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International Federation of Clinical Chemistry and Laboratory Medicine





In this issue

EDITORIAL

- ▶ Message from the eNews Editor 5

THE VOICE OF IFCC

- ▶ IFCC President's Message – March 2023 6

- ▶ Visiting Lecturer Programme (VLP):
XX Congress for Laboratory Professionals organized
by the Colegio Dominicano de Bioanalistas (CODOBIO) 8

- ▶ News from the WG-AIGD: ChatGPT
– timely tool or terrifying threat? 13

- ▶ The IFCC Committee on Emerging Technologies
in Pediatric Laboratory Medicine (C-ETPLM) 15

- ▶ IFCC Task Force on Global Lab Quality (IFCC TF-GLQ)
EQA Survey data are published 17

IFCC: THE PEOPLE

- ▶ Welcome and thanks to the Chairs (Gillery - Cobbaert) 21

- ▶ In memoriam: Kor Miedema 23

☐ IFCC: THE YOUNG SCIENTISTS

- ▶ IFCC Professional Scientific Exchange Programme (PSEP):
My experience at the National Centre of Microbiology,
Institute of Health Carlos III, Madrid, Spain 24
- ▶ IFCC Professional Scientific Exchange Programme (PSEP):
My experience at Hennepin Healthcare Research,
HCMC in Minneapolis, USA 25
- ▶ The SEQCML focuses its II Conference for Residents
and New Clinical Laboratory Specialists on the professional
reinforcement of communication skills 29

☐ CONTRIBUTE TO IFCC eNews

- ▶ Pediatric age-specific reference intervals in a Chinese population 31
- ▶ Enhanced Blood donor engagement coupled
with early detection of cardiovascular risk 33
- ▶ Teaching artificial intelligence to the future physicians
in laboratory medicine 36
- ▶ How to improve the global crisis of antibiotic resistance? 38

☐ NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES

- ▶ Workshop on POC Testing / Point-Of-Care Testing (POCT) held in Bolivia 41
- ▶ SOBOBIOCLI and AACC carry out the Workshop Course:
“Verification of Analytical Methods. Steps to follow to verify
the manufacturers’ specifications” 44
- ▶ 8th Annual Meeting Saudi Society for Clinical Chemistry,
December 2022 – Riyadh, Saudi Arabia 47

▶ News from the Japan Society of Clinical Chemistry (JSCC): The 2022 JSCC Academic Award	49
▶ News from the Japan Society of Clinical Chemistry (JSCC): The 2022 JSCC Young Investigator Award	50
▶ First EuroLabNews issue of 2023	51
▶ Comments on IFCC's and other organization's collaborations to the CALILAB 2022 Congress	52
□ IFCC'S CALENDAR OF CONGRESSES, CONFERENCES & EVENTS	
▶ Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses	55
▶ Other events with IFCC auspices	58

EDITORIAL

Message from the eNews Editor

by Katherina Psarra
eNews Editor

Dear colleagues,

Here we are again with a new large enough issue. I hope that you went through the rich first 2023 eNews issue and that you are ready to travel around the world with this issue.

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

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

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

Katherina



Katherina Psarra, MSc, PhD



26th International Congress of Clinical Chemistry and Laboratory Medicine

17th Congress of Arab Federation of Clinical Biology

10th Saudi Society for Clinical Chemistry Annual Meeting

THE VOICE OF IFCC

IFCC President's Message – March 2023



Prof. Khosrow Adeli
PhD, FCACB, DABCC, FAACC

by Khosrow Adeli
IFCC President

In this issue of the IFCC newsletter, I am pleased to update you all on the ***New IFCC program to develop evidence-based clinical laboratory guidelines, best practice recommendations, and/or position statements to support clinical laboratories around the world.*** These documents are meant to provide practical recommendations to laboratory professionals based on evidence from a wide range of existing reputable guidelines, peer-reviewed publications, and expert consensus. Given that IFCC is home to leading experts in laboratory medicine, the IFCC Executive board recently invited Committees, Task Forces, and Working Groups to participate in a discussion forum to develop a roadmap and terms of reference for this new program. Draft terms of reference and a tentative template were circulated to stimulate discussion and initiate a debate on the need for this program.

The IFCC community responded by providing a number of useful suggestions to improve the program. Several committees and taskforces also came forward with proposals to develop specific guidelines or recommendations on various biomarkers and other areas of clinical laboratory medicine.

On March 1st, a special meeting of the IFCC Executive Board with chairs of all divisions as well as the chairs and members of committees, taskforces and working groups was held to develop a roadmap for this important new program. There were about 80 IFCC officers present in this hybrid meeting, either in person or online. The session included presentations by me and all 4 chairs of the IFCC Divisions followed by comments from members of the Executive Board. Overall, there was tremendous support and interest in this new program. There was also a discussion forum among the IFCC Committees, Task Forces, and Working Groups to develop a roadmap and terms of reference for this new program, and there was considerable discussion on the focus of the program. The majority of the attendees felt that it would be more useful to focus on the development of practical and best laboratory practice recommendations and position statements on clinical laboratory biomarkers as well as preanalytical/analytical/postanalytical laboratory processes, rather than traditional guideline documents that require the use of standard methodology and a grade system to evaluate the level of evidence. Several other suggestions and ideas were brought forward by IFCC colleagues that will no doubt lead to development of a well-designed and effective roadmap in the near future to kick start this program.

The initial scope and mandate of the program are to develop and disseminate best practice recommendations/practical guidelines in all areas of laboratory medicine and facilitate the implementation of the latest evidence-based recommendations in clinical laboratories worldwide. The draft roadmap includes calling for proposals to all functional groups, reviewing proposals by a review panel and the IFCC Executive Board, prioritizing

Article continued on next page

approved topics, initiating guideline development, developing clear, concise, practical, and evidence-based documents, gaining IFCC Review Panel approval, and publishing/disseminating/promoting/regularly updating the best practice recommendations/guidelines.

The next step for the IFCC is to put together a special steering panel including representatives from the Executive Board, all divisions, and key experts to review all proposals received and develop a final roadmap and terms of reference for this important program. In the meantime, the IFCC is encouraging the community to continue providing comments and suggestions on the ideas brought forth thus far or any other aspect of this program to the IFCC Office.

And feel free to email me at president@ifcc.org with any other feedback, questions, or concerns on this or any other IFCC program or initiative.

Khosrow 😊

News from the IFCC Website

IFCC Secretary and Treasurer elected for term 2024-2026



The IFCC Nominations Committee is pleased to announce that Dr. Sergio Bernardini (IT) has been elected IFCC Secretary and Dr. Alexander Haliassos (GR) has been confirmed IFCC Treasurer. We congratulate them both and wish them a fruitful term in the promotion of clinical chemistry and laboratory medicine world-wide.

[Read more](#)

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Visiting Lecturer Programme (VLP): XX Congress for Laboratory Professionals organized by the Colegio Dominicano de Bioanalistas (CODOBIO)



*by María del Carmen Pasquel
IFCC C-PR member
Ecuador*

The XX Congress for Laboratory Professionals organized by the Colegio Dominicano De Bioanalistas (CODOBIO) was very successful, 1000 professionals from different parts of the Dominican Republic participated at the Dominican Fiesta hotel.

My first presentation was on Friday, December 2 at 10:30 am, in the Churchill room with capacity for 250 people, this room was completely full, the topic was ISO 9001:2015 vs. ISO 15189 ACCREDITATION, SIMILARITIES AND DIFFERENCES, a topic that caused a lot of interest because people get confused with these terms, they think they are the same and in reality, their objective and their composition are different. At the end of the conference, I asked the audience several questions to verify that the concepts were clear and everyone answered correctly, the talk was very entertaining and interactive. I received many congratulations.



One of the sessions of the XX Congress for Laboratory Professionals



The Second Presentation was titled: DOCUMENT MANAGEMENT, FUNDAMENTAL PILLAR OF QUALITY IN THE CLINICAL LABORATORY, this talk was held on Saturday, December 3 at 8:30 am, in the Pitiusas room, and likewise this room was small for the audience of over 250 professionals who wanted to listen to the talk.

I focused on the importance of laboratories having their documents as knowledge of what they are, and how they can develop it with the ISO 1013:2021 standard. Quality management systems – Guidance for documented information by design and scope.

This Standard is very new, it was approved in March 2021 and many do not know it, so the talk was very interesting and the colleagues from the Dominican Republic thanked me for bringing them such a necessary and important topic as are the documents in the clinical laboratory and with a current International Standard.



Dr. Maria del Carmen Pasquel during one of her speeches



Dr. Maria del Carmen Pasquel with COC members

On Thursday we had the inaugural session that was very interesting with speeches by the presidents of the event, Lic. Rita Solis, President of CODOBIO, Lic. Leonarda Reyes, President of the Organizing Committee and Lic. Zoila García, President of the Scientific Committee.

On Friday night, the dinner for the exhibitors was held in the gardens of the Dominican Fiesta hotel, and it was a free moment to share with other colleagues and authorities in the region. Lic. Modesta de La Cruz presented me with a beautiful gift during this event.



Lic. Modesta de La Cruz and Dr. BQF. Maria del Carmen Pasquel



Waiting for the Congress to start



The XX Congress for Laboratory Professionals social event

Finally, on Saturday, December 3, a closing luncheon was held for everyone, and the Congress authorities expressed their gratitude to the invited participants and the exhibitors. The PAHO representative for the Dominican Republic was also present at the closing ceremony.

I must congratulate all for the great organization of the event, the good treatment that the exhibitors had and the great reception of the professionals of the clinical laboratory in the Dominican Republic, they filled all the rooms where The XX CONGRESS took place, there was also a great participation of the industry in this scientific event.



The PAHO representative receives a plaque of recognition from the President of the Congress Organizing Committee, Lic. Leonarda Reyes, accompanied by Lic. Rita Soliz, President of CODOBIO

News from the WG-AIGD: ChatGPT – timely tool or terrifying threat?

*by Jason Park, Paolo Fortina, Larry Kricka
IFCC ETD Artificial Intelligence in Genomic Diagnostics Working
Group (WG-AIGD)*

A very recent and highly controversial development in Artificial Intelligence (AI) that has far reaching implications is ChatGPT from OpenAI (openai.com) (<https://research.aimultiple.com/chatgpt/>). Recently, the Working Group - for Artificial Intelligence and Genomic Diagnostics (WG-AIGD) used this human-like text generator to prepare essay-format text for the WG-AIGD web page.

Firstly, to define ChatGPT we asked ChatGPT the simple question - “What is ChatGPT?” In a matter of seconds, the app responded with the following answer:

“ChatGPT is a chatbot based on the GPT-3 language model, developed by OpenAI. GPT-3 (short for “Generative Pre-training Transformer 3”) is a state-of-the-art natural language processing (NLP) model that has been trained on a vast amount of data and can generate human-like text when given a prompt. ChatGPT is designed to be able to hold a conversation with a human user in real-time, responding to user input with appropriate and coherent responses.

To use ChatGPT, a user can type a message into a chat window and ChatGPT will generate a response based on the message it was given. The user can then continue the conversation by typing a follow-up message, and ChatGPT will generate a response to that as well. This process can continue for multiple turns, allowing for a back-and-forth conversation between the user and the chatbot.

ChatGPT is an example of how AI and NLP technology can be used to build chatbots that are able to hold natural and engaging conversations with humans. These chatbots can be used in a variety of applications, such as customer service, online tutoring, and entertainment.”

Next, we asked ChatGPT a question relevant to the topic of our Working Group: “What are the applications of AI in genomic diagnostics?” Again, within seconds, back came the following summary of the specific application area of interest to our WG:

“Artificial intelligence (AI) has many potential applications in genomic diagnostics, which involve the use of genomic information to identify genetic conditions and guide treatment decisions. Some examples of how AI might be used in this field include:

Analyzing large amounts of genomic data: AI algorithms can be used to analyze large amounts of genomic data quickly and accurately, helping to identify genetic variations and patterns that may be relevant to a particular condition or disease.

Predicting disease risk: AI can be used to predict an individual’s risk of developing a particular disease based on their genomic information, allowing for earlier diagnosis and treatment.

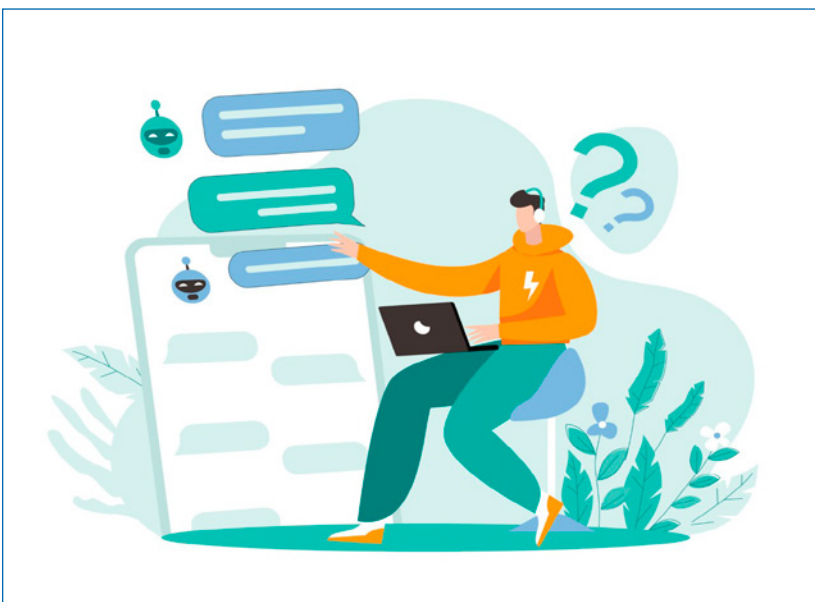
Personalized medicine: AI can be used to tailor treatment plans to an individual’s specific genomic profile, helping to optimize treatment effectiveness and minimize side effects.

Article continued on next page

Drug discovery: AI can be used to identify potential new drugs and evaluate their effectiveness based on an individual's genomic information, helping to speed up the drug development process.

Clinical decision support: AI can be used to provide clinicians with recommendations for diagnosis and treatment based on an individual's genomic information, helping to improve the accuracy and efficiency of healthcare delivery."

ChatGPT-3 has 175 billion parameters and was trained on 570 gigabytes of text and 300 billion words (<https://analyticsindiamag.com/behind-chatgpts-wisdom-300-bn-words-570-gb-data/>). It is not connected to the internet, and has limited information post-2021 (<https://help.openai.com/en/articles/6783457-chatgpt-faq>), so we are only seeing the very beginning of the utility and capabilities of this AI-based technology (<https://www.nytimes.com/2022/12/05/technology/chatgpt-ai-twitter.html>, <https://www.medrxiv.org/content/10.1101/2022.12.19.22283643v1.full.pdf>, <https://www.nature.com/articles/d41586-022-04437-2>, <https://www.medrxiv.org/content/10.1101/2022.12.16.22283512v2>).



Already, at least four articles have been published that list ChatGPT as an author, and this has raised the question “Is it appropriate to cite software as an author?”. Early indications are that scientific journals will not allow bots to be authors and AI-generated text without proper citation could be considered plagiarism (<https://www.nature.com/articles/d41586-023-00107-z>). An important tool has been the recently developed app, GPTZero, designed to detect Chatbot generated text (<https://www.analyticsinsight.net/gptzero-an-app-to-detect-whether-text-is-written-by-chatgpt/>, <https://etoward-gptzero-main-zqgfwb.streamlit.app/>).

An indication of the impact of ChatGPT is that “it was released in November 2022 and hit more than one million users within a week (<https://www.demandsage.com/chatgpt-statistics/>).

ChatGPT is one of many chatbots powered by AI. Earlier demonstrations of chatbots have been made by companies such as Google. The compelling aspect of ChatGPT is the ease of use; it is a consumer product that has immediate applications and no learning curve for use. We are likely to see a wave of companies emerge that create chatbots and uses for chatbots. Immediately, chatbots are being used by students to write essays and scientists to write research manuscripts. In the very near future we are likely to see chatbots replace our current modern habits of using search engines for quick access to information. We can now see a future where we no longer have to ‘Google’ information and find and read websites. Instead, we will query a chatbot by written or verbal interface and receive a direct answer to our question.

Like many foundational technologies, chatbots will present unique challenges to society. In the context of this present report, what is the value of academic writing and journals if the information is synthesized without human intervention? More fundamentally, how will we as a society and as a profession teach writing and scientific inquiry with the rapid and easy access to automated responses?

The IFCC Committee on Emerging Technologies in Pediatric Laboratory Medicine (C-ETPLM)

by Dr. Tim Lang
C-ETPLM Chair

*Blood Sciences Royal Victoria Infirmary
Newcastle upon Tyne Hospitals NHS Foundation Trust
Newcastle upon Tyne - UK*

Dr. Tze Ping Loh
C-ETPLM member

*Clinical Chemistry Division, Department of Laboratory Medicine
National University Hospital - Singapore*

A/Prof. Ronda GREAVES
C-ETPLM ETD EC liaison

*Murdoch Children's Research Institute
Parkville - Victoria 3052 Australia*

In 2018 the Task Force of Pediatric Laboratory Medicine became a committee with a new name and focus under the newly created Emerging Technologies Division chaired by Prof. Sergio Bernardini. The Committee of Emerging Technologies in Pediatric Laboratory Medicine has since undergone a transformation recruiting new members with expertise in emerging technologies, developing new activities whilst continuing to support some of its previous education initiatives. During the next term the committee, having aligned its activities with the key aims of the IFCC Executive Board, will focus on developing education material and guidelines for use of emerging technologies especially in developing countries. With this in mind the XVth International Congress in Pediatric Laboratory Medicines (ICPLM) will focus on newborn bloodspot screening and novel biomarkers in cardiac and renal conditions.

During the pandemic the committee continued to be very active, especially given to need to support



Dr. L. Kyriakopoulou,
C-ETPLM member



Dr. T.P. Loh,
C-ETPLM member

the continuation of specialist pediatric laboratory and newborn screening services. Members prepared a survey jointly with Society for the Study Inborn Errors of Metabolism (SSIEM) and the International Society of Neonatal Screening (ISNS) assessing the effect of COVID on pediatric laboratory medicine, which the findings were published in the eIFCC Journal (EJIFCC. 2022 Aug 8;33(2):194-208.). The XV ICPLM was delivered virtually at the end of 2021 due to the ongoing changing COVID-19 pandemic. In addition, Dr. Tim Lang was invited to speak at the IFCC Global Conference on COVID-19 describing “the effect of COVID on presentations of common paediatric diseases”. Dr. Joely Straseski, our North

American corresponding member delivered a very successful joint IFCC C-ETPLM/AACC PMF Scientific Session titled, “Case Studies in the Use of Emerging Technologies in Pediatric Laboratory Medicine” at the 2021 AACC Annual Scientific Meeting held in Atlanta, Georgia, USA.

RESEARCH ACTIVITIES

Over the past term several members including corresponding members representing the German Society of Endocrinology and the European Society of Pediatric Endocrinology (ESPE) have been active in the standardization and quantification of serum/ plasma 17α -hydroxyprogesterone (17OHP) by liquid chromatography mass spectrometry. This has been followed up with an interference study associated with the analysis of 17OHP by LC-MSMS with samples being distributed early in 2022 to labs participating in the RCPAQAP and SKML programs. The Committee is also supporting future work to address measurement of neonatal bilirubin in collaboration with the Australian Association of Clinical Biochemists via an IFCC working group.



C-ETPLM Committee members and corresponding members at the IFCC General Conference in Brussels:
L-R: Prof. K. Kohse, consultant, A. Prof. R. Greaves, ETD EC liaison, S. Colli Lanzi, IFCC office, Prof. S. Bernardini, ETD Chair, Dr. T. Lang, C-ETPLM Chair, Dr. Y.B. de Rijke and Dr. I. Papassotiriou, C-ETPLM Members

IFCC Task Force on Global Lab Quality (IFCC TF-GLQ) EQA Survey data are published

by Dr. Qing Meng

Dr. Egon Amann

Co-Chairs of IFCC Task Force on Global Lab Quality (TF-GLQ)

Shortly following the formation of the IFCC TF-GLQ in 2021, one of our first priorities was to conduct a global survey on clinical laboratory quality practice in order to develop a strategic plan. This survey's intention was to determine global laboratory quality system, laboratory practice, and assess the need for implementation or expansion of IQC and EQA programs for Clinical Chemistry and Laboratory Medicine.

The task force developed a survey comprising a total of 29 Questions (10 for EQA). The survey was distributed to 93 full members and 17 affiliate members on February 10, 2021 and closed on March 25, 2021. Of the 66 responses received, there were 52 (47.3%) valid responses from national/country societies for the survey with 41 (37.3%) providing responses to EQA questions. For details of the survey and survey results, please refer to our publication "External quality assessment practices in medical laboratories: an IFCC global survey of member societies" and also available in PubMed. <https://pubmed.ncbi.nlm.nih.gov/36779362/>

We hope this survey will help you have a global view on EQA practice and find opportunity for improvement. This database is also vital for the task force to develop a quality training program targeting the specific unmet needs in developing countries.

We would like to thank the IFCC EB for their vision, guidance, and support. We are so grateful to the support from the IFCC office, particularly to Ms. Silvia Cardinale for her dedication, hard effort, facilitation, and follow up during the survey and data analysis. We deeply appreciate the national societies' presidents and representatives who took their time to respond to our questions. We are so thankful to our entire TF members for their collective efforts and contribution. We are one team with one goal of global laboratory quality improvement.



Task Force GLQ members during their meeting at General Conference 2022 in Brussels.
A. Haliassos as the IFCC Treasurer participated in the meeting.

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Anti-TPO
TRAb
TMA
Rev T3
T-Uptake

Hepatic Fibrosis

HA
PIIIP N-P
C IV
Laminin
Cholyglycine
*GP73

TORCH

Toxo IgG
Toxo IgM
Rubella IgG
Rubella IgM
CMV IgG
CMV IgM
HSV-1/2 IgG
HSV-1/2 IgM
HSV-1 IgG
HSV-2 IgG
*HSV-2 IgM
*HSV-1 IgM
*Toxo IgG Avidity
*CMV IgG Avidity

Kidney Function

β₂-MG
Albumin
*NGAL

STAT-X™

*hs-cTnI
*NT-proBNP
*Myoglobin
*D-dimer
*PCT
*CRP

Fertility

FSH
LH
HCG/β-HCG
PRL (Prolactin)
Estradiol
Testosterone
free Testosterone
DHEA-S
Progesterone
free Estril
17-OH Progesterone
AMH
SHBG
Androstenedione
PIGF
sFlt-1

Autoimmune

Anti-CCP
Anti-dsDNA IgG
ANA Screen
ENA Screen
Anti-Sm IgG
Anti-Rib-P IgG
Anti-Scl-70 IgG
Anti-Centromeres IgG
Anti-Jo-1 IgG
Anti-M2-3E IgG
Anti-Histones IgG
Anti-nRNP/Sm IgG
Anti-SS-B IgG
Anti-SS-A IgG
TGA (Anti-Tg)
Anti-TPO
TRAb
TMA
ICA
IAA (Anti Insulin)
GAD 65
Anti-IA2
*ZnT8
Anti-MPO IgG
*Anti-PR3 IgG
*Anti-GBM IgG
*Anti-Cardioliipin IgG
*Anti-Cardioliipin IgM
*Anti-Cardioliipin IgA
*Anti-Cardioliipin screen
*β2-Glycoprotein I IgG
*β2-Glycoprotein I IgM
*β2-Glycoprotein I IgA
*β2-Glycoprotein I screen
*Anti-tTG IgA
*Anti-tTG IgG
*DGP IgA
*DGP IgG

Tumor Markers

AFP
CEA
Total PSA
f-PSA
CA 125
CA 15-3
CA 19-9
PAP
CA 50
CYFRA 21-1
CA 242
CA 72-4
NSE
S-100
SCCA
TPA-snibe
ProGRP
HE4
HER-2
PIVKA-II

Infectious Disease

HBsAg
Anti-HBs
HBeAg
Anti-HBe
Anti-HBc
Anti-HBc IgM
Anti-HCV
Syphilis
Anti-HAV
HAV IgM
*HEV IgG
*HEV IgM
HIV Ab/Ag Combi
Chagas
HTLV I+II
H.pylori IgG
H.pylori IgA
H.pylori IgM
2019-nCoV IgG
2019-nCoV IgM
SARS-CoV-2 S-RBD IgG
SARS-CoV-2 Neutralizing Antibody
SARS-CoV-2 Ag
Monkeypox Virus Ag
Dengue Virus IgG
Dengue Virus NS1
*Dengue Virus IgM
*Chlamydia Pneumoniae IgG
*Chlamydia Pneumoniae IgM
*Mycoplasma Pneumoniae IgG
*Mycoplasma Pneumoniae IgM

Cardiac

CK-MB
Troponin I
Myoglobin
hs-cTnI
hs-CRP
H-FABP
NT-proBNP
BNP
D-Dimer
Lp-PLA2
MPO
*HCY
*hs-cTnI (STAT)
*NT-proBNP (STAT)
*Myoglobin (STAT)
*D-dimer (STAT)

Hypertension

Direct Renin
Aldosterone
Angiotensin I
Angiotensin II
Cortisol
ACTH

Coagulation Markers

D-Dimer
*TAT
*TM
*PIC
*tPAIC

Metabolism

Pepsinogen I
Pepsinogen II
Chagas
GH (hGH)
IGF-I
IGFBP-3

Prenatal Screening

AFP (Prenatal Screening)
free β-HCG
PAPP-A
free Estril

Anemia

Vitamin B12
Ferritin
Folate (FA)
EPO
RBC Folate

Inflammation Monitoring

CRP
PCT (Procalcitonin)
IL-6 (Interleukin 6)
SAA (Serum Amyloid A)
*PCT (STAT)
*CRP (STAT)
*TNF-α

Bone Metabolism

Calcitonin
Osteocalcin
25-OH Vitamin D
Intact PTH
β-CTX
total P1NP

EBV

EBV EA IgG
EBV EA IgA
EBV VCA IgG
EBV VCA IgM
EBV VCA IgA
EBV NA IgG
EBV NA IgA

Immunoglobulins

IgM
IgA
IgE
IgG

Glyco Metabolism

C-Peptide
Insulin
GAD 65
Anti-IA2
ICA
IAA (Anti Insulin)
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ROMA
LA NUVOLA

20 May 2023

**16th International Congress of Pediatric
Laboratory Medicine - Satellite Meeting**



IFCC: THE PEOPLE

Welcome and thanks to the Chairs (Gillery - Cobbaert)



Prof. Philippe Gillery

Farewell Philippe Gillery

Philippe Gillery is Professor of Biochemistry and Molecular Biology at the Faculty of Medicine of Reims. He is the chair of the Laboratory of Biochemistry - Pharmacology - Toxicology and of the Biology and Pathology Department of the University Hospital of Reims, France.

He has chaired the Scientific Division (SD) of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) for two terms, from 2017 until 2022. Previously he was the SD vice-Chair from 2011 until 2016 and a member of the same from 2006 until 2010.

Prof. Gillery is Associate Editor of the Clinical Chemistry and Laboratory Medicine Journal.

His research interests (CNRS Research Unit “Extracellular Matrix and Cell Dynamics”) are related to the effects of nonenzymatic post-translational modifications on protein structure and functions, and to their involvement in the pathophysiology of diabetes mellitus and other chronic diseases. He has published more than 240 articles in peer-reviewed journals.



Prof. Christa Cobbaert

Welcome Christa Cobbaert

Christa Cobbaert is the new Chair of the Scientific Division.

Christa Cobbaert is Professor of Clinical Chemistry and Laboratory Medicine at the University of Leiden, the Netherlands. She is heading the Department of Clinical Chemistry and Laboratory Medicine of the Leiden University Medical Centre, Leiden, the Netherlands and supervises the Laboratory Specialist trainees.

Her scientific research focuses on test evaluation with emphasis on standardization, harmonization and trueness verification of medical test results, for the sake of improving patient management and patient care.

In the domains of clinical proteomics and precision diagnostics her research group works on the selection, development and standardization of promising protein biomarkers using quantitative clinical chemistry proteomics, as alternative for immunoassay-based tests.

She has appointments on (inter)national positions because of her expertise on metrological traceability of test results. She is chair of the International Federation of Clinical Chemistry (IFCC) Scientific Division (SD-EC) and member of ISO TC 212/ working group 2. At the national level she is heading the Dutch Calibration 2.000 initiative and acts as consultant in the IFCC working group on standardization of serum apolipoproteins by mass spectrometry. She is an observer for the European Commission in the IVD working group of the Medical Device Coordination Group and chairs the EFLM Task Force on European Regulatory Affairs. Her scientific work is done in close collaboration with international colleagues and has resulted in ca. 180 original publications.

Best wishes for many successful results to the new Chair and many thanks to Prof Gillery for his contribution to IFCC life!

News from the IFCC Website

Rome is waiting for you!



Did you already register for Rome 2023? See the great video!

Beyond the very strong programme with a truly international faculty as well as industry workshop and exhibits, Rome is the perfect stage for this experience!

A truly global city that is rich in history, stunning architecture, and a cosmopolitan atmosphere. See the video and taste the setting and the atmosphere!

As IFCC continues to grow and expand its international reach, we remain committed to the key goal of advancing better healthcare worldwide. International forums such as the 2023 WorldLab - EuroMedLab Congress support us in this effort by ensuring our organization and field remain at the cutting edge.

Stay tuned for more information over the coming weeks!

[Read more](#)

In memoriam: Kor Miedema



Dr. Kor Miedema

Friday, January 27, 2023 Dr. Kor Miedema passed away unexpectedly.

From 1969 till 2005 Kor Miedema worked as Clinical Chemist in the ISALA teaching hospital, Zwolle, the Netherlands. In his position as Clinical Chemist Dr. Miedema was an esteemed 'boss' and charismatic colleague with substantial knowledge and experience, and with a personal style that created a true connection between collaborators and laboratorians.

Dr. Miedema was deeply involved in groundbreaking work in the field of diabetes diagnostics, which has led both nationally and internationally to substantial improvement of diabetes care.

He was one of the visionary and *avant-la-lettre* proponents of metrological traceability of medical test results within allowable measurement uncertainty, as an essential fundament for accurate and comparable HbA1c results across the globe. Thanks to his contributions, an IFCC endorsed HbA1c reference measurement system has been established that is until today the reference standard for all field HbA1c tests.

The standardization efforts and analytical performance improvements enabled that HbA1c became not only the biomarker indicated for diabetes monitoring in treated diabetes patients, but also the test for diagnosing diabetes. The HbA1c reference measurement procedure is still running in his former hospital laboratory, which functions as one of the esteemed calibration labs of the global IFCC standardization network for HbA1c.

For his impactful contribution in the daily care of diabetes patients, Dr. Miedema received at the occasion of his retirement in 2005 a prestigious Dutch Award as *Officer in the Order of Orange-Nassau*.

Dr. Miedema will be remembered as a mentor and a great role model for many laboratory specialist and clinical chemists. He will be greatly missed.

Prof. Dr. Christa Cobbaert (NL)

Dr. Cas Weykamp (NL)

IFCC: THE YOUNG SCIENTISTS

IFCC Professional Scientific Exchange Programme (PSEP): my experience at the National Centre of Microbiology, Institute of Health Carlos III, Madrid, Spain



*by Daniel Mekonnen Nigus, PhD student
Ethiopian Medical Laboratory Association (EMLA)*



At ISCIII, National Center of Microbiology, Mycobacterium research team with Daniel (middle)

AIM OF THE VISIT

- To have hands of training on genomic wet and dry laboratory
- To conduct whole genome sequence and bioinformatics for Mycobacterium tuberculosis as part of PhD study

Article continued on next page

THE RESULT OF THE VISIT

In this collaboration, the PhD student's visit was fully covered by IFCC and the laboratory supply and facility were fully covered by National center of Microbiology, Spain. In the visit, the two participating institutes (Department of Medical Laboratory Science/Biotechnology Institute, Bahir Dar University and National Center of Microbiology, Madrid Spain) did a collaborative research work that could transform the collaboration to a new stage. Additionally, the student acquired the different manual and robotic DNA extraction technique, next generation sequencing library preparation, sequencing, and bioinformatics techniques. The study helped to show the transmission dynamics and population genomic structure of Mycobacterium tuberculosis in Amhara Regional State. The result of the work is under preparation for scientific publication.

Often research visits, participation on conferences and seminars help people learn, and connect with each other. My IFCC supported PSEP visit offered more than what I mentioned above. It narrowed my skills and knowledge gaps on genomics and next generation sequencing technology and pushed my career to the next stage. Thank you very much IFCC and EMLA!

IFCC Professional Scientific Exchange Programme (PSEP): My experience at Hennepin Healthcare Research, HCMC in Minneapolis, USA



by Blanca Fabre Estremera
Resident of Laboratory Medicine
La Paz University Hospital, Madrid, Spain

Supervisor: Prof. Fred Apple

Topic: Cardiac biomarkers

Hosting laboratory: Department of Clinical Chemistry and Cardiac Biomarker Trials Laboratory, Hennepin County Medical Center / Hennepin Healthcare Research Institute, Minneapolis, Minnesota, United States of America

Duration: 3 months (September 19 – December 19, 2022)

My name is Blanca Fabre Estremera. I was born in Zaragoza (Spain), where I studied a bachelor's degree in Biotechnology. I did my last academic degree, together with my final project, at the Università Degli Studi di Pavia (Italy). Nowadays, I am a fourth-year resident of Laboratory Medicine at La Paz University Hospital (HULP), in Madrid (Spain). On the first day of working in the hospital Dr. Antonio Buño Soto, the Director of Laboratory Medicine, explained to me the necessary ingredients for a successful residency: proactivity, effort, planning, humility, patience... each one to develop his own action plan with personal objectives being indispensable. From my point of view, an essential part of the residency is research. To learn about scientific methodology, during my second year, I combined hospital training with the assistance of a Master's in Epidemiology at the Faculty of Medicine, Universidad Autónoma de Madrid (UAM). The final project was focused on cardiac biomarkers, supervised by Dr. Rosario Ortolá Vidal (UAM) and Antonio Buño Soto (HULP). At present we continue to investigate cardiac biomarkers as a part of my PhD.

The resident program of Laboratory Medicine in Spain lasts 4 years, and my hospital let me choose a hosting laboratory to study in a specific field for 3 months. Due to my particular interest in cardiac biomarkers, we decided

Article continued on next page



Identification card of Blanca Fabre Estremera during her internship



Department of Clinical Chemistry at the Hennepin County Medical Center, Minneapolis, United States of America

to look for a prestigious laboratory in this topic. I feel deeply grateful for spending three months at the Hennepin Healthcare Research Institute / Hennepin County Medical Center (HCMC) in Minneapolis (Minnesota, USA). My supervisor was Prof. Fred Apple, Co-Director of Clinical Chemistry and Toxicology, and Principal Investigator of Cardiac Biomarkers Trials Laboratory at the HCMC and a well known world leader in this field. He also works as a Professor of Laboratory Medicine and Pathology at the University of Minnesota. I have felt very welcome by him and his team not only in the clinical laboratory but also in the research one. During these three months, I had two main objectives: 1) to learn how a clinical laboratory operates in the USA; 2) to expand my knowledge in cardiac biomarkers.

On the one hand, regarding clinical assistance, I periodically attended meetings with Prof. Fred Apple, Dr. Amy Saenger (Director of Clinical Chemistry) and Dr. Kang Xiong-Hang (Resident of Clinical Chemistry). In these meetings, we discussed the updates in the clinical laboratory as well as clinical cases in Clinical Chemistry and Toxicology. I could understand the healthcare system, organization chart and workflow of a USA laboratory. Moreover, I think, working hand in hand with a resident was enriching, allowing us to discuss about the differences between European and USA clinical laboratories and resident programs. Dr. Kang Xiong-Hang is a proactive and motivated resident and I would like to express my gratitude for her help during this period. In addition to this, I also had other opportunities such as attending a meeting of clinical laboratories from Minnesota, a College of American Pathologists inspection of the whole laboratory (Clinical Chemistry, Toxicology, *Point-of-Care* Testing, Genetics, Microbiology, Hematology, Pathological Anatomy), an interesting talk about career opportunities by Prof. Fred Apple, different talks about toxicology or visiting the Department of Clinical Chemistry of Regions Hospital with Ian Gunsolus, among others.

On the other hand, regarding cardiac biomarkers, I feel lucky to have learned from Prof. Fred Apple and his experienced research laboratory.



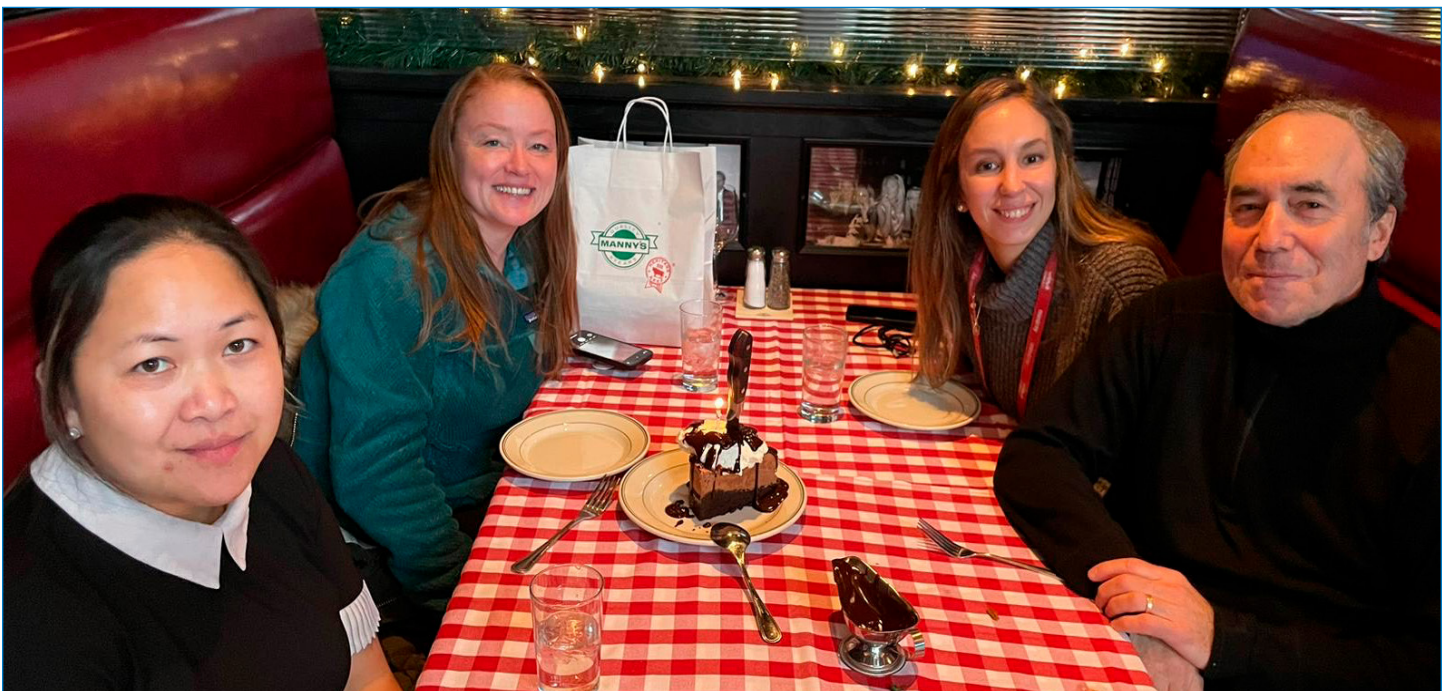
Blanca Fabre Estremera with Prof. Fred Apple at the Cardiac Biomarkers Trials Laboratory



Blanca Fabre Estremera with Prof. Fred Apple and Karen M. Schulz

Dr. Karen M. Schulz (Clinical Research Laboratory Director) and Prof. Fred Apple let me attend their research meetings and they took into account my opinion as another member of the team. In addition to this, they gave me the chance to do research with them as a part of my PhD, involving me in different projects. This will also allow me to get the International Mention of my PhD. Moreover, I attended the Scientific Sessions of the American Heart Association in Chicago with Prof. Fred Apple.

Working closely with Prof. Fred Apple I had the opportunity to notice that he is an excellent professional and even a better person. I will always be grateful to him for this fruitful experience, as well as to the International Federation of Clinical Chemistry (IFCC) for the support through the Professional Exchange Programme (PEP) scholarship. Furthermore, I would like to extend my gratitude to my PhD supervisors, Dr. Antonio Buño Soto and Dr. Rosario Ortolá Vidal, for helping me to achieve this objective and being my mentors. It exceeded all my expectations, personally and professionally. I definitely encourage other residents and young scientists to live the experience of studying abroad.



Blanca Fabre Estremera having lunch with Dr. Kang Xiong-Hang, Dr. Amy Saenger and Prof. Fred Apple

IFCC FORUM for YOUNG SCIENTISTS – Rome (IT), 21st May, 2023

SAVE THE DATE!



The poster features a central white diamond shape containing the event details. The IFCC logo is in the top left, and the TF-YS logo is in a rounded rectangle at the top. The text 'II Edition' is above the main title. The main title 'IFCC FORUM for Young Scientists' is in large blue font, followed by 'Italy, Rome - May 21st, 2023'. At the bottom left is the WorldLab and EuromedLab logo with 'ROMA 2023'. The background is a collage of Rome landmarks: the Colosseum, a bridge over a river, and a modern stadium.

IFCC
International Federation
of Clinical Chemistry
and Laboratory Medicine

TF-YS

II Edition

**IFCC FORUM for
Young Scientists**

**Italy, Rome - May 21st,
2023**

**WORLDLAB · EUROMEDLAB
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Don't miss the IFCC FORUM for Young Scientists!

Join us in Rome on 21st May 2023

- ➔ **FORUM online registrations will open soon**
- ➔ **Be ready to book your place at the FORUM**

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

- ➔ **The FORUM Scientific Program is in preparation**

The SEQCML focuses its II Conference for Residents and New Clinical Laboratory Specialists on the professional reinforcement of communication skills

*Organized by the Group of Residents and Young Scientists
of the Spanish Society of Laboratory Medicine (SEQC^{ML})*

THE CONFERENCE INCLUDED:

- **Micro-workshops to acquire the necessary skills for efficient and assertive communication in the workplace.**
- **How to get the most out of the residency period and assert oneself professionally, as well as disseminating the facilities and importance of having access to external, national, or international scientific exchanges, among the topics addressed.**
- **Encouraging the participation of residents in the different committees or working groups or collecting and disseminating residents' concerns and needs, among the current lines of work of the SEQC^{ML} Committee of Residents and Young Scientists.**

Madrid, 10 February 2023 - The Spanish Society of Laboratory Medicine (SEQC^{ML}) has successfully held its Conference for Residents and New Clinical Laboratory Specialists, which took place in Seville on February 10. The great novelty of this second edition, organized by the Commission of Residents and Young Scientists of the SEQC^{ML}, was the development of training micro-workshops in the field of professional communication to acquire the necessary skills to transmit messages in an efficient and assertive manner.

The conference was welcomed by the deputy managing director of the South Health Management Area of Seville, Rocio del Castillo, and the medical director, Jose Antonio Sanchez, who were accompanied in the presentation by the president of SEQC^{ML}, Dr. Antonio Buño. The head of the Clinical Analysis Service of the Hospital Universitario Virgen de Valme, Maria del Mar Viloria, also participated in the organization and presentation.

Through different talks, the aim was to help residents and new laboratory specialists to get the most out of their residency period and how to assert themselves professionally. In this sense, Dr. Antonio Buño shared a series of tips on how to face a fundamental period of their professional development such as specialized training. "The aim is to explain the competencies they should develop and the complementary training they can undertake during this period, so as to help them improve their training and enable them to have better future prospects," Dr. Buño indicated.

Another objective was to emphasize how interesting and enriching it is to go outside the laboratory service and do external rotations, whether in Spain or abroad. In addition to explain how to find the destination center and what grants are available and can be applied for to alleviate the extra financial burden of these trips.

More in detail, the member of the Residents and Young Scientists Commission of the SEQC^{ML}, Dr. Blanca Fabre, has conveyed in the talk, "How to make the most of the residency. Fellowships national/international external rotation", the importance of doing an external rotation: "Recently, I have had the opportunity to do a stay in the United States where I have deepened in cardiac biomarkers with Prof. Fred Apple. This stay will allow me to obtain my doctoral PhD with International Mention. This has been possible thanks to the José Luis Castaño-SEQC Foundation's international external rotation grants, which cover all travel and accommodation expenses".

She also stressed the importance of the residents enhancing their strengths, but also acknowledging their weaknesses. To do this, according to resident Blanca Fabre, "we have to get out of our comfort zone. I think it is important to get to know other clinical laboratories to see other ways of working and to appreciate what we have".

WORKSHOP ON COMMUNICATION IN THE PROFESSIONAL ENVIRONMENT

In addition to the lectures, a series of micro-workshops were held during the conference to enable new professionals to acquire the necessary skills for effective communication in the workplace. According to the president of the SEQCML Residents and Young Scientists Commission and coordinator of the Conference, Dr. Julia Maroto García, "this year we wanted to make a workshop more applicable to the day-to-day work of all professionals (residents and physicians), and useful throughout their whole professional career. The main objective is to learn how to transmit in the best way what they want to communicate, we want them to learn to cope in the different situations that arise in daily routine and in other not so everyday situations".

Thus, the physician and member of the Residents and Young Scientists Commission of the SEQC^{ML}, Dr. Aleix Fabregat, stated in the micro-workshop, "Efficient communication: keys to influence and have an impact", that the main purpose is to become aware of the importance of knowing how to communicate efficiently in our daily lives. "To do this, we reviewed the factors that influence oral communication, highlighting the role of non-verbal communication, which has a greater relevance than the words themselves in this process. We have also given a series of guidelines to get along with the audience, lose stage fright and generate interest and reflection in our audience," he explained.

Under this same approach, Dr. Nerea Varo, a physician from the Biochemistry Department of the Clínica Universidad de Navarra, shared through the micro-workshop "Listen, think... then express" the clues and tools on how to develop skills for efficient and assertive communication. As she recalled, the resident's training, despite its multidisciplinary nature, is scarce in relation to teaching and communication skills. "These skills can be learned, trained and improved. That is why I believe that acquiring knowledge and tools related to communication, questioning their style as a communicator, can help them to enhance their presentation skills, conversation and presentation of ideas," she explained.

SEQC^{ML} RESIDENTS AND YOUNG SCIENTISTS COMMISSION

Among the main lines of work of the SEQCML Commission of Residents and Young Scientists is to encourage the participation of residents in the different commissions or working groups of the Society and to carry out activities (face-to-face or on-line) of interest to clinical laboratory residents, such as the II Conference of Residents and New Clinical Laboratory Specialists. In Dr. Maroto's words, training residents and new specialists is fundamental, as they represent the future of the profession. "Right now, residents and new specialists are at the beginning of their working career and, therefore, it is the ideal time to lay the foundations of what will later become their professional profile. The most important thing is to achieve a solid knowledge base to develop adequate professional criteria, and associated with this everything else, such as the ability to make decisions or be resolute will come", she concludes.

SEQC^{ML}

Sociedad Española de Medicina de Laboratorio

For more information: www.seqc.es.



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CONTRIBUTE TO IFCC eNews



Pediatric Age-Specific Reference Intervals in a Chinese Population

Yantai Yuhuangding Hospital



Pictured (from left to right): Guozhen Chen, Guangyu, Zhou, Chengming Sun, Yanjie Ding, Lei Cheng

Article continued on next page

Pediatric myocardial injury (PMI) although not common, can be serious and is thought to be underdiagnosed. Diagnosis and treatment of PMI is crucial for preserving cardiac tissue and improving outcomes for pediatric patients with PMI. The ability to safely diagnose and/or rule-out PMI is contingent on the use of appropriate pediatric reference intervals.

Understanding age-specific pediatric reference intervals helps to ensure high quality care for vulnerable patients. Thus, an integrated clinical care team at Yantai Yuhuangding Hospital, Yantai, China sought to determine pediatric reference intervals for hs-cTnI to enable more accurate rule-in and out of PMI. Determination of reference intervals in a pediatric population is inherently challenging due to difficulties in participants recruitment, collection of adequate blood volume, and the ability of the sample population to include healthy subjects. Given these difficulties, the team used an indirect data mining method known as the “Indirect Hoffmann Method which uses retrospective data, allowing large amounts of previously measured data to generate the most reliable reference range possible. Appropriate pediatric reference intervals were assessed by age and then integrated into the laboratory information system (LIS) for clinical reference, diagnosis and treatment planning. In conjunction, education was provided to clinicians to ensure adoption and enable buy-in for widespread use.

Use of the pediatric reference intervals supported a 41% increase (from 55% to 96%) in the safe exclusion of myocardial injury in patients aged from birth to two days, which resulted in an 84% reduction in additional myocardial biomarker testing in the neonatology and pediatrics departments. This reduction in testing corresponded with an increase in clinical confidence, with 93.3% of surveyed respondents indicating their belief that the new pediatric reference intervals improve their confidence in making clinical decisions.

The measurable success of this program has inspired other hospitals in China to initiate their own pediatric age-specific hs-cTnI reference intervals with Yantai Yuhuangding Hospital being awarded recognition of Achievement in association with the 2021 UNIVANTS of Healthcare Excellence Awards program.

THREE KEY TAKEAWAYS:

- Using pediatric age-specific biomarker reference intervals can enhance detection of myocardial injury.
- Safe rule out of myocardial injury (MI) in pediatric patients can mitigate the need for additional testing and unnecessary prophylactic drug therapies.
- Decreasing time to diagnosis can improve patient experiences, lower overall anxiety and minimize costs

To learn more and/or prepare your UNIVANTS of Healthcare Excellence award application, please visit: www.UnivantsHCE.com.



Enhanced Blood Donor Engagement Coupled with Early Detection of Cardiovascular Risk

OUC Medicina Trasfusionale
AOOR Villa Sofia-Cervello



Pictured (from left to right): Francesco Arcoleo, Francesco Gioia, Aurelio Maggio, Patrizia Carta, Calogero Falletta

Blood and blood-derived products are an integral part of saving lives and improving patient outcomes. Blood supply however is heavily dependent on donations which vary greatly based on many factors.

Understanding the need for increased engagement of blood donors, an integrated clinical care team at Villa Sofia-Cervello Hospital in Italy developed and implemented a novel donor strategy which included a CVD prevention initiative for (apparently) healthy individuals. Individuals who donated blood were able to be stratified into cardiovascular risk categories based on the added measurement of high-sensitivity cardiac troponin I (hs-cTnI).

Article continued on next page

This effort enabled identification of 89 asymptomatic individuals who were newly identified at medium/high risk of future CVD events, creating awareness and enabling opportunity for appropriate follow-up, intervention and preventative measures. Donatella Perricone, Blood Donor Recruiter remarks, “It can be difficult to find blood donors. Offering the added incentive of a more thorough risk evaluation driven by a cardiac-specific biomarker has become a motive for our donors and, as such, has helped us more readily engage donors and complete more donations since the implementation of the program.”

In recognition of the outcomes associated with this initiative, the integrated clinical care team from Villa Sofia-Cervello Hospital was recognized by the 2021 UNIVANTS of Healthcare Excellence award program, with recognition of Achievement.

THREE KEY TAKEAWAYS:

- Offering cardiovascular health screening can successfully entice more donors to give blood.
- Early understanding of cardiovascular risk can enable early prevention of cardiovascular events reducing cardiovascular disease and disability.
- Cardiac-specific biomarkers, in conjunction with clinical and diagnostic findings, can help overcome the limitations of the most frequently used tools for cardiac risk stratification.

To learn more about this best practice and/or the UNIVANTS of Healthcare Excellence program, please visit www.UnivantsHCE.com





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100% INCREASE
of surveyed clinicians had increased decision confidence through use of the nodule risk model for risk stratification⁴



– PAYORS –

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in mitigated costs and procedures⁶



– ADMINISTRATION –

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of incremental revenue over 3 years⁸

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1. University of Alabama Birmingham Hospital, 2020. 2. Nova Scotia Health, 2020. 3. St. Petersburg Hospital Number Two, 2020. 4. The First Affiliated Hospital of Sun Yat-sen University, 2020. 5. Aga Khan University Hospital, 2020. 6. Hospital Clínico San Carlos, 2020. 7. Aga Khan University Hospital, 2020. 8. Seirei Hamamatsu HP, 2020.



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Teaching artificial intelligence to the future physicians in laboratory medicine



The Resident Physician of Clinical Pathology, Jarvis Raraz Vida, presented a study at the World Congress of Laboratory Medicine in Uruguay, Punta del Este -2022.

The title of the study was: Artificial intelligence to identify the Koch bacillus.

Author: Jarvis Raraz Vidal

Resident in clinical pathology, Hospital Nacional Hipólito Unanue, Peru

Editor: Luis Figueroa Montes

President of the Peruvian Medical Association of Clinical Pathology, Peru

At present, talking about artificial intelligence (AI) in low- and middle-income countries is new for medical practice, therefore it is important that specialist doctors, residents and medical students begin to familiarize ourselves with all these concepts.

Many medical universities around the world are offering courses on artificial intelligence for their students, and some even offer medical residency programs specializing in artificial intelligence. Ultimately, this will help students understand how artificial intelligence is applied and used, as well as the basics of working with these tools (1–3).

The physician who practices laboratory medicine must be aware of the technology for the use of intelligent medical devices, which is being developed to improve identification and diagnosis (4). Artificial intelligence can be used to help healthcare professionals detect patterns in laboratory test results and improve medical diagnoses. This is achieved by using advanced algorithms to identify patterns, identify risk biomarkers, assess characteristics of medical data, all with the aim of avoiding diagnostic errors or medical errors (4,5).

Article continued on next page

This process generates more accurate diagnoses, improving the quality of treatments. It can also help doctors monitor lab test results and highlight changes in patients' health, predicting certain diseases or disorders before they reach their level of severity, that is, detecting them early. This means that patients will benefit from early diagnosis and treatment. This saves time and resources for health professionals, impacting the quality of life of our patients and health spending (6).

These AI programs can use algorithms to analyze huge health-related data sets, such as lab test results, medical records, genetic data, and clinical profiles of patients. This is achieved through the automation of processes, which allows health professionals to simplify data collection, analyze them efficiently and the statistical analysis of the data obtained, can serve to evaluate the quality of the results of laboratory tests (5,7).

For all of the above, it is necessary for future laboratory medicine doctors (currently residents) to receive intermediate level training in artificial intelligence and join the challenges of future medicine.

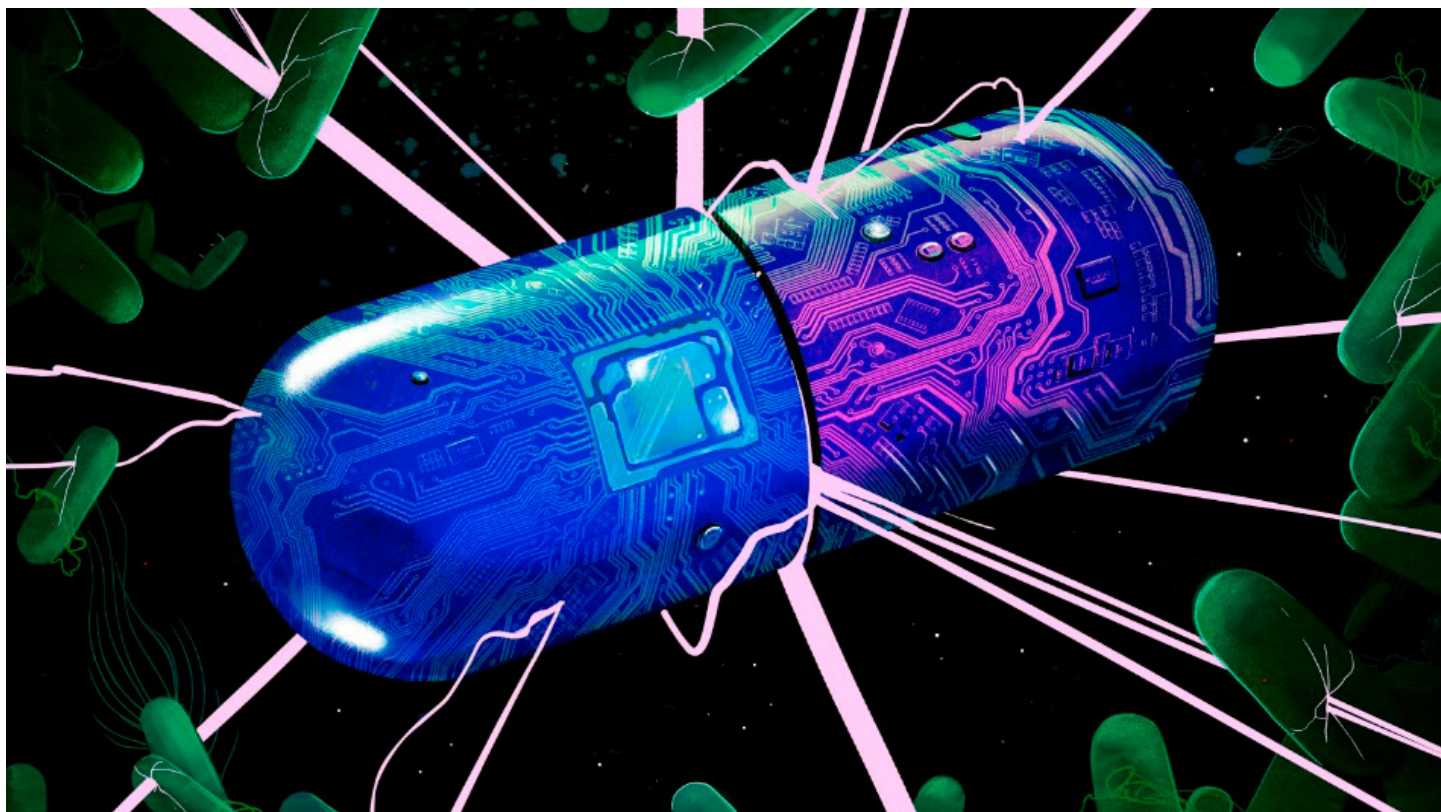


Jarvis Raraz Vidal

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How to improve the global crisis of antibiotic resistance?



by: Luis Figueroa Montes

President of the Peruvian Medical Association of Clinical Pathology, Peru

Antibiotic resistance is one of the biggest threats to global health, food security and development. Antibiotic resistance can affect everyone, regardless of their age or the country in which they live. An increasing number of infections - for example pneumonia, tuberculosis, gonorrhea and salmonellosis - are becoming more difficult to treat due to the loss of efficacy of antibiotics. Antibiotic resistance prolongs hospital stays, increases medical costs and increases mortality (1).

A recent Nature article, titled «Tackling antimicrobial resistance with a pandemic-style mobilization», mentions the specific dangers and their impact posed by bacterial resistance to antibiotics. Alexander Fleming warned of this problem in his 1945 Nobel Prize speech, and decades since, his warnings have proved extremely prescient (2). In 2019, antibiotic-resistant infections were responsible for almost 1.3 million deaths worldwide, more than HIV infection or malaria. That number would reach 10 million per year by 2050, unless significant action is taken. COVID-19 has exacerbated the problem, due to the excessive use of antibiotics at the beginning of the pandemic (2).

It has been almost 40 years since a new class of antibiotics was discovered, and there are currently fewer than 50 antibiotics in development in the world, compared to more than a thousand cancer drugs in development (2). To make the picture more bizarre, 1 in 4 of these candidate antibiotics have new mechanisms of action. In conclusion, we would have on average only 10 candidates that could improve the antibiotic resistance scenario (2). Eric Topol, in his recent article (December, 2022), from his *Fundamental Truths blog*, asks the following question:

Article continued on next page

Why hasn't rapid sequencing for severe infections and sepsis become the standard of care in microbiology? In 2014, Sharon Peacock, professor of microbiology at the University of Cambridge, wrote an article in *Nature* in which she defends sequencing as a standard in clinical practice, because it quickly determines the pathogen that causes the infection and can provide the appropriate therapy, since sequencing reveals mutations that confer resistance to antibiotics «Microbial sequencing should be performed as close to the patient as possible» (3).

The case of Joshua Osborne, a 14-year-old boy with severe combined immunodeficiency, stands out. The sequencing of his cerebrospinal fluid established the diagnosis of leptospirosis in the first 48 hours after many weeks of a series of tests, including a brain biopsy, which had not managed to establish the cause of his encephalitis. On average half of such brain infections go undiagnosed under current approaches that include laboratory tests for a variety of pathogens and cultures of cerebrospinal fluid (3).

So, what has changed to incorporate sequencing as the standard of care for severe infections or sepsis? Eric Topol replies: *essentially nothing*. Today, most microbiology laboratories in hospitals at the second and third levels of care in low- and middle-income countries work with traditional microbiology, that is: the sample is obtained, it is inoculated in culture media, and growth is expected. If it is positive, its identification and antibiogram are expected (this can be manual or automated) and in the end we obtain the result. The average time for a result is 3 to 5 days. It should be noted that the times will depend on the technology, either with updated panels and the microorganism that is isolated: difficult-to-grow bacteria, parasites, fungi or viruses.

Today, when a patient presents possible sepsis, blood cultures are extracted and it is hoped that the results have a pathogen and a useful susceptibility test. In parallel, the patient is medicated with a cocktail of «broad-spectrum empirical antibiotics» to cover all possible bacteria causing his infection, knowing that viruses, fungi and parasites will not be covered. This potent cocktail may not even be directed at the causative pathogen. What it can cause is toxicity to the kidneys and other organs. Cultures are often negative, depending on the patient's clinical condition, and treatment is continued for several days. More adverse effects of antibiotics, and potentially misdirected (3).



Another Nature article details how Metagenomic Next-Generation Sequencing (mNGS), the comprehensive analysis of host and microbial genetic material (DNA and RNA) in patient samples, is moving rapidly from research to clinical laboratories. This emerging approach is changing the way clinicians diagnose and treat infectious diseases, with a wide range of tools including: antimicrobial resistance, the microbiome, human host gene expression (transcriptomics), and oncology (4).

To date, metagenomics is not routinely used in medical centers. Possible reasons could be the unwillingness of health systems to invest in getting this technology integrated into patient care. Another reason could be the complexity of the interpretation of the data analysis, separating the pathogen sequence from other contaminating pathogens, which requires the development of advanced automated interpretation tools (artificial intelligence). Another limitation could be local regulations to ensure quality control (4).

For example, a study in London evaluated the potential of respiratory metagenomics to improve the treatment of secondary infection in intensive care units of COVID-19. In 43 respiratory samples from 34 intubated patients, clinical metagenomics of sputum in 8 hours led to the correct diagnosis with a sensitivity of 92% and a specificity of 82%, identifying different pathogens such as: *Acinetobacter baumannii*, *Aspergillus fumigatus*, *Bulkholderia* spp., *Citrobacter koseri*, *Pseudomonas aeruginosa*, *Serratia marcescens*, *Stenotrophomonas maltophilia*, *Staphylococcus aureus*, among others. This study demonstrates the potential of clinical metagenomics, to improve treatment of bacterial and fungal infections, to improve antimicrobial stewardship, to help identify nosocomial transmission, and targeted infection control interventions (5).

Sepsis is one of the main causes of death: it represents 1 in 5 deaths in the world: around 11 million deaths in 2017. Patients and their families, if they knew more about this technology, might start to complain about it. Eric Topol ends with this reflection «I keep thinking about how many lives we could save (and could have saved) if we were implementing this technology in daily practice, in response to Peacock's 2014 article» (3).

With the growing and urgent threat posed by antibiotic-resistant superbugs, there is no time to lose (2). If we want to fight frontally against resistance to antibiotics, public and private health systems must join in making this situation more visible and have this technology in Microbiology services. Changing the paradigm from bacterial identification to sequencing, requests and bureaucratic obstacles must be updated, especially in the public sector of low- and middle-income countries, in order to have this technology for the benefit of patients and our disease burden indicators.

LINKS OF INTEREST

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NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES



Workshop on POC Testing / Point-Of-Care Testing (POCT) held in Bolivia

by Dr. Alvaro Justiniano Grosz

President of The Bolivian Society of Clinical Biochemistry

Dra. Verónica Luzzi

Chair LAWG/GLQI AACC



Point-of-care tests (POCT) are a form of testing in which the analysis is performed where medical care is provided, that is, next to the patient, they are also near-patient tests (NPT) or tests next to the bed testing, also called alternate site testing. However, the international standard ISO 22870, Point-of-care tests (POCT) - Quality and competence requirements, defines POCT as: “test that is performed near or at the site of a patient with the result that leads to a possible change in patient care.” This definition of POCT provides a precise but fairly general description of the application of POCT. Another interesting definition suggested by an Irish group that recently completed a survey of POCT in Irish hospitals is: “Point-of-care testing is defined as a service of quality-assured pathology using analytical devices (including test kits and analyzers, such as blood gas and intensive care analyzers, and meters for glucose, urinalysis, and other metabolites) provided close to the patient rather than the traditional setting from a clinical laboratory” however it is very important in this type of tests that they comply with the required suitability for the purpose that they are established and that they are under quality management procedures and the specific requirements for quality control (QC) and external quality assessment (EQA).

In the city of Santa Cruz - Bolivia, within the framework of a specific agreement aimed at developing an educational and training project in collaboration between the American Association for Clinical Chemistry, or AACC, through the Latin American Working Group of the AACC Global Lab Quality Initiative, currently coordinated by Dr. Veronica Luzzi. and the Bolivian Society of Clinical Biochemistry (SOBOBIOCLI), a cooperation agreement to carry out the training program for the “Analysis for cardiovascular disease in the place of care” (Cardiovascular Disease Point-of-Care Testing, or POCT), the same which included a two-day, face-to-face workshop for clinical laboratory professionals was taken. The CDC and the CDC Foundation are also part of this activity.

In the above mentioned event 25 professionals from the clinical laboratory were trained in a practical theoretical workshop where, at the end of it, 25 kits were delivered with their respective reagents and supplies to be distributed in the nine departments of Bolivia, where tests will be carried out. Tests were previously carried out with patient samples so that the workshop attendees carried out training in handling the equipment, naturally complying with all the required biosafety protocols.

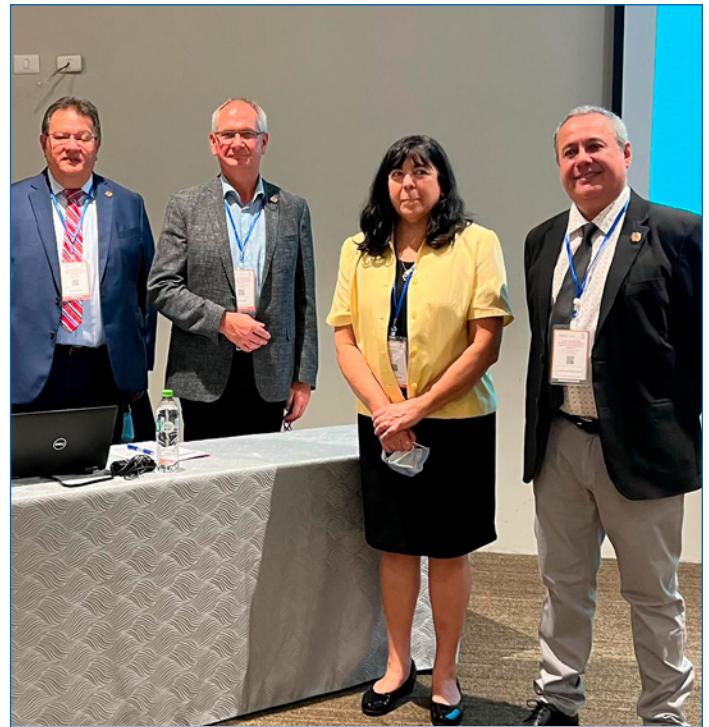
Article continued on next page



Alina Artega President SOBOBIOCLI- Santa Cruz, Fidelia Pokuat CDC, Huber Vesper CDC Alvaro Justiniano President SOBOBIOCLI, Veronica Luzzi (USA) Jose Jara (USA)



Practical exercises for handling POC equipment



José Jara (USA), Huber Vesper (CDC – USA), Verónica Luzzi (USA), Alvaro Justiniano President SOBOBIOCLI (BO)



Equipment POC Supplies endowed for Bolivia

The WORKSHOP FOR POC TESTING / POINT-OF-CARE TESTING (POCT) workshop was held on September 28 and 29, 2022, at the Radisson Hotel in the city of Santa Cruz de la Sierra - Bolivia. Speakers at the Activity were Verónica Luzzi (USA), José Jara (USA), Hubert W. Vesper (USA), Fidelia Pokuah (USA), Victor Paz (BO), Ingrid Vidal (BO), Omar Gandarillas, Karina Chávez (BO).

The program addressed topics such as describing the current state of cardiovascular diseases in Bolivia, reporting the role of POCT Tests in patient care and public health, as well as the situational status in Bolivia. Then, the specific description of POC devices to be used in lipids, preanalytical considerations, environment, user and patient safety, implementation of new methods, method validation versus verification, process control, risk management, inventory management, were addressed as well as organization and management of POC tests, quality control evaluation, continuous quality improvement process, CLSI QMS12 guide as a resource for quality indicators in the laboratory and POC.

The Course - workshop is part of the Schedule of Activities of the Bolivian entity, within which is the Bolivian Program of Continuing Education (PROBOECO) SOBOBIOCLI considers it essential to update the Bolivian clinical laboratory professional on current issues, especially the POCT, which plays an important role in assisting in the diagnosis of various pathologies.



Participants of the WORKSHOP FOR POC TESTING / POINT-OF-CARE TESTING (POCT) IN BOLIVIA together with Speakers and organizers of the event



SOBOBIOCLI and AACC carry out the Workshop Course: "Verification of Analytical Methods. Steps to follow to verify the manufacturers' specifications"

by Dr. Alvaro Justiniano Grosz

President of The Bolivian Society of Clinical Biochemistry

Dra. Rosa Sierra Amor

Senior Advisor, Past Chair LAWG/GLQI AACC



One hundred professionals from the Bolivian Clinical Laboratory participated in the WORKSHOP COURSE "VERIFICATION OF ANALYTICAL METHODS. STEPS TO FOLLOW TO VERIFY THE MANUFACTURERS' SPECIFICATIONS" carried out on November 18 and 19, 2022 at the Radisson Hotel in the city of Santa Cruz de la Sierra – Bolivia. Speakers at the Activity were Eugenio Zabaleta (USA), José Jara (USA), Juan David García (USA), Rosa Sierra (MX), Marilyn Cruz Vargas (BO) and Alvaro Justiniano Grosz (BO).

With a demanding and advanced program, topics such as:

- From total error to method performance verification in the Clinical Laboratory.
- What analytical parameters must be used in the performance verification of assays in the Clinical Laboratory?
- Plan for the Performance Verification of Assays in the Clinical Laboratory: Practical Aspects
- Precision: Concepts and guidelines of user verification of precision using CLSI EP 15-A3
- Accuracy Manufacturer's Claims Verification: EP15-A2 and EP09-A3 recommended protocols.
- Reference Intervals: Concepts, Interpretation and EP28-A3c recommended protocols.
- Verifying the Reportable Range Following CLSI EP-6A Recommendations

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"PROBOECO"

AACC

CURSO INTERNACIONAL

VERIFICACIÓN DE MÉTODOS ANALÍTICOS

PASOS A SEGUIR PARA VERIFICAR LAS ESPECIFICACIONES DE LOS FABRICANTES

COORDINADORA: LISANDRA MORALES 71861542
INSCRIPCIÓN: ALEJANDRA JUSTINIANO 62019148

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Juan-David García (USA)

CERTIFICACIÓN Y CARGA HORARIA: CERTIFICADO DE APROBACIÓN Y 20 HORAS ACADÉMICAS

- Evaluation of between-reagent lot variability
- Monitoring and Maintenance the Performance of Laboratory Methods using the internal QC – Proficiency testing data and Designing a Good Internal Quality Control Strategies.
- Bolivian experience with External Quality Control programs accredited under the ISO/IEC 17043 standard as a laboratory improvement tool.
- A review of ISO 15189:
- Post examination process.
- Reporting of results.
- Release of results.

In all the presentations, practical exercises were carried out to evaluate the conferences proposed in the program.

This activity was part of the series of courses that have been taught in Latin America with the support of the Wallace H. Coulter Foundation and the American Association for Clinical Chemistry, AACC. The professors from Peru, Argentina, Colombia and Mexico are part of the Latin American working group of the AACC Global Lab Quality Initiative, which is currently coordinated by Dr. Veronica Luzzi.



Dr. Alvaro Justiniano Grosz President Bolivian Society of Clinical Biochemistry (SOBOBIOCLI)



Dr. Alina Arteaga President SOBOBIOCLI -Santa Cruz, Dr. Álvaro Justiniano Grosz President SOBOBIOCLI, Alee Chios (AACC), Dr. José Jara (AACC), Dr. Juan David García (AACC), Kerry Cosby (AACC) Dr. Eugenio Zabaleta (AACC)

SOBOBIOCLI, carried out a series of academic activities this year, and this course - workshop is part of the Schedule of Activities of the society, where continuous education is a fundamental pillar to reposition the biochemical professional as part of the multidisciplinary health team.

SOBOBIOCLI thanks all the participants, teachers and organizations for the support provided to carry out this important collaborative activity between associations for the same purpose, the updating of the Bolivian clinical laboratory professional.



Alee Chios (AACC), Kerry Cosby (AACC), Dr. Juan David García (AACC), Dr. Alvaro Justiniano Grosz (SOBOBIOCLI), Dr. Eugenio Zabaleta (AACC), Dr. Jose Jara (AACC)



Participants of the Workshop Course
“Verification of Analytical Methods. Steps to Follow to Verify the Manufacturers Specifications”



8th Annual Meeting Saudi Society for Clinical Chemistry December 2022 – Riyadh, Saudi Arabia

*by Anwar Borai, PhD, FAACC, MLS(ASCP)CM
IFCC National Representative for Saudi Arabia*



Saudi Society for Clinical Chemistry held the 8th Annual conference as a hybrid meeting on 6th – 8th December 2022 in Riyadh. A preconference workshop was held on 6th December 2022 covering the topics on Toxicology Workplace Drug Testing and Point-of-Care Testing (POCT).

The keynote speaker for the conference was Professor Khosrow Adeli, the President of International Federation of Clinical Chemistry (IFCC). The conference was accredited by Saudi Commission for Health Specialties for 15 CMEs and more than 500 delegates attended the meeting.

The Scientific Program included 10 sessions with more than 35 speakers, 40 posters and 40 presentations. The speakers were international (Australia, Canada, UAE, Oman), regional and national.

This scientific program included sessions about laboratory management, research, and the need to know the potential and limitation of laboratory biomarkers of diseases and its application in clinical practice. The sessions also covered the importance of preanalytical phase in the different areas of the laboratory and the common interferences in laboratory tests.

The Industry Workshop session provided by the collaborators presented the topics on the use of biomarkers, renal disease management, new generation lab automation, point of care testing and toxicology.

The exhibition court included booths for different collaborators namely Roche, Siemens, Snibe, Abbott, Abdulla-Fouad (Sebia), Beckman, Waters, Binding Site, and Randox.

By the end of the meeting there was Poster Session Awards Announcement with more than 40 posters printed, and 5 prizes for the 5 best posters.



Side of the poster exhibition



Main auditorium



President of the IFCC, Prof Khosrow Adeli with the president of the SCC (Dr Samia Sobki) in addition to international, regional and national speakers.



Side view from the exhibition hall



News from the Japan Society of Clinical Chemistry (JSCC): The 2022 JSCC Academic Award

by Hideo Sakamoto, PhD

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 2022, Masatsune Ogura, M.D., Ph.D. was the winner of the Academic Award. At the 62nd Annual Meeting of JSCC in Toyama, Japan from September 30 to October 2, 2022 award winner Dr. Ogura was congratulated by Dr. Takashi Miida, President of JSCC for his outstanding work in clinical chemistry.

In this issue, we would like to introduce one of winners of Academic Award to distribute his outstanding work.



Masatsune Ogura, M.D., Ph.D.

Masatsune Ogura, M.D., Ph.D. (Department of Metabolism & Endocrinology, Eastern Chiba Medical Center, Department of General Medical Science, Chiba University Graduate School of Medicine) is the winner of the 2022 Academic Award, entitled with “Clinical Significance of Measuring HDL Functionality and Challenges to Overcome”.

Higher blood levels of HDL cholesterol are not always better. It has been reported that treatments that simply increased the amount of HDL also failed to prevent cardiovascular events. Therefore, HDL research has undergone a paradigm shift from “quantity” (serum HDL cholesterol concentration) to “quality” (HDL functionality). To date, Masatsune Ogura have shown that cholesterol efflux capacity, an HDL functionality, is more useful than serum HDL cholesterol concentration as a surrogate marker for atherosclerotic cardiovascular diseases in patients with familial hypercholesterolemia and severity of carotid atherosclerosis in general population in Japan. He recently reported that the increase in blood HDL cholesterol brought about by drinking habits is not necessarily accompanied by an increase in cholesterol efflux capacity.

On the other hand, there are several issues to be resolved in the measurement of cholesterol efflux capacity and its clinical application. The first unresolved issue is standardization as a clinical test. His method of measuring cholesterol efflux capacity is based on the use of radioactive cholesterol in cultured cells and can never be standardized. It is good to see that cell-free and non-radioactive assays have been established in recent years. The second unresolved issue is the fact that test result is only a “phenomenon” and not a “molecule,” and therefore cannot be used as a therapeutic target. Furthermore, given intracellular cholesterol homeostasis, strategies that simply increase cholesterol efflux capacity are unlikely to be successful for preventing diseases. Actually, there have been no intervention trials that have proven that increasing cholesterol efflux capacity prevents disease. His future research direction is to search for specific molecules that are common to both disease severity and reduced HDL functionality, leading to the development of novel biomarkers and a new concept of drug discovery called “cholesterol efflux revivors”.



News from the Japan Society of Clinical Chemistry (JSCC): The 2022 JSCC Young Investigator Award

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

The Japan Society of Clinical Chemistry (JSCC) Outstanding Young Investigator Award is given to persons who have made outstanding academic research in clinical chemistry. In 2022, Mayumi Idei, MD, PhD. and Yuna Horiuchi, PhD were winners of the Outstanding Young Investigator Award. At the 62nd Annual Meeting of JSCC in Toyama, Japan from September 30 to October 2, 2022 award winners Dr. Idei and Dr. Horiuchi were congratulated by Dr. Takashi Miida, President of JSCC for their outstanding work in clinical chemistry.



Mayumi Idei, M.D., Ph.D.

In this issue, we would like to introduce one of winners of Outstanding Young Investigator Award to distribute her outstanding work.

Mayumi Idei, MD, PhD (Department of Clinical Laboratory Medicine, Juntendo University School of Medicine) is the winner of the 2022 JSCC Outstanding Young Investigator Award, entitled “The association between effluent ERC/mesothelin and mesothelial cells in peritoneal dialysis patients”.

Peritoneal dialysis (PD) is an established, renal replacement therapy for end-stage kidney disease with several advantages over hemodialysis (HD), such as the preservation of residual kidney function and the achievement of good quality of life. However, long-term exposure to PD dialysate causes morphological and functional changes in the peritoneum. The progression of peritoneal damage leads to difficulties with adequate fluid control and small solute clearance and increases the risk of encapsulating peritoneal sclerosis (EPS), which is characterized by recurrent refractory ileus and the most serious complication of PD. Peritoneal damage should be detected at an early stage, and timely discontinuation of PD and transfer to HD is needed to maximize the prognosis of PD patients. Therefore, a simple and reliable biomarker is needed to predict peritoneal damage in PD patients.

Dr. Idei and her colleagues focused on ERC/mesothelin (ERC) because peritoneal membrane is covered with a monolayer of mesothelial cells. ERC is a glycosylphosphatidylinositol-anchored membranous protein (71 kDa) that is locally expressed in the mesothelial cells. ERC is cleaved by a furin-like protease to produce N-terminal ERC (N-ERC, 31 kDa) and C-terminal ERC (C-ERC, 40 kDa). Thus, N-ERC and C-ERC concentrations in peritoneal effluent may reflect the peritoneal condition and be potential biomarkers of peritoneal damage in patients undergoing PD. Her study indicates that effluent N-ERC better predicts increased peritoneal permeability than effluent C-ERC and effluent CA125 which is a potential marker for the number of peritoneal mesothelial cells, in PD patients. Effluent N-ERC may serve as a useful biomarker for the screening of peritoneal damage (Ther Apher Dial 26:1014-1022, 2022). Dr. Idei hopes effluent N-ERC will be used as a biomarker for peritoneal damage in PD patient in the future.

*by Aleš Kvasnička**EFLM, Communication Committee member*

In her first report of the year 2023, EFLM President Tomris Ozben, on behalf of the Executive Board, summarised and reiterated the EFLM's commitment to its National Societies: EFLM is promoting a stronger relationship between EFLM and National Societies via participation of EB representatives in National Congresses. The awardees of the EFLM research grant in 2022 were Anna Carobene from Italy ("EuBIVAS: biological variation data for bone turnover and metabolism biomarkers") and Katerina Tosheska-Trajkovska from North Macedonia ("Impact of oxidized low-density lipoprotein (oxLDL) and antioxLDL antibodies on cardiovascular health"), and the EFLM academy award recipient was Evgenija Homsak from Slovenia for her extraordinary contribution to education in Laboratory Medicine. Importantly, Tomris Ozben presented the EFLM's strategic and action plan for 2022-2023.

In the January-February issue of the [EuroLabNews](#), inspiring interviews can be read under the regular columns of "Coffee with the President" and 'Interviews with Senior Colleagues'. EFLM bursary recipient Judit Gonda shares her experiences about the EFLMLabX program. Additionally, laboratory medicine professionals can listen to numerous live webinars on the [EFLM e-learning platform](#), such as: "Fast and furious - integration of (not only) molecular methods for faster results in the microbiology lab", "Cerebrospinal fluid biomarkers for neurodegenerative dementias", "Diagnosis of Gaucher disease and other lysosomal disorders" and "Monitoring the performance of a measurement system for its intended clinical use". We are all looking forward to participating in the WorldLab-EuroMedLab Conference in Rome this May to exchange professional experiences and revive old friendships. See you in Rome!

EFLM
EUROPEAN FEDERATION OF CLINICAL CHEMISTRY
AND LABORATORY MEDICINE

EuroLabNews

THE EFLM BI-MONTHLY NEWSLETTER

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

Issue n.1/2023

In this issue

- ▶ The EFLM Executive Board informs
- ▶ Interviews with Past EFLM Presidents and Past EFLM Officers
- ▶ Coffee with the EFLM President
- ▶ News from EFLM Functional Units
- ▶ Vacancies in the EFLM Functional Units
- ▶ Past EFLM Events
- ▶ Upcoming EFLM Events
- ▶ Changing of the guard in the EFLM National Societies
- ▶ News from EFLM National Societies
- ▶ IFCC News
- ▶ Calendar of EFLM Events and Events under EFLM auspices

Comments on IFCC's and other organization's collaborations to the CALILAB 2022 Congress



by Dra Nilda E. Fink

Director of PROES Program, Argentine Biochemistry Foundation

The XI CALILAB Congress organized by the Argentine Biochemistry Foundation, (FBA) took place in the city of Mar del Plata from November 7 to 9, 2022, at the Sheraton hotel and was sponsored, among others, by the national society Unified Biochemistry Confederation of the Argentine Republic (CUBRA), the regional entities Latin American Confederation of Clinical Biochemistry (COLABIOCLI) and European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) and the international organization International Federation of Clinical Chemistry (IFCC). The event was very successful and the achievements of this 11th edition was the result of three factors: the scientific program prepared by the Scientific Committee highly praised by the attendees for its breadth and for the topics discussed, in which, according to some colleagues, “there was no lack of any topic of current interest”. But it would not have been successful without the other relevant factor, such as the collaboration of speakers of an academic level of excellence. And finally, as another essential factor, there was an enthusiastic attendance that had a great interest in participating and being in person in a congress, after the pandemic. Of course, for the transfer of all this programming, the intense work carried out by the Organizing Committee was essential, which followed all the details very carefully, to ensure the realization of the program. The attendance was more than 1700 participants, being 90% national and 10% foreign. The participants either virtually or in person, in different

categories, were from 21 countries, as mentioned before, mainly from Argentina, but also from Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Denmark, United States, El Salvador, Spain, France, Guatemala, Italy, Mexico, Paraguay, Peru, South Africa, Turkey and Uruguay.

In the opening ceremony Dr. Alvaro Justiniano GROSZ, in his condition of President of COLABIOCLI and Dr. Claudio Duymovich, President of the Argentine Biochemical Foundation (FBA) and the Organizing Committee of the Congress were the speakers. Dr. Duymovich highlighted the fact that the professionals were very committed to quality and considered that CALILAB was for everyone, from laboratories of urban centers to the most distant one in Argentina, and a unique opportunity to update one's knowledge in a world of technological changes. On the stage, representatives of different national, regional and international organizations were also chairing the meeting. The inaugural conference of the Congress was given by the President of the IFCC, Prof. Dr. Khosrow Adeli, a renowned Canadian specialist and professor of Clinical Biochemistry at the Hospital for Sick Children, University of Toronto, Canada. He presented “The changing concept of total quality management in the clinical laboratory: critical need to improve post-analytical quality”.

The scientific program included three plenary lectures, 17 conferences in simultaneous sessions, 25

Article continued on next page

symposia, 2 round tables and 3 special activities. The teamwork carried out by the members of the Scientific Committee is noteworthy, welcoming and hosting 21 guests, 14 in persons and 7 virtual speakers, from different countries, namely: Belgium, Brazil, Canada, Chile, Denmark, Spain, United States, France, Italy, Mexico, Turkey, South Africa and Uruguay. Another aspect of interest was the commercial exhibition where numerous companies participated and presented 12 industry symposia. It should be noted that through the IFCC-Abbott VLP Program it was possible to have two very prominent experts, Dr. Maria Salinas from the San Juan Hospital, Alicante, Spain who focused her participation mainly on the issue of costs and adequacy of demand (For more details see <https://www.ifcc.org/media/479931/ifccnewsdecember2022.pdf>) and Dr. Mauro Panteghini, Director of CIRME, Italy, who gave the lecture dedicated to Prof. Dr. Daniel Mazziotta on “The role of laboratories that perform reference procedures for the application and validation of metrological traceability: the case of enzymes” and participated in a symposium on Metrology in which he spoke on the “Standardization of metrological measurements. Enzymes in the Clinical Laboratory: Navigating Between Expectations and Barriers.”

In addition, with substantial financial support from Abbott, it was possible to have the participation of the relevant speakers Prof. Dr. Boerge Nordestgaard (Denmark) and Dr. Rosa Sierra-Amor (Mexico). Dr. Nordestgaard delivered a plenary lecture on the worldwide use of lipid profiles without fasting instead of fasting. Dr. Sierra Amor participated in a symposium referring to activities of the Working Group on Accreditation Management of COLABIOCLI. Also, with the financial support of COLABIOCLI, it was possible to meet this Working Group and have other speakers from Chile (Dr. Leonardo Aguirre) and Mexico (Dr. Sandra Quintana).

With the endorsement of the Cape Peninsula University of Technology (CPUT) in conjunction with the African Federation of Clinical Chemistry (AFCC) there were 5 speakers from South Africa, members of the working group led by Rajiv Erasmus, who dealt with a

novel topic such as “Emerging biomarkers in vascular health and diabetes”.

Another separate chapter was the task of the Awards Committee chaired by Dr. Horacio Lopardo and constituted by Drs. Daniel Bustos, Raúl Coniglio, Angela Famiglietti, Néstor Litwin, Graciela López and José Oyhamburu. The prizes awarded were the following:

CALILAB 2022 AWARDS

1st CALILAB Award 2022 for the best free communication: “Impact of the selection of different models of quality requirements in the classification of analytical performance in the Clinical Chemistry laboratory”. Bravo M, Jacobsen D, Fernández Machulsky N, Ortiz MV, Gomez ME, Perazzi BE.

2nd CALILAB Award 2022 for the second-best free communication: “Usefulness of Expanded Uncertainty in the determination of the limit of quantification for blood lead”. Areny G, Martínez De Marco MB, Brescovich M, Barreto J, González DE, Villafañe ST.

1st mention CALILAB 2022: “Development and implementation of a bioanalytical method by high performance liquid chromatography for the therapeutic monitoring of mitotane”. Caro YS, Sartorio ME, Cámara MS, De Zan MM.

2nd mention CALILAB 2022: “Verification of the quantification limit of anti Xa”. Siracusa M, Iglesias Varela M, Donlo L, García País R, Monzón K, Díaz N, Bechi P, Maggi L.

3rd mention CALILAB 2022: “Change of modality when providing preanalytical indications in the SARS-CoV-2 pandemic and its impact on the recitation of complete urine samples”. Fiol L, Toledo MS.

4th mention CALILAB 2022: “First steps in search of pre-analytical quality in a hospital laboratory: harmonized indicators, six sigma and continuous improvement cycle”. Ladavaz ML, Cabrera F, Casanovas M, Black ML.

COCERBIN 2022

COCERBIN Award 2022 Free communications: “Development and standardization of an ELISA-IGg assay for

the detection of hantavirus infection in humans using a recombinant antigen produced in bacteria". Muzulin PM, Brignone JM, Rodriguez MA, Iglesias NG, Levis SDC.

1st mention COCERBIN 2022 Free communications titled: "Evaluation of a new Total T3 method (Abbott CMIA): the challenge of choosing between transfer

or establishment of the reference interval". Benzi M, Monteverdi L, Cáceres O.

2nd COCERBIN 2022 Free communications: "Validation of user satisfaction questionnaire as a quality management tool in the Directorate of Medical Specialties of the Municipality of Córdoba". Pilar Pardo GM, Marrama M, Gennero DA, Lujan PR.



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IFCC'S CALENDAR OF CONGRESSES, CONFERENCES & EVENTS

Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses

Mar 15, 2023	IFCC	<i>Recent updates on SARS-CoV-2 biology and diagnostics</i>	Live webinar
Mar 22, 2023	IFCC	<i>Nitrous oxide abuse: clinical consequences and biological markers related</i>	Live webinar
Mar 29, 2023	IFCC	<i>Laboratory Medicine and its challenges</i>	Live webinar
May 20 - 21, 2023	IFCC	<i>Point-of-Care Testing: Home, Hospital and Beyond - Satellite Meeting</i>	Rome, IT
May 20, 2023		<i>XVI ICPLM - International Congress of Pediatric Laboratory Medicine - Satellite Meeting</i>	Rome, IT
May 20 - 21, 2023	IFCC	<i>Clinical Mass Spectrometry: Validation and Accreditation of IVD and Laboratory Developed Test (LDT) in the new "Regulation EU 2017/746" ERA - Point-of-Care Testing: Home, Hospital and Beyond - Satellite Meeting</i>	Rome, IT
May 21, 2023	IFCC	<i>The Road to Measurably Better Healthcare Performance: Integrated Clinical Care Workshop to Maximize Key Performance Indicators for Patients, Payors, Clinicians and Health Systems - Satellite Meeting</i>	Rome, IT

Calendar continued on next page

<p>May 21, 2023</p>	 <p>IFCC Task Force Young Scientists FORUM Italy, Rome - May 21st, 2023</p>	<p><i>IFCC FORUM for Young Scientists</i></p>	<p>Rome, IT</p>
<p>May 21 - 25, 2023</p>	 <p>21-25 May EUROMEDLAB ROMA 2023</p>	<p><i>XXV IFCC - EFLM WorldLab EuroMedLab - Rome 2023</i></p>	<p>Rome, IT</p>
<p>May 26 - 30, 2024</p>	 <p>IFCC WORLDLAB DUBAI 2024 MAY 26-30</p>	<p><i>XXVI IFCC WORLDLAB - Dubai 2024</i></p>	<p>Dubai, UAE</p>
<p>Aug 28 - Aug 31, 2024</p>		<p><i>XXVI COLABIOCLI 2024</i></p>	<p>Cartagena, CO</p>
<p>Oct 31 - Nov 3, 2024</p>	 <p>APFCB CONGRESS Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine (APFCB) Congress 2024 19-22 October 2024 ICC Sydney, Australia</p>	<p><i>APFCB 2024 Sydney</i></p>	<p>Sidney, AU</p>
<p>May 18 - 22, 2025</p>	<p>IFCC - EFLM</p>	<p><i>XXVI IFCC-EFLM EUROMEDLAB 2025</i></p>	<p>Brussels, BE</p>

<i>2026 Date TBA</i>	IFCC	<i>XXVII IFCC WORLDLAB 2026</i>	<i>Venue to be selected</i>
<i>2027 Date TBA</i>	IFCC	<i>XXVII IFCC-EFLM EUROMEDLAB 2027</i>	<i>Venue to be selected</i>
<i>2028 Date TBA</i>	IFCC	<i>XXVIII IFCC WORLDLAB 2028</i>	<i>Venue to be selected</i>
<i>2029 Date TBA</i>	IFCC	<i>XXVIII IFCC-EFLM EUROMEDLAB 2029</i>	<i>Venue to be selected</i>
<i>2030 Date TBA</i>	IFCC	<i>XXIX IFCC WORLDLAB 2030</i>	<i>Venue to be selected</i>

Other events with IFCC auspices

Aug 1, 2022 - Apr 30, 2023	<i>5th International program in control of analytical quality in the clinical laboratory</i>	Quality Academics, online event
Jan 1 - Jul 31, 2023	<i>Inter-QC Topics</i>	Quality Academics, online event
Mar 16 - 19, 2023	<i>23èmes Journées Marocaines de Biologie Clinique</i>	Marrakech, MA
Mar 23 - 25, 2023	<i>IFCC Visiting Lecture 2023: Prof. Khosrow Adeli (IFCC President)</i>	Jakarta, ID
Mar 24 - 26, 2023	<i>XXIV Congreso Nacional Para el Análisis de la Garantía de la Calidad en el Laboratorio Clínico y Expoquim Puerto Vallarta 2023. CONAQUIC.</i>	Hybrid Event, Puebla, MX
Mar 30 - 31, 2023	<i>XX Meeting of the SEQCML Scientific Committee</i>	Madrid, SP
Apr 5 - 7, 2023	<i>VIII.Türkiye in vitro Diagnostic (IVD) Symposium "Preclinical Modelling"</i>	Izmir, TR
Apr 26 - 28, 2023	<i>II Peruvian International Congress of Clinical Pathology and Laboratory Medicine and the IX Peruvian Congress of Clinical Pathology "Dr. Oswaldo Herculles"</i>	La Libertad, Trujillo, Peru
Apr 28 - 30, 2023	<i>XXIII National Congress of Clinical Chemistry and Laboratory Medicine Expolab Veracruz 2023</i>	Veracruz, MX

May 4, 2023	<i>11th European Symposium of Clinical Laboratory and In Vitro Diagnostic Industry: "THE LABORATORY OF HAEMATOLOGY: A 360° VISION"</i>	Barcelona, ES
May 11 - 13, 2023	<i>XIV Congreso Uruguayo de Bioquímica Clínica</i>	Montevideo, UY
May 16 - 19, 2023	<i>The 14th International & 20th National Congress on Quality Improvement in Clinical Laboratories</i>	Tehran, IR
June 12 - 14, 2023	<i>UKLabMed23</i>	Leeds, GB
Sept 20 - 23, 2023	<i>6th ACTC (Advances in Circulating Tumor Cells) meeting "Liquid Biopsy and Precision Oncology: where do we stand now"</i>	Skiathos, GR
Oct 12 - 13, 2023	<i>5th Symposium – Cutting Edge of Laboratory Medicine in Europe – CELME 2023</i>	Prague, CZ
May 21 - 24, 2024	<i>The 10+1 Santorini Conference "Systems medicine and personalised health & therapy"- "The odyssey from hope to practice: Patient first -Keeps Ithaca always in your mind"</i>	Santorini, GR
Jun 13 - 14, 2024	<i>9th International Symposium on Critical Care Testing and Blood Gases</i>	Saint-Malo, FR

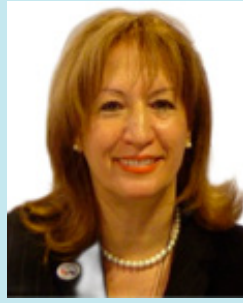




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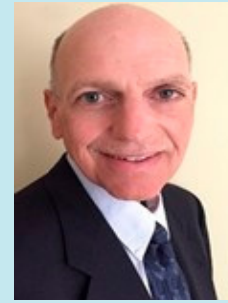
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**Communications and Publications
Division (CPD) of the IFCC**

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

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Design & Production:



Circulation

The eNews is distributed to all IFCC members registered on-line to receive it and to all IFCC sponsors.

Deadlines for submissions to the eNews

N° 1/2 – January/February: *by mid January*

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*

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