAKEAWAYS

- 1. Screening for kidney disease, hypertension, and diabetes with individualized risk scores can change delivery of care and improve patient wellness for patients in rural communities
- 2. Strategic use of high-quality point-of-care testing can help ensure rural and remote Indigenous communities have equitable access to preventative care
- 3. Cross-disciplinary involvement and collaborations, including patient partners, help ensure uptake and success

Early Diagnosis and Improved Management of Patients with Diabetes through Strategic and Automated Test Algorithms via Primary Care

Hospital Universitari Sant Joan d'Alacant, Spain



Pictured from Left to right: Beatriz Massa, Emilio Flores, Maite López-Garrigós, María Salinas, Francisco J. Pomares-Gómez

Diabetes is one of the leading causes of morbidity and mortality worldwide. Diabetes is also a significant cause of blindness, kidney failure, heart attacks, stroke and amputation. As such, diabetes not only impacts patients directly, but their loved ones, and the health care system as whole.

Fortunately, diabetes can be treated, and its associated complications can be avoided or delayed through diet, physical activity, medication and regular screening and treatment for complications. These opportunities are contingent on the ability to identify and monitor patients appropriately.

Not unlike many chronic diseases, diabetes is often left to primary care physicians (GPs) to identify, treat and monitor. With a growing and aging population, this may be overwhelming to the system and physicians. As the first line of defense against this chronic and debilitating disease, significant opportunities exist to ease this burden, while increasing appropriate screening and monitoring of diabetes for improved health outcomes.

An integrated clinical care team involving laboratory medicine, endocrinology and hospital leadership at Hospital Universitari Sant Joan d'Alacant in Spain identified this need and saw an opportunity to improve patient wellness through strategic and automated testing algorithms in primary care.

The automated algorithm is deployed in two ways. The first method aims to identify unknown/undiagnosed diabetes and prediabetes, whereby Hemoglobin A1c (HbA1c) is strategically and automatically added to all eligible requests from GPs for patients without known DM. The second method aims to enhance monitoring for patients with known diabetes in primary care with a laboratory order for diabetes. HbA1c, cholesterol, (high-density lipoprotein cholesterol (cHDL), low-density lipoprotein cholesterol(cLDL), triglyceride and urinary albumin to creatinine ratio (ACR) values are automatically added to test orders (if not already requested) and had not been requested in the guideline-recommended time period.

This strategic and automated algorithm has enabled the identification of diabetes in one in every 7 patients screened between the ages of 25-45 and one in every 19 patients aged 45-75, for a total of 229 newly identified cases of diabetes and >3000 new cases of prediabetes. Additionally, 14.4% of all known diabetics had improved diabetes monitoring. Consequently, since implementation, the proportion of patients with better controlled diabetes (HbA1c <8%) has significantly increased (3.9% improvement).

While the costs of additional screening and monitoring are small (<€15.7), the potential mitigated costs are substantial. Compared to the annual costs of treating diabetes and lost labor, the marginal costs of testing and reduced disease burden provide substantial savings opportunities for the patient and health system.

In order to successfully implement a testing algorithm of this magnitude and to ensure buy-in and follow-up occurs, partnership across disciplines is crucial. Although the dedication and investment of many individuals has enabled success, key leaders from Hospital Universitari Sant Joan d'Alacant were recently commended for Healthcare Excellence with a 2020 UNIVANTS of Healthcare Excellence Award.

Leaders associated with the recognition from Hospital Universitari Sant Joan d'Alacant include Maria Saline, *PhD, Head of Laboratory Medicine*, Beatriz Massa, *MD, Chief Executive*, Emilio Flores, *PhD Consultant Laboratory Medicine*, Francisco J Pomares-Gómez, *MD, Endocrinology*, MaiteLópez-Garrigós, *PhD, Consultant Laboratory Medicine*.

THREE KEY TAKEAWAYS

- 1. Diabetes is a major public health issue and a significant cause of morbidity. Efforts to delay progression and minimize complications are conditional on the ability to identify and appropriately monitor these patients
- 2. IT-automated algorithms that leverage HbA1c in clinical practice can significantly improve identification of diabetes and prediabetes, as well as ensure guideline-recommended monitoring occurs
- Cross-divisional involvement helps ensure patients receive appropriate treatment, thus reducing longterm complications and helping to avoid some of the long-term complications with minimal additional costs.

Free Educational Webinar

Solving Confusion with Regulations, QC Design, and Troubleshooting for SARS CoV-2 Assays

Friday 11th December 10:00 EST | 07:00 PST | 15:00 GMT

Register Here



PRESENTERS

Sharon Ehrmeyer Ph.D., MT(ASCP) Professor Emeritus, Pathology and Laboratory Medicine and Public Health, University of Wisconsin-Madison



Professor Sten Westgard Director of Client Services and Technology for Westgard Quality Control

Join us for a webinar to learn about quality control (QC) regulations, setting the proper QC strategy/ design, and troubleshoot SARs CoV-2 and other semi-qualitative tests in the laboratory. Sharon Ehrmeyer, Associate Professor from the University of Wisconsin- Madison will discuss regulations. Sten Westgard, Director of Client Services and Technology for Westgard QC, will cover QC design and troubleshooting the SARs CoV-2 and other semi-quantitative assays.

Understanding regulations and how to establish a strong QC design for semi-quantitative tests, leads to better proactive detection of assay problems and the potential identification of false results.

Key Learning Objectives

- Understand the regulations and QA practices required for semi-quantitative testing, like SARS CoV-2 testing
- Apply the best QC design strategies to monitor semi-quantitative assays to detect testing errors.
- Interpret errors in QC system and apply appropriate troubleshooting steps.

Register Here



Interlaboratory Peer Program

Analytical processes between laboratories and peer groups with the same lot number are compared with simple reports and sophisticated trouble shooting tools.



Powerful Reporting and Sophisticated Trouble-shooting Tools

Peer Reports | Group Coordinator Report Levey Jennings Report | Monthly Standard Report Exception Notes Report | Youden Plot Report **Measurement of Uncertainty** | Sigma Metrics | Bias Report Registration now open!





VIRTUAL CONFERENCE

CRITICAL ROLE OF CLINICAL LABORATORIES IN THE COVID-19 PANDEMIC

IFCC GLOBAL CONFERENCE ON COVID-19 (SECOND ANNOUNCEMENT)

ABSTRACT SUBMISSION

REGISTRATION ONLINE

FEBRUARY 15-17, 2021

IFCC Scientific Symposia will be presented in the morning. Afternoon will be mostly dedicated to industry Educational Workshops.

TIME SCHEDULE: PROGRAMME WILL START AT 08.00 AM, US EASTERN TIME (CORRESPONDING TO: 14.00 ROME; 21.00 BEIJING) All sessions will be recorded and fully available for registered people.

Vaccine boom: glimmers of hope



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

by Bernard Gouget

The COVID-19 pandemic has led to multiple reactions from countries with very varied health, economic and societal capacities. Coronavirus has killed hundreds of thousands of people and has strained health systems around the world. The highest mortality rates are found in countries where life expectancy has skyrocketed. The COVID crisis has clearly revealed the fragilities of our modern societies, which have pushed natural human limits related to health, lifespan, and natural resources. In so doing, they gained wealth and became accustomed to a comfort that has increasingly proven to be illusory, as well as becoming more fragile. Their vulnerability has increased over time and when a climatic or health event occurs suddenly, they are hard hit and helpless.

Dr. Bernard Gouget

Even as science began to unravel many of the virus's mysteries, how it spreads, how it tricks its way into cells, how it kills, a fundamental unknown about vaccines is still hanging over the pandemic and our collective human fate: Vaccines can stop many viruses, could they stop this one. Vaccines have changed the way we think about infectious diseases. In many parts of the world, diseases that were once responsible for millions of deaths a year are now considered a thing of the past. Smallpox has been eradicated, polio is on its way out, and there is a decline in a wide range of other vaccine-preventable diseases like measles, diphtheria, and pertussis. The rapid development of new vaccines for novel threats is direly needed. This is particularly needed in areas where vulnerable populations live, where the risk of outbreaks can be higher.

The COVID-19 vaccine is the key that the whole world awaits to get back to normal life after months of anxiety and drama. Drug companies are racing against time to develop and produce a vaccine. Press releases are coming out one after another; it is necessary to learn how to read between the lines: "encouraging": a few positive signals, nothing more; "promising": some good leads, but adjustments are needed to stay in the race; "outstanding" is promising and "groundbreaking": this is it, we are on the right track!

Although research is complicated, remember that we have vaccine guidance due to the considerable work already having been undertaken following the respective emergence of the SARS and MERS coronaviruses, even though no vaccine has reached the marketing stage. Several vaccine candidates are in contention. There are projects using inactivated vaccines which, subject to the right adjuvant, remain capable of eliciting an immune system response:

- mRNA vaccines based on the viral RNA segment coding for all or part of the S-protein; they are relatively easy to produce, but exhibit lower immunogenicity in humans than in animals so that several doses are required (an innovative strategy never before used in humans);
- vaccines in units or conjugates containing all or part of the S-protein or in the form of "virus like

particles", like the oncogenic HPV virus vaccine, with an adjuvant to optimize their immunogenicity quantitatively and qualitatively; and, finally

 live recombinant vaccines expressing all or part of the S-protein in a virus that is non-pathogenic in humans such as the murine vesicular stomatitis virus used for the VSV-EBOV Ebola vaccine. Another type of recombinant vaccine using the measles vaccine strain is also being developed by the Institute Pasteur, and other avenues involve mucosal vaccines administered nasally.

Close to 200 COVID-19 vaccine projects are underway worldwide, according to a note from the World Health Organization, published on November 12th. The 48 most advanced projects currently tested in human beings include the Pfizer-BioNTech and Moderna vaccine projects, as well as the one from the Chinese biopharmaceutical company Sinovac, the one from the Novavax company (United States), the one from AstraZeneca and Oxford University (United Kingdom) or even the vaccine candidate resulting from the French-British alliance between Sanofi and GSK. But since these projects are still ongoing, caution is in order. Research on the Pfizer-BioNTech and Moderna vaccines, which has sparked a wave of hope around the world, has not yet been peer-reviewed or published in a scientific journal.

The stakes are high, the race to develop a COVID-19 vaccine has caught the attention of cybercriminals. Researchers, big pharma, startup healthcare institutions and the supply chain are all potentially under threat. Pharmaceutical and biotech companies are racing to capture the financial and reputational advantage of being first-to-market. Manufacturers are expecting the biggest contract manufacturing sales in recent history. To-date, in addition to \$11 billion in grants, there may be ten times as much in investors' money riding on the out. Stock prices for some competing companies are trading around record highs.

Regardless, there are many questions as to feasibility, mass production, acceptability of vaccination and the indications for such vaccines. New funding models are necessary to secure the entire development chain and ensure availability to everyone, both haves and have-nots. The vaccine must ultimately have a universal appeal, with a coverage rate to achieve the level of collective immunity necessary to break the virus transmission chain.

Given the limited production capacities of pharmaceutical groups, it will not be possible to immunize everyone right away. "The goal here is that every country should be able to immunize 20 percent of their population by the end of 2021," recommended Katherine O'Brien, director of WHO's immunization department. The epidemiological data also emphasize the need for equitable distribution of the vaccine for maximum efficacy. To counter the selfish interests of each country, WHO launched the COVAX platform, which brings together governments, scientists and members of civil society and the private sector, aimed at ensuring a fair and equitable distribution of the vaccine. In each country, the first doses will start "with the most exposed categories, such as the elderly and health workers," said Guido Rasi, director of the European Medicines Agency. With the assumption of a vaccine reaching the market in January, its first effects on spread of the virus "will be visible in five to six months, mainly next summer" he estimates.

Vaccine resistance could hinder vaccine coverage. The temporary stopping and then resuming of several clinical trials on candidate vaccines, due to health problems detected in some participants, may have raised fears that drug design is being too rushed. Conspiracy theories are rife. A highly effective and safe vaccine that can be produced is only of public health value if it reaches the people it needs to protect and is widely used by the population. There is also a question of the duration of immunity: six months, a year, two years, more? Only time will tell. We also do not yet know how effective a vaccine will be in the elderly. More than ever, COVID-19 vaccine deployment faces an unprecedented degree of uncertainty and complexity that will be extremely difficult to communicate. Vaccine acceptability will also come into question if highly effective treatments eliminate the risk of severe forms of COVID-19.

Vaccine acceptance by the public depends on who is best on spreading the message and militant antivaccination campaigning has gained ground due to social media. Vaccine adoption will involve engaging in

dialog both online and on the local level, with people on the ground who understand their own communities. The messaging needs to be in line with daily experience and be attractive and adaptable. The dialog must address legitimate public fears and concerns. In addition, we are not talking about "a vaccine" but rather several vaccines, each with distinct precautions.

We are now in the third beta-coronavirus zoonosis in twenty years causing severe respiratory distress. Due to the rapid circulation of the virus, it is urgent, as Ph. Sansonetti of the Collège de France emphasizes in "The perfect storm", to install a strong culture of prevention and ensure control of ecological, zoological, anthropological and commercial causes, to strengthen the culture of immediate alerting and to acquire the means for a fast and appropriate response.

Vaccine candidates cannot prevent the rise in the severe case hospitalization and death curves for the next few months. But they give hope that the pandemic will end. The scientific world has kept its promises in record time. This highlights the role of the free circulation of knowledge, capital, and humans to push the limits of the possible. The spread of infection that we are trying to combat by mask wearing and physical distancing will be countered by equitably distributed vaccines.

Vaccination strategies must be adopted, mastered, and explained relentlessly. Solid vaccination programs not only prevent resurgences of diseases that appear to be on the decline but are a strong protective armor for the eradication of new global health threats. Life will get back to normal. There is light at the end of the syringe!

NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES



News from the Japan Society of Clinical Chemistry (JSCC): 2020 JSCC Academic Award

> *by Dr. Hideo Sakamoto* International Exchange Committee of JSCC

The Academic Award of the Japan Society of Clinical Chemistry (JSCC) is given to a person, who has made outstanding academic research in clinical chemistry. In 2020, Ryosuke Kikuchi, PhD, is the winner of the Academic Award. The award presentation was held at the 60th Annual Meeting of JSCC in Tokyo, Japan from October 30 to November 1, 2020 by livestreaming. At the award presentation, award winner Dr. Kikuchi was congratulated by Dr. Masato Maekawa, president of JSCC for his outstanding work in clinical chemistry.

In this issue, we would like to introduce the Academic Award winner, to distribute his outstanding work.

Ryosuke Kikuchi, PhD. (Biomedical Laboratory Scientist, Department of Medical Technique, Nagoya University Hospital) is the winner of the 2020 JSCC Academic Award, entitled with "Association of Vascular Endothelial Growth Factor-A and Metabolic Dominoes with Cardio-Renal Vascular Disease".

Dr. Kikuchi started his career in the Nagoya University Hospital in 2007, practicing clinical laboratory services and research in a "Bedside to Bench and Bench to Bedside" bi-directional manner. His goal was to support medical care from the standpoint of a biomedical laboratory scientist.

Since 2008, Dr. Kikuchi has started his PhD. in angiogenesis, a highly advanced medical treatment, under the supervision of Prof. Toyoaki Murohara. After receiving his PhD., he conducted research on the relationship between peripheral arterial occlusive disease and the vascular endothelial growth factor, under the supervision of Prof. Kenneth Walsh at Boston University in the United States, while focusing on the

inconsistency between clinical laboratory values and pathological states. This award-winning research is the culmination of his work to replicate the results of the basic research in an actual clinical setting. He will continue to conduct research that can be applied to clinical practice from a biomedical laboratory scientist's perspective, in the spirit of the precision of clinical chemistry.

There is a clinical concept called "metabolic dominoes" that relates to the etiology, development and complications of metabolic syndrome and patient prognosis. Peripheral artery disease (PAD), which is downstream of the metabolic dominoes, is a condition in which peripheral arteries become narrowed due to atherosclerosis, resulting in impaired blood flow and tissue ischemia.

Dr. Kikuchi's research group found that an anti-angiogenic isoform of VEGF-A, VEGF-A₁₆₅b was elevated in patients with PAD and prevented revascularization in a preclinical model of ischemia, suggesting new targets for relief of PAD symptoms (*Nat.Med.* 2014). Furthermore, they found that urinary VEGF-A₁₆₅b levels in chronic kidney disease patients downstream of the "metabolic dominoes" decreased with the degree of renal dysfunction, that blood VEGF-A₁₆₅b levels were elevated in patients immediately before dialysis induction (*Clin. Chim. Acta.* 2017), and they also found that circulating levels of VEGF-A₁₆₅b represent



Dr. Ryosuke Kikuchi

a prognostic indicator in patients with acute myocardial infarction (*Clin. Chim. Acta.* 2018, *Int. J. Cardiol. Heart. Vasc.* 2018). In other words, VEGF-A₁₆₅b may be profoundly associated with cardio-renal vascular disease caused by metabolic dominoes (*Adv. Clin. Chem.* 2019).

News from the IFCC Website



DiV - Octubre 2020

Enjoy the contents of the new DIAGNÓSTICO IN VITRO October issue. El número comienza con el editorial del Editor Jefe, Dr. Raúl Girardi quien comenta sobre el "año en que vivir será un peligro", y agrega que: "Desde lo personal y profesional me reconforta ver donde estuvimos y estamos los bioquímicos y especialistas en medicina de laboratorio en este periodo. Ya sabemos que la frase "estar en la trinchera" y "ser la primera línea de batalla" no son frases trilladas sino hechos más que probados de la realidad. Lee todas las novedades y noticias, los artículos científicos, las comunicaciones cortas, y no olvides el reportaje. In this issue, the IFCC WG-IANT confirms its commitment to advance excellence in laboratory medicine for better healthcare worldwide in Latin America.

Read more



INTRODUCTION

The XIII Uruguayan Congress of Biochemical Chemistry under the theme "Talent, technology and time: the key to transformation" was hosted virtually by the "Asociación Bioquímica Uruguaya" (ABU). More than 700 participants attended the congress (clinical biochemists, pathologists, laboratory technicians, and students, among others) from 35 countries.

The theme of the congress related to the concerns that laboratory professionals have to adapt to the constant changes occurring in a laboratory. We believe that human talent is the most important resource that an organization has. Technology is necessary to achieve the goals and time is the key factor to convert opportunities to success. These 3 topics, if properly connected allow to move forward.

The core programme was prepared with a strong input from the Scientific Committee and the Congress Organizing Committee. The Scientific Programme covered the following topics: Biochemistry, Genetics, Coagulation, Hematology, Immunology, Laboratory Emergency, Microbiology, Neonatal Research, Quality Assurance, among a variety of others.

A wide range of scientific sessions were offered, comprising Courses, Symposia, Speeches, Plenary Lectures, as well as Poster Sessions.

The selected theme was developed with the participation of 51 speakers, with experts recognized at national, regional and international levels. There was a total of 36 foreign speakers from Argentina, Belgium, Bolivia, Brazil, Canada, Chile, Mexico, Netherland, Paraguay, Switzerland, Spain, United Kingdom and USA.

OPENING CEREMONY

At the opening ceremony there were brief speeches of welcome from the Dean of the Faculty of Chemistry (Dr. Alvaro Mombrú), the President of COLABIOCLI (Dr. Alvaro Justiniano-Grosz), the President of ABU (Q.F, B.C Fernando Antúnez), and the President of the Congress (Q.F; B.C Laura Yametti).

The opening ceremony ended with an impressive plenary conference, delivered by Prof. Damien Gruson entitled "The impact of digital transformation and artificial intelligence on laboratory services" who capitivated the attention of the audience.

THE CONGRESS

There were three IFCC Visiting Lecturers:

Alan Wu	USA
Damien Gruson	Belgium
Wytze Oosterhuis	Netherland

Prof. Alan Wu participated in two plenary lectures: "Promoting the value of clinical laboratory to the general public. The time to act is now" and "Implementation of high sensitivity cardiac troponin for acute coronary syndromes".



Professor Alan Wu talked on: "Promoting the value of clinical laboratory to the general public"



Symposium: Thyroid pathologies in women (Dra Andrea Kozak, Dra Florencia Ambrosoni, Professor Damien Gruson



Prof. Wytze Oosterhuis talked on: "Measurement uncertainty, total error and analytical performance specifications"

Prof. Damien Gruson in addition to the plenary conference mentioned above, participated in a symposium on thyroid disease, and his presentation was "Thyroid an infertility".

Prof. Wytze Oosterhuis presented his plenary talk: "Adding clinical utility to the laboratory reports" and participated in a symposium with his presentation "Measurement uncertainty, total error and analytical performance specifications".

A broad spectrum of laboratory and clinical topics were included from all branches of laboratory medicine. Throughout the congress simultaneous translation was provided in one of the rooms whenever a talk was given in English or Spanish. The live activities were available to be seen on demand until November 9th, so participants had the opportunity to attend to them in anytime.

Two intra- congress courses were held on Thursday and Friday entitled: "Interference in immunoassays" and "Platelet rich plasma" with more than 100 attendees each one. During the congress eight workshops were held sponsored by the industry.



During the closing ceremony, Prof. Khosrow Adeli talked on: "Lipid Guidelines and the new evidence-based recommendations on laboratory assessment and clinical stratification of patients with lipid disorders"

There was also a commercial exhibition with 10 booths from industries and laboratories and another Professional formation exhibition with 8 booths. These exhibitions were also available on demand so participants could visit the stands in different moments.

There was a poster exhibition with a total of 24 posters. They were presented with a summary, a video and a ppt. The explanation was of 3 minutes duration and the idea was to listen to it at the time it was possible to see the ppt presentation. Two of the posters, one from Mexico and one from Uruguay received an award.

It was a honor for the congress to have as a keynote lecturer the President of IFCC, Prof. Khosrow Adeli, who gave an outstanding lecture at the closing of the congress entitled "Lipid Guidelines and the new evidence-based recommendations on laboratory assessment and clinical stratification of patients with lipid disorders".

We seize the opportunity to thank everyone who helped us and who have made this successful event possible!



Professional formation exhibition



Commercial exhibition



Many thanks to the Asociación Bioquímica Uruguaya (ABU) for kindly providing the IFCC the above very successful Virtual Booth free of charge!





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www.ifcc org





Updates on EFLM publications

European Biological Variation Study (EuBIVAS): within- and between-subject biological variation estimates for serum bio intact parathyroid hormone based on weekly samplings from 91 healthy participants

Bottani M, Banfi G, Guerra E, Locatelli M, Aarsand AK, Coşkun A, Díaz-Garzón J, Fernandez-Calle P, Sandberg S, Ceriotti F, González-Lao E, Simon M, Carobene A, and on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation

Ann Transl Med 2020; Available from: https://doi.org/10.21037/atm-19-4498. Reported by Aleksei Tikhonov, member-young scientist of EFLM WG-Promotion & Publications

The European Biological Variation Study (EuBIVAS) was created by the EFLM Working Group on Biological Variation to establish high-quality biological variation (BV) estimates for clinically important measurands. In this study, the aim was to deliver reliable BV estimates for the bio intact parathyroid hormone (PTH 1-84).

The within-subject BV [CV_I (95% CI)] estimates were significantly different between men and women [13.0% (12.1–14.2%) and 15.2% (14.3–16.3%), respectively], while the between-subject estimates [CV_G (95% CI)] were similar (men: 26.8% (21.4–35.1%), pre-menopausal women: 27.8% (22.7–36.1%)], allowing for delivery of updated analytical performance specifications and reference change values.

The EuBIVAS CV_I estimates were lower than those delivered by previously published papers on bio intact PTH, possibly related to different statistical approaches and to the strict control of the fasting status. These EuBI-VAS BV estimates, together with a suitable interpretation of the PTH 1-84 concentration changes, represent a key tool in medical practice for a correct diagnosis and monitoring of bone turnover and parathyroid glands pathologies, for patient management, for creating standardized protocols for the pre-analytical, analytical, and post-analytical stages of PTH evaluation, and for giving information about the analytical quality of the method used for PTH 1-84 evaluation.

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The Academy of the European Federation of **Clinical Chemistry and Laboratory Medicine and** the European Register of Specialist in Laboratory Medicine: Guide to the Academy and the Register, version 4 - 2020

Wieringa G, Jassam N, Homsak E, Rako I, Racek J

Clin Chem Lab Med 2020; Available from: https://doi.org/10.1515/cclm-2020-1507. Reported by Tara Rolić, member of the EFLM WG-Promotion & Publications

The 4th version of the guide to the Register for European Specialist in Laboratory Medicine (EuSpLM) describes the transfer of the register to the EFLM in 2016, the extension in 2018 and transfer under the umbrella of the EFLM Academy in 2019 when the Academy was founded.

Furthermore, it elaborates the benefits of membership, including reduced registration rates at selected conferences and a free subscription to Clinical Chemistry and Laboratory Medicine (CCLM). With effect from 2020, eligibility was extended to anyone with interest in laboratory medicine. The updated guide describes the processes for individual membership and block enrolment and the steppingstones to recognition as an EuSpLM within the Academy.

Additionally, the guide explains the new ways of working for the EFLM Register and introduces the EFLM Academy. It includes an update for establishing the criteria for joining the Register and the Academy, the value to the individual and the profession in achieving recognition as a EuSpLM. In this guide, a process of individual or block registration and enrolment mediated by societies/organizations is described.

In updated criteria, new expectations across Europe in education, training, professional regulation, and qualifications are reflected. All this reflects EFLM's leadership role in harmonizing high-quality laboratory medicine practice

EFLM ACADEMY AND EU REGISTER OF SPECIALISTS IN



THE ACADEMY OF THE EUROPEAN FEDERATION OF CLINICAL CHEMISTRY AND LABORATORY MEDICINE AND THE EUROPEAN **REGISTER OF SPECIALISTS IN** LABORATORY MEDICINE: GUIDE TO THE ACADEMY AND THE REGISTER, **VERSION 4-2020**

Wieringa G, Jassam N, Homsak E, Rako I, Racek J October, 2020

https://doi.org/10.1515/cclm-2020-1507

THE EFLM REGISTER

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- harmonization of high quality education and training for individuals with an interest in LM
- ongoing initiatives to establish a Common Training Framework for Specialist in LM under EU Directive 2013/55/EC
- Criteria: Master of Science (9-10 years min. academic and vocational training)
- Who can join? Medical, scientific and pharmacy trained individuals, members of EFLM's national, affiliated and provisional society
- annually renewable certificate and reregistration at the end of each calendar year

THE EFLM ACADEMY

- support of the education, training and continuous professional development of individuals with an interest in laboratory medicine

 web domain for information and communication - annual renewable membership Benefits

- free on-line subscription to CCLM
- unlimited access to CLSI database
- regular e-mail notifications of all EFLM activities
- EFLM travel grants
- reduced registration fees

 free acces to EFLM webinars from 2020 open for all individuals interested in laboratory medicine, representatives of diagnostics companies

PROCESS FOR JOINING THE ACADEMY VIA NATIONAL SOCIETY OR ORGANISATION AND 'EFLM ACADEMY' PAGE

INFOGRAPFIC BY TARA ROLIC (EFLM CC)



Harmonization of antineutrophil cytoplasmic antibodies (ANCA) testing by reporting test result- specific likelihood ratios: position paper

Bossuyt X, Damoiseaux J, Rasmussen N, van Paassen P, Hellmich B, Baslund B, Blockmans D, Vermeersch P, Lopez-Hoyos M, Vercammen M, Barret E, Hammar F, Leinfelder U, Mahler M, Olschowka N, Roggenbuck D, Schlumberger W, Walker R, Rönnelid J, Cohen Tervaert J-W, Csernok E, Fierz W for (i) the European Federation of Laboratory Medicine (EFLM) Task and Finish Group "Autoimmunity Testing," (ii) the European Autoimmune Standardization Initiative (EASI) and the (iii) European Consensus Finding Study Group on autoantibodies (ECFSG)

Clin Chem Lab Med 2020; Available from: https://doi.org/10.1515/cclm-2020-1178. Reported by Lejla Alić, member of the EFLM WG-Promotion & Publications

Recently, many high-quality immunoassays for proteinase-3 and myeloperoxidase antineutrophil cytoplasmic antibodies (ANCA) have come up. Although reference materials and standards are available for these measurements, studies have shown that the harmonization of ANCA test results reporting is an open question. In this position paper authors propose harmonization of reporting test results of ANCA immunoassays using test-results specific likelihood ratios (LR). Eight different immunoassays were tested using samples of 924 disease controls (suspected for ANCA-associated vasculitis) and 251 diagnostic samples (confirmed ANCA-associated vasculitis, AAV). The test results specific LRs were estimated using derivative of the receiver operating characteristics (ROC) curve and by Bezier curves.

Authors propose reporting of the test results as LR of 0.1, 1, 10, and 30. This is based on the fact that test-results specific LRs consistently increased with increasing antibody levels, up to 93% AAV patients have LR > 10, cut-off values of most of the assays had a test-specific LR of around 1 and reference materials' test-specific LRs were > 30.

HARMONIZATION OF ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) TESTING BY REPORTING TEST RESULT- SPECIFIC LIKELIHOOD RATIOS: POSITION PAPER

Bossuyt, et al. Clin Chem Lab Med. 2020 https://doi.org/10.1515/cclm-2020-1178



Harmonization of clinical interpretation of ANCA immunoassay test results: proteinase 3 (PR3)-ANCA myeloperoxidase (MPO)-ANCA by reporting

test result-specific likelihood ratios (LR).

is the fraction of patients with a particular test result divided by the fraction of controls with the same test result.



post-test odds = pre-test odds * LR

(meaning that LR improves the clinical interpretation of a test result)



8 tested immunoassays251 ANCA-associated vasculitis samples924 disease control samples

LR should be reported as 0.1, 1, 10, 30 because:

- test result-specific LRs consistently increase with increasing antibody level
- up to 93% of patients had a test result-specific LR > 10
- most of cut-off values determined by manufacturers had test result-specific LRs≈1
- reference materials had test-specific LR>30 in most of the assays



INFOGRAPHIC BY LEJLA ALIĆ (EFLM-CC



18th Annual Conference of the Greek Society of Clinical Chemistry - Clinical Biochemistry

by Christos Tsatsanis

Professor, Department of Clinical Chemistry, Medical School, University of Crete Head of the Laboratory of Clinical Chemistry - Biochemistry, University General Hospital of Heraklion, Crete, Greece



ΠΑΝΕΛΛΗΝΙΟ ΣΥΝΕΔΡΙΟ ΚΟΙΝΙΚΗΣ ΧΗΜΕΙΑΣ Η συμβολή του εργαστηρίου στη διαχείριση του βαρέως πάσχοντος

18th National congress of the creek society of clinical chemistry - clinical Biochemistry



The 18th Annual Conference of the Greek Society of Clinical Chemistry- Clinical Biochemistry took place between the 15th to 17th of October and was successfully organized for the first time as an online event, due to restrictions imposed because of the pandemic.

This year the Conference focused on 'The role of the clinical laboratory in the management of the critically ill patient", a topic that was timely due to Covid19 pandemic. A carefully balanced program with few selected presentations from international experts in each topic resulted in a vibrant program that covered a broad range of laboratory and clinical aspects on the management of critically ill patients, ranging from the management of sepsis in the ICU to diagnosis and management of renal disease in critically ill patients.

A symposium organized by EQALM-Trace Med Lab on "Standardization and Harmonization in Clinical Chemistry" updated participants on the latest developments in the area. To provide closer insight on the role of the clinical laboratory in the management of Covid19, during the last day of the symposium experts in the field of SARS CoV2 detection and Covid19 patient management provided the latest information on the battle against the disease.

Despite the lack of the in-person interaction between the delegates, the meeting provided an opportunity to reach a large number of scientists and students within and outside the country. The participation far exceeded expectations, and, with integration of the EQALM-Trace Med Lab Symposium, the conference attracted a large number of international participants.

Such a successful meeting paved the way to organize hybrid meetings in the future to outreach a wider audience in the field of Clinical Chemistry and Laboratory Medicine.



International Guest Speakers



AUERBACH DAVID

Project Manager European Metrology Network_"Traceability in Laboratory Medicine" Bundesallee 100, Braunschweig

DELATOUR VINCENT

Group Leader in Biomedical - Biomarkers division, Laboratoire National de Metrologie et d'Essais (LNE), Paris, France

PAVLAKIS GEORGE M.D., Ph.D. Chief, Hu Branch Center for C

M.D., Ph.D. Chief, Human Retrovirus Section, Vaccine Branch Center for Cancer Research, National Cancer Institute, Frederick, Maryland, USA



DELANAYE PIERRE

Professor of Nephrology, University of Liege, Liege, Belgium

HERRMANN MARCUS

Professor, Chair of Institute, Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University of Graz, Graz, Austria





PLEBANI MARIO

Full Professor of Clinical Biochemistry and Clinical Molecular Biology, Chief Department of Laboratory Medicine, University Hospital – Padova, Dean of the Medical School, University of Padova, Italy, Editor in Chief of CCLM, Member of the Executive Committee of the Scientific Division of IFCC, Italy





ΒΑΠΟΡΙΔΗ ΑΙΚΑΤΕΡΙΝΗ

Αναπληρώτρια Καθηγήτρια, Μονάδα Εντατικής Θεραπείας, Τομέας Χειρουργικής, Ιατρική Σχολή, Πανεπιστήμιο Κρήτης, Πανεπιστημιακό, Γενικό Νοσοκομείο Ηρακλείου, Ηράκλειο, Κρήτη

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ΓΚΙΖΕΛΗ ΗΛΕΚΤΡΑ

IMBB - ITE

GIZELI ELECTRA

ΚΑΚΟΥΛΙΔΗΣ ΗΛΙΑΣ Χημική Υπηρεσία Μετρολογίας, ΑΑΔΕ, Γενικό Χημείο του Κράτους

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News from the IFCC Website

IFCC Call for Nominations

The IFCC invites nominations for the following positions:

- EMD Committee on Point of Care Testing (C-POCT): one corporate member position - applications close on 10th December 2020.
- EMD Executive Committee: one member position applications close on 15th December 2020.
- EMD Committee on Clinical Laboratory Management (C-CLM): one member position - applications close on 10th January 2021.
- EMD Committee on Clinical Molecular Biology Curriculum (C-CMBC): one member position - applications close on 15th January 2021.
- SD Executive Committee: Secretary position applications close on 10th December 2020.
- SD Committee on Nomenclature, Properties and Units (C-NPU) in collaboration with International Union of Pure and Applied Chemistry (IUPAC): one member position - applications close on 10th December 2020.

Refer to your National Representative or Corporate Representative for information on the procedures for nominations.

Read more

IFCC WELCOMES A NEW CORPORATE MEMBER

LumiraDx

LumiraDx develops, manufactures and commercialises an innovative point-of-care diagnostic Platform.

The LumiraDx Platform is designed to deliver lab comparable diagnostic results at the point of care in minutes.

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Website: www.lumiradx.com.





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

Feb 15 - 17, 2021	International Federation of Clinical Chemistry and Laboratory Medicine	Critical Role of Clinical Laboratories in COVID-19 PANDEMIC	Virtual conference
May 27 - 29, 2021	ARAB FEDERATION OF CLINICAL BIOLOGY AFCB	AFCB Congress 2021	Beirut, LB
Sep 23 - 25, 2021	the second secon	AFCC Congress 2021	Lusaka, ZM
Nov 28 - Dec 2, 2021	EUROMEDLAB 2021 MUNICH	XXIV IFCC - EFLM EuroMedLab Munich 2021	Munich, DE
Dec 6 - 7, 2021	International Federation of Clinical Chemistry and Laboratory Medicine	IFCC-ICHCLR Workshop on overcoming challenges to global standardization of clinical laboratory testing: reference materials and regulations	Paris, FR

Calendar continued on next page

Mar 28 - Apr 2, 2022	COLABIOCLI	XXV COLABIOCLI Congress	Leon, MX
June 26 - 30, 2022	HECE WorldLab	XXIV IFCC WorldLab Seoul 2022	Seoul, KR
Oct 15 - 18, 2022		XVI APFCB Congress 2022	Sydney, AU
May 21 - 25, 2023	EUROMEDLAB ROMA 2023	XXV IFCC - EFLM WorldLab EuroMedLab - Rome 2023	Rome, IT
New date TBA	Emerging Technologies in Pediatric Laboratory Medicine	International Congress of Pediatric Laboratory Medicine	TBA
New date TBA	International Federation of Clinical Chemistry and Laboratory Medicine	IFCC Forum for Young Scientists	TBA

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.				
Jun 3, 2020 - Jan 3, 2021	Virtual Postgraduate Course of Clinical Biochemistry	Mexico virtual page		
Jul 1, 2020 - Apr 30, 2021	International Diploma in Quality Management According to ISO 15189	Mexico online event		
Sep 3, 2020 - Dec 15, 2020	Course on Analytical Quality Control from ABC to SIGMA	Mexico online event		
Nov 2, 2020 - Jul 4, 2021	Virtual Diplomat in Selected Topics of Diagnostic Hematology for the Laboratory (Advanced Level)	Mexico online event		
Dec 8 - 11, 2020	Journées de l'innovation en biologie (JIB 2020)	France online event		
Dec 9, 2020	MAMLS Annual Scientific Meeting	Malawi online event		
Dec 16, 2020	Shift in Paradigm – Lab Medicine and COVID-19	India ACBI online event		
Dec 18 - 20, 2020	Turkish Biochemical Society 31st National Biochemistry Congress	Turkey online event		
Feb 17 - 19, 2021	1st EFLM-AFCB Conference – Laboratory Medicine for Mobile Societies (LM4MS) – 34th National Days of Clinical Biology	Hammamet, TN		
Mar 4 - 5, 2021	XVIII Meeting of the SEQCML Scientific Committee	Madrid, ES		
Mar 15 - 16, 2021	POCT: Making the point	Rome, IT		
Apr 14 - 16, 2021	XXII Serbian Congress of Medical Biochemistry and Laboratory Medicine and 16th Symposium for Balkan Region	Belgrade, SRB		

May 24 - 27, 2021	10th Santorini Conference "Systems medicine and personalized health and therapy" – "The odyssey from hope to practice: Patient first – Keeps Ithaca always in your mind"	Santorini, GR
May 27 - 29, 2021	II National Meeting Conquilab and Technological	Mazatlan, MX
Jun 10 - 11, 2021	8th International Symposium on Critical Care Testing and Blood Gases	Biarritz, FR
Oct 6 - 8, 2021	4èmes Journées Francophone de Biologie Médicale	Rennes, FR
Oct 8 - 11, 2021	46th ISOBM Congress	Bled, SI
Feb 10 - 11, 2022	International Congress on Quality in Laboratory Medicine	Helsinki, Fl
New date TBA	6th Serbian Biomarker Symposium (SERBIS): Lipid Metabolism in Health and Disease	Belgrade, SRB
New date TBA	The 13th International & 18th National Congress on Quality Improvement in Clinical Laboratories	Tehran, IR
New date TBA	VI Jornadas Bioquímicas de Cuyo 2020	San Luis, AR
New date TBA	LabMed Next	Rome, IT
New date TBA	24th International Conference on Laboratory Medicine and Pathobiology: An Expert Forum on Innovation in Clinical and Laboratory Medical Sciences	Samos, GR
New date TBA	14th CIRME International Scientific Meeting "Implementation of metrological traceability in laboratory medicine: where we are and what is missing"	Milan, IT
New date TBA	54 èmes Journées de Biologie Praticienne - JBP	Paris, FR
New date TBA	7th Serbian Biomarker Symposium (SERBIS): Biomarkers of gastrointestinal diseases	Belgrade, SRB

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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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Turkey: Society of Clinical Biochemistry Specialists (KBUD) Ukraine: Association for Quality Assurance of Laboratory Medicine (AQALM)







Publisher

Communications and Publications Division (CPD) of the IFCC

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

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- N° 3 March: by mid February
- N° 4 April: by mid March
- N° 5 May: by mid April
- N° 6 June: by mid May
- N° 7/8 July/August: by mid June
- N° 9 September: by mid August
- N° 10 October: by mid September
- N° 11 November: by mid October
- N° 12 December: by mid November

If you want to submit an article or advertisement to be published in the eNews, send it to: Katherina Psarra, Editor, IFCC eNews E-mail: enews@ifcc.org

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