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## International Federation of Clinical Chemistry and Laboratory Medicine





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# Report for the IFCC VLP - Tunisian Society of Clinical Biology (STBC), JNBC 2018



Hammamet, Tunisia  
8-12 May 2018

*by Sunil Sethi*

*IFCC Executive Board Member  
Department of Laboratory Medicine  
National University Hospital, Singapore*

***The Tunisian Society of Clinical Biology held its 2018 Annual Meeting in Hammamet, Tunisia. Hammamet is a beach resort about one hour by road from the airport and the capital city, Tunis. The conference was held in a five-star resort hotel which had excellent facilities to manage the conference. I was informed that there was a total of close to one thousand participants from all fields of biological science.***

The main conference program was over a three day period and I was involved in multiple activities over the period of my stay in Tunisia:

1. Visit to the Tunisian Minister of Health. The IFCC Visiting Lecturers were honoured to be hosted by the Minister and we spent the time explaining the work of the IFCC and how we could cooperate with the Tunisian professional societies in order to raise the level of laboratory practice. The Minister was supportive and looked forward to hosting future IFCC events and activities in Tunisia.
2. Participated in the IFCC Symposium and presented on my topic "*Clinical Laboratory Informatics and Automation*". The symposium and presentation was well received and well attended with an interesting Q&A session on all the topics which were presented.

The IFCC Symposium comprised:

- a. Clinical Laboratory Informatics and Automation - Sunil Sethi
- b. Managing Clinical Laboratory Variability - Sergio Bernardini
- c. Clinical Laboratory Accreditation - David Kinniburgh

3. Participated in a panel discussion on government legislation and biomedical act requirements. Shared the latest revisions of the Singapore Healthcare Act and participated in the Questions & Answers session.

4. I was part of the judging panel for the best poster Award. There were seven high-quality posters and the eventual winner was a paper entitled "*Contribution of the molecular and functional study of lymphoproliferative syndrome with autoimmunity in highly consanguineous populations*". This was a very good paper, with a high level of science.

I would like to congratulate the two main organisers of the event: Professor Taib Ben Massoud and Professor Abderrazak Hedhili. All administrative arrangements for travel, accommodation and hospitality were carefully managed for the IFCC speakers. We were met at the airport and thereafter very well looked after throughout our stay. The hotel and conference venue was excellent. The participation from registrants and the scientific program was exciting and contemporary. The language for the conference was French, but translation support was provided.

Overall, I would like to put on record my thanks and appreciation to all those who contributed to the success of the conference and for looking after the IFCC contingent.

Finally, my sincere thanks to the IFCC and to the VLP scheme, without which I would not have been able to participate and share in this wonderful conference experience.

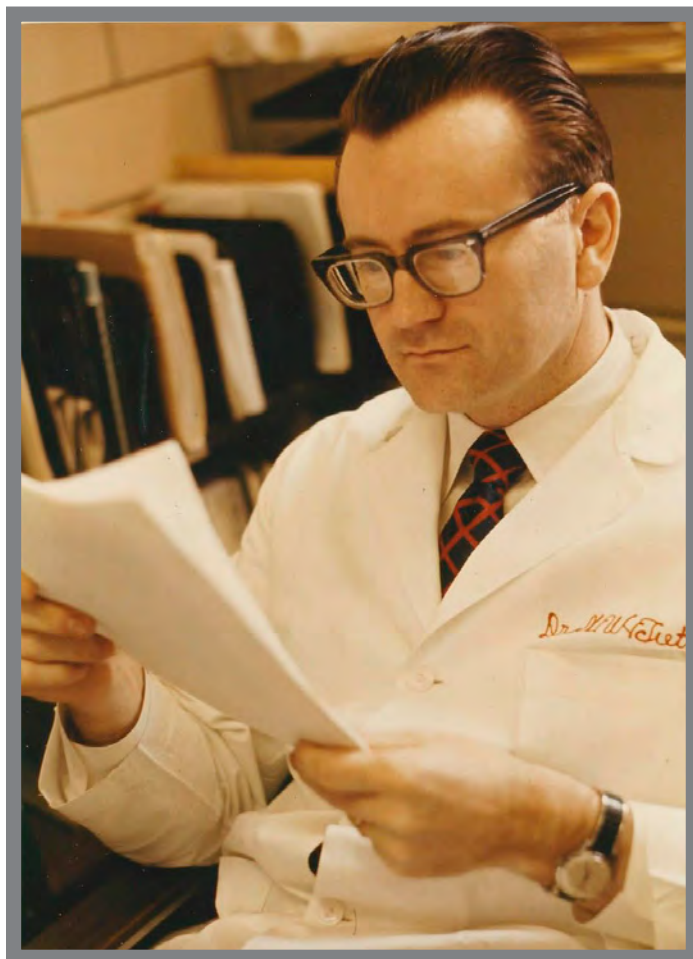
## In memory of Dr. Norbert Tietz

### A giant in clinical chemistry has died

by Nader Rifai

Department of Laboratory Medicine, Boston Children's Hospital, USA

IFCC EMD EC - VLP Chair



Dr. Norbert Tietz

On the morning of May 23, 2018, Dr. Norbert Tietz, a major figure in the field of clinical chemistry and laboratory medicine, died peacefully in Georgia, aged 91.

Norbert was born in Stettin, Germany in 1926; one of seven children who all pursued a career in science. Two of his siblings became physicians but Norbert believed that a PhD was a harder goal to achieve, so that is what he pursued.

As a World War II veteran and a prisoner of war, Norbert immigrated to America in 1954 to join his brother and to start a new life. He returned home briefly to convince Gertrud to marry him; they met in Munich just before he left Germany. Shortly after, they got married in Chicago and had four children.

His first job was at Rockford Memorial Hospital in Illinois, working under the guidance of Dr. Samuel Natelson, an early pioneer in the development of clinical laboratory methods. At the time, the field of clinical chemistry was undergoing a transformational change driven by people like Otto Folin, Donald Van Slyke, and Michael Somogyi.

In the 1950's, instrumental methods of analysis such as flame photometers and UV spectrophotometers as well as systems such as the Coulter electronic cell counter and the Technicon Auto Analyzer had been introduced and changed forever the landscape of the clinical laboratory.

In 1959, he was offered a position at Mount Sinai Hospital Medical Center in Chicago with a faculty appointment at the Chicago Medical School. During his interaction with clinicians, he realized their great dependence on laboratory tests and the need for having a book that bridges modern automated technology and pathophysiology to better connect the medical staff with the clinical laboratorians. Hence he published the first edition of the *Fundamentals of Clinical Chemistry* in 1969; the 8<sup>th</sup> edition of this book is scheduled to appear later this year. The *Tietz Textbook of Clinical Chemistry* followed almost two decades later to become the main reference book in the field.

In 2014, I was asked to assume responsibility for both the *Tietz Textbook of Clinical Chemistry and Molecular Diagnostics* and the *Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics* and to build

Article continued on next page

on the excellent work that Norbert had started and Carl Burtis, Edward Ashwood and David Bruns continued; Carl Wittwer and Rita Horvath joined me to accomplish this task. Jerry Gallwas, a dear and a mutual friend, visited Norbert regularly in his home in La Jolla to share a meal. During each visit, the three of us conversed on FaceTime. I recall once describing to Norbert the vision for the 6<sup>th</sup> edition of the Textbook and the desire to convert it from a book to a primarily cloud-based platform. He was quite pleased with this and intrigued by the concept and inquired about the publication date. When I informed him that it would be in one and a half year, he said disappointedly “*Oh, I will be dead by then*” and I immediately answered “*that is*

*totally out of the question, you have to stay alive to see it*”. His reply was simply “*Okay*”. I am glad that he lived to see it and for us to have several conversations about it.

Norbert dedicated his book “*My Life: From Refugee to Teacher & Scientist*” to his “*Family, Colleagues, and Students*”, those who meant the most to him. His passion for teaching was exceptional and his dedication to education was recognized by both the IFCC and AACC as they bestowed on him their highest honours. Norbert Tietz was an unusual man who contributed greatly to our profession and left an indelible and a long-lasting impression. His legacy in his books and publications will be appreciated for generations to come.

## Commutability explained in freely available resources



### WHAT IS COMMUTABILITY?

One of the key considerations in improving the harmonisation of clinical laboratory results is that the reference materials (and calibrants) used in laboratory methods should behave in an identical fashion to the analyte being measured in the clinical sample. A commutable reference material achieves this desirable aim. Non-commutable reference materials may be a source of variability between different methods for the same analyte and can contribute to methods giving erroneous results, which may have clinical consequences for patient care.

Commutability is also important in external quality assessment (EQA) for the same reason. For EQA results to be meaningful the EQA specimens distributed by the scheme organiser should be commutable, i.e.

*by Graham H. Beall*  
*IFCC Representative to the Executive*  
*of the Joint Committee for Traceability*  
*in Laboratory Medicine (JCTLM)*

behave in an identical way to clinical specimens in the assay that is being assessed.

The concept of commutability is easy to understand but more difficult to evaluate. At the basic level commutability is assessed by using two different methods for the same analyte to measure a panel of clinical samples and the reference materials / calibrants (or EQA specimens). For the clinical specimens there should be a straight-line relationship between the two methods. If the reference materials / calibrants (or EQA specimens) lie on the same straight line they are said to be commutable. Deviation from the straight-line relationship rendered the reference material / calibrant as non-commutable [1].

Such a ‘black or white’ has long been regarded as unsatisfactory. To address the topic in a more scientific way the IFCC Scientific Division established the Working Group on Commutability (WG-C), chaired by Greg Miller from the USA. The WG-C attracted a large and expert membership who examined commutability in a systematic and scientific way and employed statistics

to define the extent to which a reference material is commutable, so helping to determine whether that reference material may be employed with confidence in a clinical laboratory method.

The WG-C recently published three linked articles in *Clinical Chemistry* [2-4]. These articles prompted an Editorial entitled 'The enduring importance and challenge of commutability' [5]. Together, these publications provide the definitive explanation of commutability and should be of interest to all manufacturers of clinical laboratory diagnostics and to all laboratory medicine specialists.

### JCTLM RESOURCES TO AID THE UNDERSTANDING OF COMMUTABILITY

The JCTLM is an international consortium that promotes the global standardisation of clinical laboratory test results, and provides information on reference materials, reference measurement methods and services that are available from around the world. The aim of JCTLM is to support world-wide comparability, reliability and equivalence of measurement results in laboratory medicine, for the purpose of improving health care and facilitating national and international trade in *in vitro* diagnostic devices, by:

- promoting the concept of traceability of measurement results to the *Système International d'Unités* (SI) or, where necessary, to other internationally agreed references;
- evaluating reference materials, reference measurement procedures and reference measurement services for laboratory medicine with respect to conformity with appropriate international standards;
- producing educational materials and activities promoting the value of traceability in laboratory medicine and raising awareness amongst stakeholders;
- promoting close links between Reference Laboratories in Laboratory Medicine and National Metrology Institutes;
- facilitating the identification and prioritisation of measurands requiring international traceability and comparability and thereby encouraging appropriate organisations to accept responsibility

for the development of suitable reference methods and measurement procedures and certified reference materials;

- encouraging the *in vitro* diagnostic (IVD) industry to apply the agreed reference measurement systems;
- encouraging EQAS organizers to apply the agreed reference measurement systems.

Details of JCTLM may be found at [www.jctlm.org](http://www.jctlm.org). The JCTLM database of reference materials, reference measurement procedures, and reference measurement services is freely available at the following link: [www.bipm.org/jctlm](http://www.bipm.org/jctlm).

Commutability is of considerable importance to JCTLM and its members. The listing of reference materials on the JCTLM database requires evidence of commutability. Consequently, the JCTLM has produced educational resources, based on the IFCC WG-C publications, that are freely available to its members and to all interested parties – including IFCC Members and individual laboratory medicine specialists. There are two resources:

- A special report entitled 'Commutability of certified reference materials'. This report, prepared by Greg Miller and Neil Greenberg (US) on behalf of the IFCC WG-C, was published as an addendum to the 2018 JCTLM Newsletter. A copy of the special report may be accessed [here](#).
- Two webinars have been prepared by Vincent Delatour (FR), a member of the IFCC WG-C and a member of the JCTLM WG for Traceability, Education & Promotion (WG-TEP). These two webinars, each lasting approx. 20 minutes, have been published on the IFCC e-Academy together with learning points. Multi-choice questions to test the understanding gained from the webinars will be available shortly. The webinars may be freely accessed as follows:
  - Commutability: why it matters  
<http://eacademy.ifcc.org/events/jctlm-webinars/?ctype=1154&cid=1857>
  - Commutability explained  
<http://eacademy.ifcc.org/events/jctlm-webinars/?ctype=1154&cid=1858>

## CONCLUSION:

The recent work of the IFCC WG-C has led to definitive publications on the clinically important topic of commutability. The JCTLM has produced freely available educational resources to aid understanding of commutability and its importance. This short article aims to encourage laboratory medicine specialists to improve their own understanding of commutability and to encourage peers, trainees and students to do the same. By insisting on methods that contain commutable reference materials / calibrators and by using commutable EQA specimens laboratory medicine specialists can make an important contribution to harmonisation and patient safety.

## REFERENCES:

1. Miller WG, Myers GL. Commutability Still Matters. *Clin Chem* 2013; 59: 1291-1293
2. Miller WG, Schimmel H, Rej, R, Greenberg N, Ceriotti F, Burns C, Budd JR, Weycamp C, Delatour V, Nilsson G, Mackenzie F, Panteghini, M, Keller T, Camara JE, Zegers I, Vesper HW. IFCC Working

Group Recommendations for Assessing Commutability. Part 1: General Experimental Design. *Clin Chem* 2018; 64(3): 447-454

3. Nilsson G, Budd JR, Greenberg N, Delatour V, Rej R, Panteghini M, Ceriotti F, Schimmel H, Weycamp C, Keller T, Camara JE, Burns C, Vesper HW, Mackenzie F, Miller WG. IFCC Working Group Recommendations for Assessing Commutability. Part 2: Using the Difference in Bias between a Reference Material and Clinical Samples. *Clin Chem* 2018; 64(3): 455-464

4. Budd JR, Weycamp C, Rej R, Mackenzie F, Ceriotti F, Greenberg N, Camara JE, Schimmel H, Vesper HW, Keller T, Delatour V, Panteghini M, Burns C, Miller WG. IFCC Working Group Recommendations for Assessing Commutability. Part 3: Using the Calibration Effectiveness of a Reference Material. *Clin Chem* 2018; 64(3): 465-474

5. Young IS. The Enduring Importance and Challenge of Commutability. *Clin Chem* 2018; 64(3): 421-423

## Clinical Chemistry Trainee Council: Clinical Case Studies



This is the fourth in a series of articles regarding the *Clinical Chemistry Trainee Council* (CCTC), a free multi-lingual online educational program for laboratory medicine trainees and their mentors ([www.trainee-council.org](http://www.trainee-council.org)). Our goal is to bring the CCTC to the attention of laboratory medicine professionals worldwide. Currently, more than 12,000 registrants, from 156 countries, are using and benefiting from this endeavor. Approximately 40% of CCTC users are from emerging and developing countries.

The CCTC website houses a variety of educational materials, including Clinical Case Studies (CCS). At the present time, over 120 CCS are available on the website, with one new case added each month. The way

*by Nader Rifai*  
*Founder of CCTC programme*  
**Ann Gronowski**  
*Co-Chair, CCTC programme*

in which this feature works is that participants request to receive the actual case with questions to facilitate discussion within their groups sent to them a month prior to publication. When the case is published, the case discussion and commentaries from two clinicians sharing their views about the clinical case are sent to the participants. In order to participate in this activity and receive the monthly CCS, send a request to Ms. Erin Roberts ([eroberts@aacc.org](mailto:eroberts@aacc.org)).

Currently, 17,405 individuals from 157 countries participate in this feature. 40 CCS articles are currently available in Spanish and several others in various languages including Portuguese, French, Russian, Arabic, Turkish, Japanese, and Chinese.

*Article continued on next page*

The CCS articles are very popular among laboratory medicine professionals and have been downloaded over 1.4 Million times. The top ten most popular ones are listed in Table 1.

**Table 1** The top ten most popular CCS articles

Title	First Author	Year Published	# of downloads
Evaluation of a Prolonged Prothrombin Time	J. Hood	2008	98,577
Severe Hyponatremia with High Urine Sodium and Osmolality	J. van der Mahajan	2009	61,079
Interpretation of HIV Serologic Testing Results	V.S. Mahajan	2010	62,971
A 24-Year-Old Man with Previously Diagnosed Hemophilia	F. Khani	2012	32,518
Persistent Increase in Aspartate Aminotransferase in an Asymptomatic Patient	S. Krishnamurthy	2009	22,968
Too Much of a Good Thing: A Woman with Hypertension and Hypokalemia	S.C. Murphy	2009	22,496
A Patient with a Leg Rash, Pedal Edema, Renal Failure, and Thrombocytopenia	K.L. Schnabl	2009	20,734
Celiac Disease Refractory to a Gluten-free Diet?	L.M. Mikesch	2008	19,779
Prescription Compliance or Illicit Designer Drug Abuse?	M.S. Petrie	2012	19,711
Unexpected Hemoglobin A1c Results	A.G. Sofronescu	2011	18,948

We encourage all trainees in laboratory medicine and their mentors to take advantage of this free resource and register to gain access to these materials by going to [www.traineecouncil.org](http://www.traineecouncil.org).

It takes less than a minute! Enjoy the CCS.

## News from the IFCC Website



### eJIFCC Vol 29 n°1 - April 2018

The first issue of eJIFCC for 2018 is now available - the first edited by Prof. János Kappelmayer, director of a large clinical laboratory at the University of Debrecen, Hungary. eJIFCC, indexed on PubMed Central, has become an increasingly recognized journal, greatly due to the dedicated efforts of the former Editor-in-Chief Professor Gábor L. Kovács. Prof. Kappelmayer's intention is to continue to publish thematic issues, along with research articles, free communications, letters, and book reviews. Articles in this first issue for 2018 will definitely be of interest to all practicing laboratory specialists. Topics include next generation sequencing for diagnosis of human disease, the investigation of leptin receptor polymorphism in rheumatoid arthritis, hematological parameters in HIV infected patients, and the new IFCC clinical chemistry curriculum developed a guide for trainees in clinical laboratory medicine.

[Read more](#)



# Mentorship INTERVIEW



*Presented by IFCC Young Scientists Task Force*

## The Secret Ingredients of a Long Lasting and Successful Mentor and Mentee Relationship

An Interview with Dr. Eleftherios P. Diamandis (Mentor) and Dr. Vathany Kulasingam (Mentee)

Dr. Eleftherios P. Diamandis is the Biochemist-In-Chief at University Health Network and Mount Sinai Hospital, two major teaching hospitals in Toronto. He is also Head of Clinical Biochemistry at the Division of Clinical Biochemistry, Department of Laboratory Medicine and Pathobiology, University of Toronto. Dr. Vathany Kulasingam is a Clinical Biochemist at University Health Network and is an Assistant Professor at the University of Toronto.

### How They Met

Dr. Eleftherios P. Diamandis has been in the education business for over thirty years. He has supervised more than thirty PhDs, twenty Masters in Science, and a hundred Post-Doctoral Fellows and Residents. "I am blessed to have been involved with the mentorship of young professionals for so long," Dr. Diamandis said proudly. One of his best students is Dr. Vathany Kulasingam, who approached him in 2004 and applied for a graduate student position in Dr. Diamandis' research laboratory. In 2008, she completed her PhD and entered the post-doctoral diploma training program at the University of Toronto. She was appointed Clinical Biochemist at University Health Network immediately after graduation in 2010, and is currently an Assistant Professor at the

University of Toronto.

### The Long, Evolving Relationship and Benefits

"We have now completed twelve years of interaction at various levels: graduate studies, post-doctoral training program and a professional relationship," said Dr. Diamandis. "It (the relationship) has evolved over the years but the fundamental values remain the same. We are both committed to this mentor-mentee relationship, we invest the necessary time, acknowledge the limitations of each other and use our experiences to now mentor (together) other younger laboratorians," he added.

When asked how this mentorship has impacted her career as a laboratorian, Dr. Kulasingam exclaimed, "Tremendously!" As a graduate student in Dr. Diamandis' research laboratory, she witnessed first-hand his role as a clinical biochemist and how he helped build and shape the clinical biochemistry laboratories in the downtown Toronto hospitals. "Now, as a professional myself, he continues to support my academic ambitions to conduct research and teach, while providing clinical services. (His) support comes in many forms, including providing the infrastructure to conduct the research, resources in terms of personnel, instruments, etc...and having an open-door policy to always welcome a friendly discussion."

*Article continued on next page*

"In order to be a good mentor, you first need to have a genuine interest in helping the young individuals achieve their goals. It is important that the mentor has the ability to listen carefully and understand the aspirations and goals of the mentee, and also realize the talents and abilities of these individuals."

Dr. Eleftherios P. Diamandis

Mentor: Dr. Eleftherios P. Diamandis  
Biochemist-In-Chief  
University Health Network  
and Mount Sinai Hospital  
&  
Head of Clinical Biochemistry  
Department of Laboratory  
Medicine and Pathobiology,  
University of Toronto

Mentee: Dr. Vathany Kulasingam  
Clinical Biochemist  
University Health Network  
& Assistant Professor  
University of Toronto

Interview conducted by  
**Danni Li, PhD, DABCC, FACB**  
Assistant Professor  
Director of Clinical Chemistry  
University of Minnesota Medical  
Center Fairview

Designed by:  
Chermaen Lindberg  
L3 Healthcare

As the mentor, Dr Diamandis has a different perspective on how this relationship has impacted him. "The most valuable aspect is the respect and trust that we have between us, as professionals and human beings in general. Each one of us understands the capabilities and limitations of the other. Our relationship is bidirectional. I learn from the mentee and the mentee learns from me."

### Advice to Build a Successful Career

As a mentor who has built a distinguished scientific career in Clinical Biochemistry, Dr Diamandis's advice is invaluable. "It has been my own experience that those who distinguish themselves have access to a lot more opportunities than those who are members of a crowd. So, hard work, persistence and the pursuit of excellence are vital for the future success. To put it differently, why would somebody offer a job to a mediocre individual? On the other hand, those who are distinguished are usually offered a lot more positions than the ones they need. So, escape from the crowd, become distinguished and show your abilities to those who are hiring young scientists."

### How to be a Good Mentor and Maintain a Good Mentorship Relationship

"... the whole idea of mentorship is to use the experience of the mentor to solve the problems of the mentee," said Dr. Diamandis. "In order to be a good mentor, you first need to have a genuine interest in helping the young individuals achieve their goals. It is important that the mentor has the ability to listen carefully and understand the aspirations and goals of the mentee, and also realize the talents and abilities of these individuals. Then, the mentor will try to engineer a relationship which takes into account the capabilities of the mentee and their expectations for professional and personal success. A good mentoring relationship is maintained if the mentor continues to be genuinely interested about the well-being of the mentee, and provide constant guidance as the mentee goes through their professional and personal life."

### How to Seek Out a Mentor

Dr. Diamandis explains, "Mentees should study very carefully the availability of mentors and select one with whom they have matching 'chemistry' - and one that has experience and good reputation in their professional life. If there is a formal mentor/mentee relationship, this should be carefully constructed, otherwise the dissolution of the relationship may be troublesome to both parties. So, I advise the mentees, before committing to any mentor, to do their homework and to ask others who have experience with their mentor to understand their capabilities, experience and general behavior."

## The next “big leap” forward for lab medicine: artificial intelligence

*by Bernard Gouget*

*Counselor for Public Health FHF*

*Chair-Human Health Care Committee-COFRAC*

*Chair-IFCC Nominations Committee*

*General Secretary of the International Francophone Federation  
of Clinical Biology and Laboratory Medicine (FIFBCML)*



Bernard Gouget

For several months, the numbers of official reports on Artificial Intelligence (AI) strategies, such as [the one by Cédric Villani \(FR\)](#), have been multiplying. In a report submitted in late March to the French President, this renowned mathematician states that AI is one of the niches of excellence for state economies.

The countries that will be leaders in this field will be able to capture a large part of the value of the systems that they transform, as well as control these same systems, threatening the independence of other countries. Global competition is fierce. AI requires a collective and coordinated approach, concentrated in strategic sectors such as health, environment, transport-mobility and defence-security.

Health is one of the sectors where the stakes of AI are the highest. To what extent will a machine be able to analyze, diagnosis and continuously learn? What forms will the human-machine collaboration or partnership take? Will it replace the professional, and if so, to what extent? How are skills delegated? What is the division of labour? And what activities or medical specialties will be concerned as a priority?

With increasingly greater computing power available at increasingly lower costs, massive data processing technologies becoming more mature, an increase in storage capacities and continuous development of new algorithmic methods, such as deep learning, AI has shown unprecedented acceleration for 5 years.

The most measurable sign of this dynamic is the multiplication of the number of startups in the sector worldwide and the explosion of investment. In 2016, more than 1600 startups specialized in artificial intelligence were counted globally.

Since 2012, investments in startups specialized in AI have been increasing, going in 5 years from 415 million dollars to 5 billion dollars. The large digital/IT companies are obviously not to be outdone and are acquiring many young companies in order to capture the latest innovations. For them, it is a question of guaranteeing control of technological advances, new uses and new, unprecedented economic models. These actors clearly understand the growth opportunities represented by AI. The artificial intelligence market for business applications is estimated at more than 36 billion dollars by 2025.

But beyond the potential for economic growth that it represents, AI is a source of innovation in all of its forms. While the technological innovation of AI is no doubt the most spectacular effect, it goes hand in hand with innovation in uses, services and products, economic models, marketing and commercial models, organization models and, of course, with social innovation. Artificial intelligence is truly transformative in these various dimensions.

In a world marked by inequality, artificial intelligence must not lead to increasing social and economic inequalities or to increasing phenomena of exclusion and concentration of value. On the contrary, it should reduce them.

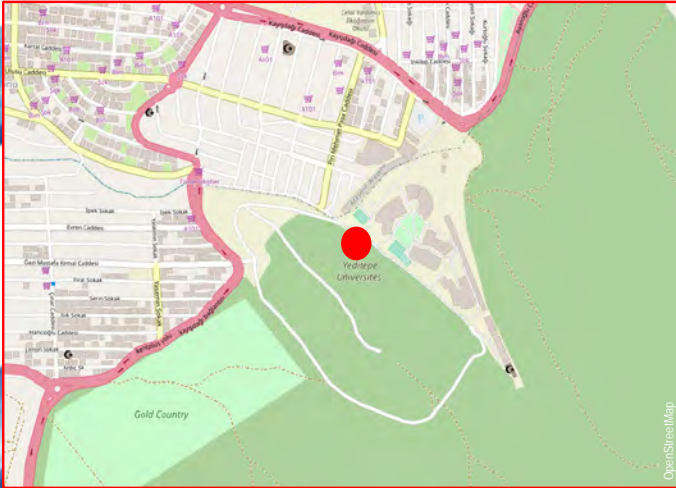
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## INFORMATION

<http://ifccflowcytometrycourse.org/>

**Course Webpage**  
[www.ifcc.org](http://www.ifcc.org)



# International IFCC Course on Flow Cytometry

## Novel Applications in Flow Cytometry for Clinical and Translational Research

20th to 22th June 2018  
Istanbul, Turkey

### Registration for the course and accomadation

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## NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES



### Meeting report from Pakistan (PSCP)

#### Meet the fraternity – a networking session

*by Sibtain Ahmed*

*Consultant Chemical Pathologist*

*Aga Khan University Hospital, Karachi, Pakistan*

On 26 April 2018, in line with medical laboratories professionals' week, an interactive session was organized by the section of Chemical Pathology, Department of Pathology and Laboratory Medicine, the Aga Khan University (AKU) in collaboration with the Pakistan Society of Chemical Pathology (PSCP). This was a 'first of its kind meeting' conducted using a virtual platform ensuring maximum participation from Chemical Pathology training centers across the country.

Chemical Pathology group from Karachi gathered at AKU with participation from Sindh Institute of Urology and Transplant, PNS Shifa, Liaquat National Hospital, Ziauddin University Hospital, Dow University of Health Sciences and Indus Hospital.

A virtual podium was utilized for the meeting, based on ZOOM, which enabled simultaneous participation from various centers across the country, specifically: SMDC Lahore, AFIP Rawalpindi, CMH Quetta, QAMC



Interactive sessions of Chemical Pathology training centers via Zoom, at Chemical Pathology, Department of Pathology and Laboratory Medicine, the Aga Khan University, Karachi, PK

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Bahawalpur, SZMC Rahim Yar Khan and RMIT Peshawar. During the two-hour session, almost all the recognized centers across Pakistan (Karachi, Rawalpindi, Lahore, Peshawar, Quetta, Bahawalpur, Rahim Yar Khan) were on board.

The ideology behind this activity was to develop connections of Chemical Pathology trainees from across Pakistan with supervisors and discuss the expected changes in upcoming exam patterns including intermediate module (IMM) and FCPS part 2. Maximum time was spent in discussions on the overview of curriculum and assessment in IMM.

The activity was officially called on by a welcome note by Prof. Dr. Imran Siddiqui, one of the pioneers of Chemical Pathology at AKU. He emphasized the significance of such collaborative activities and its value for the young blood. His talk was followed by an introduction from all the attendees.

The next talk was by Prof. Dr. Aamir Ijaz who shed light on the overview of curriculum and assessment in IMM of Pathology. His session was of utmost importance for all the trainees and as expected was followed by a variety of questions.

The next dialogue was by Dr. Adnan Mustafa Zuberi. He presented an update of expected changes in FCPS-II examination of Chemical Pathology. This was a very informative presentation for the trainees especially those approaching the upcoming examination and

was further supported by key tips from Dr. Imran Siddiqui and Dr. Aamir Ijaz.

Dedicated assessment and curriculum allied sessions were followed by a discussion by Prof. Dr. Asma Shaukat who gave vital tips and instructions for trainees to successfully ace the residency period and complete their requirements to be eligible for the exit exam in due course of time.

Subsequently, Dr. Brig. Muhammad Aamir delivered a talk on opportunities for trainees in upcoming cities of Pakistan. He discussed the constraints faced by trainees in far flung areas and how to overcome them with the help of bigger established centers.

The last talk of the meeting was by the section head of Chemical Pathology AKU, Dr. Aysha Habib Khan who suggested young Chemical Pathologists explore broader horizons in future especially focusing on metabolic medicine as subspecialty training.

Lots of questions were raised in the two-hour networking session by the trainees and were responded to by the panelists.

The event came to conclusion with a vote of thanks from Dr. Aysha Habib Khan. She appreciated event organizers Dr. Hafsa Majid and Dr. Sibtain Ahmed for this initiative and encouraged the participants to utilize such platform in future as well for the maximum benefits of our fraternity.



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

The website Lab Tests Online (LTO) brings the work of clinical laboratory professionals closer to the Spanish public

*This project is backed scientifically by the Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>)*

**SEQC<sup>ML</sup>**

Sociedad Española de Medicina de Laboratorio

- The initiative aims to offer information about clinical analyses to the general public.
- Adapted to Spain by an Editorial Committee, it includes information on some 1,200 tests, news, and other resources.
- LTO ES ([www.labtestsonline.es](http://www.labtestsonline.es)) exceeds 300,000 monthly users from all Spanish-speaking countries.

Article continued on next page



## MADRID, 7 MAY, 2018

The Internet has made available to the entire world a great deal of information on any subject, including health. The problem now is to distinguish serious and reliable information from unverified data. Lab Tests Online (LTO) was created with this objective in mind, and is a website that offers rigorous and quality information in the specific field of medical tests. It is an initiative backed in Spain by the Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>), which was charged with developing the version of this site for Spanish-speaking countries, LTO ES ([www.labtestsonline.es](http://www.labtestsonline.es)). LTO ES has the WMA (Accredited Medical Web) seal and follows the principles of the HON Code (Health on Internet Foundation).

*“In today’s society, people are increasingly concerned about their health and seek out information on how to stay healthy longer,”* explains Dr. Marià Cortés, director of the Editorial Board of LTO ES. She notes that, with this in mind, the tool was designed to help provide better understanding of the work performed by clinical laboratory professionals. The website is aimed at the general public, but it can also be useful for health professionals. *“The clinical laboratory is usually unknown to the general public, despite the fact that around 70-75% of medical decisions are made taking laboratory data into account,”* says Dr. Cortés.

Thus, Dr. Cortés believes that LTO can be a great help in the interpretation of laboratory tests. *“Knowing what is analyzed, what it is used for, how the result is interpreted, etc. ... can help users understand better the report they receive from the laboratory and why the included tests were requested”*, she explains. *“We also believe that it can be a practical source of information for general practitioners, especially for more specialized laboratory tests,”* adds the specialist.

The LTO ES website includes information on around 1,200 tests and is constantly updated. The site allows access to the information by searching for the name of the test or the associated physiological condition. It also offers an information section. *“We try to maintain a periodic frequency of publication of health news related to the clinical laboratory that is aimed at the general public, so that they can become aware of the*

*importance of the laboratory in the overall context of health care,”* says Dr. Cortés.

In 2017 the website was visited by more than 3.7 million users, with an average of 310,500 visits per month; this usage data is four times higher than in 2014. Although the website is managed in Spain and adapted to its specificities, a significant number of visits come from other Spanish-speaking countries. In fact, Spain is the country with the largest audience (28.14%), followed by Mexico (20.98%).

## 11 YEARS OF LTO ES

Lab Tests Online (LTO) began as an initiative of the *American Association for Clinical Chemistry (AACC)* at a time when the Internet was beginning to become more popular, in 2001. Starting the following year, the Spanish Federation of Health Technology (FENIN) and the Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>) tried to reach an agreement with the AACC to develop a Spanish version of this website. An agreement was not reached until 2006, and was signed between the AACC and the *European Diagnostic Manufacturers Association (EDMA)*, allowing the Scientific Societies of European countries to translate the content of the website, adapting it to the specific circumstances of each country.

This is how Lab Tests Online began in Spain, Germany, France, Italy, and Greece, with a common content management system managed by Engitel. The Spanish version of Lab Tests Online first appeared in March 2007. *“For its development, we had a large team of laboratory medicine professionals who, under the tutelage of the Editorial Committee, were in charge of translating the content of the American website and adapting it to the characteristics of our country”*, explains Dr. Maite Panadero, member of the editorial committee of LTO ES.

Over the past 11 years, LTO ES has been enriched by the progressive incorporation of the American website’s content. In recent years, in addition, its presence in social networks has been enhanced by the publication of news items prepared in Spain, and related to various aspects of health or disease prevention, which were published on the LTO ES website and shared on different social networks. This, according

to Dr. Panadero, is aimed at attracting a younger audience. In addition, the doctor notes that the website has recently been migrated to the American website's management system, which was in the redesign phase. This has not only improved the management

of the website but also its design. "The current [www.labtestsonline.es](http://www.labtestsonline.es) not only looks much more attractive, but is also more user-friendly and simple to use; it is also 'responsive', that is, adaptable to all types of devices."

## THE SEQC<sup>ML</sup>

The Spanish Society of Laboratory Medicine (SEQC<sup>ML</sup>) -founded in 1976- now includes more than 2,500 professionals and has as its main objective to bring together all interested scientists in the field of the Clinical Laboratory, to promote the dissemination of scientific and technical publications, to organize meetings, courses, and congresses of national and international character, and to cooperate with other Scientific Societies. Likewise, the Society aims to contribute to the study and recommendation of standardized methods and establish guidelines and recommendations for training in the field of Laboratory Medicine.

For more information: [www.seqc.es](http://www.seqc.es)

## Clinical Chemistry Ibero-American Symposium and Expolab, Guatemala 2018



Within the framework of the foundation of the Asociación de Químicos Biólogos de Guatemala (AQBG)

by Sandra Lima Pimentel  
Chemistry Biologist, Manager AQBG



The symposium is held within the framework of the commemoration of the 65th anniversary of the foundation of the Asociación de Químicos Biólogos de Guatemala. The AQBG was born in 1952 and obtained legal status on 4 May 1953. This historical fact makes it one of the oldest clinical laboratory professional organizations in Latin America.

After its foundation, the AQBG went through a period of relative inactivity, until it was introduced to a new stage in 1987, due to its membership of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the Latin American Confederation of Clinical Biochemistry (COLABIOCLI);

this generates a progressive spirit that encourages participation in the programs of Continuous Quality Improvement in the Clinical Laboratory, implemented by the international leaders in laboratory medicine and, additionally, encourages the organization of symposiums and congresses with the participation of notable foreign professors and experts.

One of the main goals of the Continuous Education Commission of the AQBG is the constant scientific and technical training for the clinical laboratory professionals; due to this purpose and for the 65th anniversary of its foundation, the AQBG has been working hard to organize the Clinical Chemistry

Ibero-American Symposium and Expolab Guatemala 2018, which will take place on 28-29 June 2018, in the Grand Tikal Futura Hotel. This will be done with the participation of Dr. María del Carmen Pasquel, president of the Working Group on Iberoamerican Nomenclature and Translation (WG-IANT), which belongs to the Iberoamerican Corner (RIA) of the Communications and Publications Division (CPD) of the IFCC.



Asociación de Químicos Biólogos  
Board of Directors

This symposium will allow the professional and academic interactions of the Biologist Chemist, in the fields of Quality Control, Microbiology, Immunology, Serology, Haemostasis, Evidence-Based Medicine and Clinical Biochemistry, apart from the opportunity to share and exchange experiences among colleagues.

On this occasion, it will have the participation of international speakers, members of the WG-IANT of the IFCC, from Argentina, Panama, Mexico, Uruguay, Spain, Brazil/Italy, Colombia, Paraguay, Panama, Chile and Ecuador who, due to their extensive experience will provide updates on the topics of the areas described above.

The IFCC has granted three Visitor Lecture Program (VLP) for the speakers and has sponsored the event. We also have the sponsorship of the Iberoamerican Corner (RIA), the Argentinian Biochemistry Foundation (FBA) and the Wiener Lab Foundation.

The three VLP speakers will also hold a Pre-Symposium Student Conference on June 27 at the Universidad

de San Carlos de Guatemala and Universidad del Valle de Guatemala.

Among the topics to be addressed during the symposium are:

- Imbalance of the intestinal microbiota.
- Vaginal dysfunction: the transcendent role that the biochemist must occupy in primary health care.
- Thyroid Hormones Preanalytical.
- Pre-analytical phase management and prevention of laboratory errors.
- ISO 15189:2012 Accreditation of the Laboratory - Important steps in the Implementation, Validation, Verification and Evaluation of Methods. What should I know?
- Clinical chemist role in pharmacovigilance
- Omega 3 effect of on cardiovascular risk factors, C-reactive protein and serum homocysteine in women over 35 years.

The Asociación de Químicos Biólogos de Guatemala has entered, with its 65 years, a stage in which the maturity and enthusiasm of its members will take it into cycles of permanent progress, to enhance and dignify the clinical laboratory professionals in Guatemala.



Plaza de la Independencia, Quito (EC)

**Control de Calidad**

**Hemostasia**

**Microbiología**

**Serología**

**Bioquímica Clínica**

**Medicina basada en la evidencia**

**Inmunología**

**SIMPOSIO IBEROAMERICANO**

14 EXPOSITORES INTERNACIONALES DE:  
**Argentina, Brasil, Italia, España, Paraguay, Uruguay, Colombia, Chile, México, Ecuador, Panama, República Dominicana.**

28 y 29 de Junio de 2018

**SIMPOSIO Iberoamericano de Química Clínica y Expolab Guatemala 2018**

Auspicado por:



28 y 29 de Junio de 2018

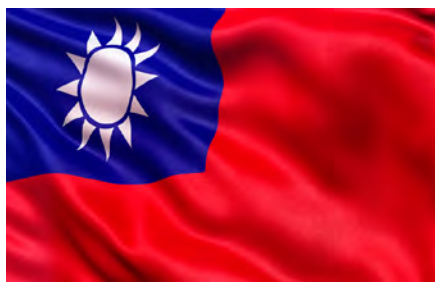
**Grand Tikal Futura Hotel**  
 Salones Kaminal Juyú y Chichen Itzá  
 De 7:00-18:00 horas

**Costos:**

Socios y miembros del PEEC Q 500.00  
 No socios Q 650.00  
 Estudiantes Q 400.00  
 Extranjeros: \$85.00 USD

Incluye: 2 Coffee Breaks por día

Información e inscripción: [gerencia@aqbg.org](mailto:gerencia@aqbg.org)



## Report from the Chinese Association for Clinical Biochemistry (Taiwan)

by *Woei-horng Fang*  
Taiwan National Representative

This brief report summarizes some of the highlights of activities for CACB during the first half Year of 2018.

1) CACB annual conference and scientific symposium, in conjunction with the 33rd Joint Annual Conference of Biomedical Science (JACBS)



Special Lecture speaker Dr. Jozica Habijanic  
and CACB Board members

CACB held its annual meeting during the 33rd Joint Annual Conference of Biomedical Science (JACBS) held at the National Defense Medical University Campus, Taipei on 24-25 March 2018. We invited Dr. Jozica Habijanic, Head, Strategic Development Asia Pacific, Roche Diagnostic Asia Pacific, to deliver a special lecture on *"The Future of Healthcare and Diagnostics: AI Application."* She shared valuable experiences with us from the vision of corporate sector ranging from recent advances to the future developments in health care and diagnostics. CACB also organized a symposium *"Metabolism and Disease from Research to Clinical Diagnosis"*. Three speakers shared their experiences in recent development of in vitro diagnostic technology. Ching-Hua Kuo, Professor of School of Pharmacy, National Taiwan University, presented *"Development of analytical methods for metabolomics studies and therapeutic drug monitoring."* Dr. Ching-Ying Kuo,

Professor of Department of Clinical Laboratory Sciences and Medical Biotechnology, National Taiwan University, presented *"Altered mitochondrial metabolism regulates breast cancer tumorigenicity."* Mei-Ling Cheng, Professor of Healthy Aging Research Center, Metabolomics Core Laboratory, Chang Gung University, presented *"Metabolomics in human health."* Following the symposium, the student research oral presentation competition and poster contest were also held. Overall, the two-day conference was very successful and truly an enjoyable academic gathering for the attending members of CACB.

Election for the CACB Executive Board 2018-2021: Ms. Hsiao-Chen Ning ([ning@cgmh.org.tw](mailto:ning@cgmh.org.tw)), Chief Technologist, Department of Laboratory Medicine, Chang Gung Memorial Hospital, was elected as the President. The immediate past-president Dr. Woei-horng Fang will serve as Executive Board member and National Representative to IFCC for the same period.

The new Secretary General is Dr. Ching-Ying Kuo ([cy-kuo27@ntu.edu.tw](mailto:cy-kuo27@ntu.edu.tw)), Assistant Professor of the Department of Clinical Laboratory Sciences and Medical Biotechnology, College of Medicine, National Taiwan University.



CACB newly elected president Ms. Hsiao-Chen Ning  
(center in the front) and Board members for 2018-2021

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2) CACB in conjunction with Dept CLSMB, NTU, and Biomedical Technology and Device Research Laboratories, Industrial Technology Research Institute organized a special lecture to invite Dr. Alan Wu, Professor Laboratory Medicine, Chief, Clinical Chemistry Laboratory, San Francisco General Hospital, to deliver a speech of *"Promoting the value of the clinical lab to students, patients and the general*

*public."* CACB members and students from Dept CLSMB, NTU enjoyed the talk followed by an enthusiastic discussion. This special lecture also served as the official launch of the traditional Chinese edition for Dr. Wu's book: *"The Hidden Assassin: When Clinical Lab Tests Go Awry."* All the fans were very happy to have Dr. Wu's signature on the front page of the books.



CACB Board members with Dr. Alan Wu and his newly published traditional Chinese edition book

## News from the IFCC Website



### IFCC Annual Report 2017

Do you want to know about the activities that were carried out in 2017 by IFCC and its members? The IFCC Annual Report 2017 compiled by Dr. David Kinniburgh, IFCC Secretary, is now available. A message from the IFCC past President, Prof. Maurizio Ferrari, welcomes the reader, followed by reports from IFCC Officers on key projects covering a wide range of clinical, scientific, educational and communication related topics. National or Area Societies and Regional Federation reports are also included, allowing the opportunity to communicate their activities to other members.

[Read more](#)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



## News from the Saudi Society for Clinical Chemistry (SSCC)

### Newly-elected SSCC Board members for 2018-2020

*by Anwar Borai*

*Saudi Arabia National Representative*



Saudi Society for Clinical Chemistry (SSCC) is a national scientific and medical professional organization dedicated to better health through laboratory medicine in Saudi Arabia.

On 7 May 2017 the General Assembly for the society was held at the Saudi Commission for Health Specialties in the capital city of Riyadh to elect a new board for the society.

The SSCC is pleased to announce that Dr. Samia Sobki, MBBS, Msc, FRCPATH, Consultant and Head of Clinical Chemistry Division, Prince Sultan Military Medical City has been elected to serve on the SSCC new Board as president-elect starting in May 2018. Other elected members of the new board are as follow; Dr.

Ali Al Othaim as Vice President, Mr. Nawaf Otaibi as Treasurer Officer and Dr. Zuhair Awan as Secretary of the Executive Board. These new board members will begin their terms immediately for a period of three years.

The SSCC Board and members, wish to extend an enormous and heartfelt thank to the Past President, Dr. Walid Al Tamimi, for his dedication starting from the establishment of the society in 2016 through his leadership in the past three years. Thanks to the previous board members for their dedicated efforts and excellent performance during the last tournament of the society.

Finally, best wishes for the continued success with the new board format.



The new Board members of the SSCC

## Essential underpinnings of Clinical Laboratory Reference Values discussed at the French Academy of Medicine – a SFBC initiative



**by Katell Peoc'h**

*co-Chair SFBC-SD committee ([www.sfbc-asso.fr](http://www.sfbc-asso.fr))*

*Assistant Professor Univ. Denis Diderot (Paris VII)*

*Biochemistry Dept., Univ Hospital Beaujon AP-HP*

**Bernard Gouget**

*SFBC, International Committee*

*Counselor for Public Health FHF*

*Chair, Human Health Care Committee-COFRAC*

*IFCC past Chair-Nominations Committee*



***On 24 January 2018, Prof. Marc Delpéch, SFBC President, Dr. Remy Couderc, Trousseau, Univ. Hospital AP-HP, in coordination with Prof. Edgard Delvin, Ste. Justine University Health Centre in Montreal (CA) organized a one-day joint symposium with the French National Academy of Medicine and the French Academy of Pharmaceutical Sciences, to discuss the clinical efficiency of laboratory testing and how to define laboratory reference values and decision limits.***

Prof. Christian Châtelain, President of the French National Academy of Medicine and Prof. Jean Loup

Parier, President of French National Academy of Pharmacy welcomed the attendees. They drew attention that collaboration of the two Academies is increasingly needed with the emerging new health-related technologies and approaches in pharmaceutical sciences. Such initiatives addressing critical issues in health, medicine, pharmaceutical sciences and related policies inspire positive action across all fields of laboratory medicine, and allow anticipating new societal needs as well as inherent professional changes. The Academy of Pharmacy recently published a series of reports and

*Article continued on next page*



press releases on POCT, self-testing, physicians' office testing, as well as on strategies and guidelines in serology standardization.

The two Presidents congratulated Dr. Katell Peoc'h, co-Chair SFBC-SD committee, for having assembled a real star cast of speakers to explore how strong the impact of Laboratory Medicine on the continuum of patient care and on early diagnosis is. Proper reference values of biological constituents provided on laboratory reports are essential for an appropriate interpretation of medical exam results, as they may significantly impact clinical decision-making and thus the quality of patient care.

Prof. J Henny, from INSERM UMRS 011, opened the first session, chaired by Prof. Edgard Delvin, Corresponding member of the French Academy of Medicine, with a talk entitled *"Reference values: strengths, weaknesses and challenges"*. He presented the different studies from the IFCC C-RIDL and the different methodologies that can be used to determine decision limits.

Dr. Pierre-Jean Lamy, Co-CEO Genomic Analysis Institute, then asked *"To test or not to test for PSA: that is the question"*. He stressed that PSA is an easy blood test to perform that has quickly been adopted -without waiting for evidence showing that it actually worked. For many years, not enough information was available to recommend for or against PSA testing. He further underlined that the PSA test not being accurate from a clinical point of view creates anxiety due to false positive results that may lead to further testing resulting in negative results. It also has the potential of diagnosing a low-risk cancer for which the treatment may be worse than the disease. He concluded that following the patient closely without treatment might be preferable. The US Preventive Services Task Force (USPSTF) recommends for men aged 55 to 69 years, the decision to undergo periodic PSA-based screening for prostate cancer should be an individual one. Before deciding being screened, men should have an opportunity to discuss the potential benefits and harms of screening with their clinician and to incorporate their values and preferences in the decision.

Prof. François Richard, urologist at La Pitié-Salpêtrière University Hospital AP-HP and Member of the French Academy of Medicine, said that in France out of 11.9 million men over 40 years with no known prostate cancer, 3.4 million (28.9%) had at least one PSA test in the year 2015. He further warned that the use of a single elevated PSA level to screen positive for prostate cancer is controversial due to the low specificity of the test and the questionable benefits of PSA screening on prostate cancer mortality.

Prof. Liliane Grangeot-Keros, Secretary of the French Academy of Pharmacy, and WHO expert, chaired the second session on serology. Dr. Christelle Vauloup-Felous explained that the interpretation of rubella laboratory results must always take into account relevant clinical and epidemiological data. Prof. Olivier Picone, Obstetrician, Louis Mourier University Hospital AP-HP, said that the detection of rubella specific IgM is usually used for the diagnosis, and that although commercial assays are available they vary in sensitivity and specificity. Consequently, it is essential that laboratory results be interpreted in the context of full clinical details to avoid misinterpretation of results and to minimize anxiety for the patient, especially if termination of pregnancy is considered.

The third session chaired by Prof. Dominique Bonnefont-Rousselot, Member of the French Academy of Pharmacy was focused on *"Defining reference values and decisions limits"*. *De facto*, many quantities assayed in clinical laboratories demonstrated age-related changes; in particular in early life, adolescence, old age, and after the menopause in females.

Prof. Edgard Delvin underlined that clinical interpretation of lab results relies heavily on the availability of appropriate population-based reference intervals or decision limits developed through clinical outcomes studies. The need for sound evidence-based reference intervals has been largely overlooked particularly in paediatric and elderly populations. In the field of paediatric medicine, accurate age and sex specific intervals established using samples from healthy children have, for a long time, not been available, forcing many paediatric laboratories to report adult reference intervals. Dr. Rémy Couderc, Head, Biochemistry Department, Trousseau University Hospital AP-HP,

reported that several international studies have addressed this issue including CALIPER, CHILD-X, KIGGs, PEDREF and the current conclusions of the SFBC working group.

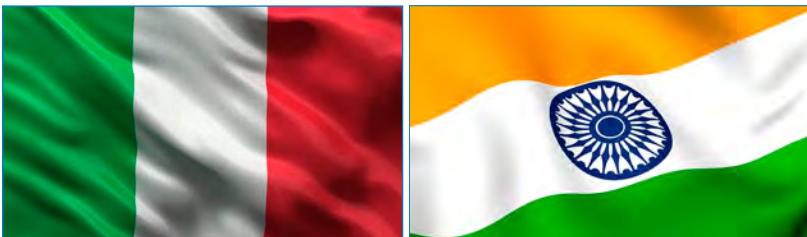
Dr. Maëlle Beunardeau, Geriatrician AP-HP, discussed the biological variations and reference values in elderly people. Physiologic changes over the years of a long life seemed to be responsible for impairment of regulation or function of many organ systems. The presence of multiple diseases in elderly patients, as well as the many medications often taken, are no doubt more sources of confusion and dismay in the correlation of between the laboratory test results and the clinical evaluation than the lack of adequate reference ranges specifically compiled for the elderly.

Focusing on the future, Prof. Michel Vidaud, Geneticist at Cochin University Hospital AP-HP, discussed the impact of genetic variability on reference values and underlined the need to take this variable into account in order to refine the medical decision. He delineated

the different genomic variations integrating the germinal genome, *de novo* mutations, post-zygotic mutations, mutations accumulated over time, and mutations in the tumour cells. He pointed out that the constant modification of the genome has thus to be taken into consideration as an additional element variation in biological reference values.

At the conclusion of the conference, Dr. Roselyne Garnotel, Assistant Prof., Biochemistry Reims University Health Centre, coordinated a round table with representatives from various horizons including public, private sectors as well as from the industry and from the academies to address the challenges and the opportunities of the “*Normal reference Laboratory values*”. Today, Clinical Laboratories are positioned to play a pivotal role in the transformation of medicine towards patient-centredness and care coordination for each individual. It is also clear that further collaborations between clinicians and biologists are needed even more to assure holistic patient care.

## IFCC PROFESSIONAL SCIENTIFIC EXCHANGE PROGRAMME (PSEP)



### My experience in Rome, Italy

*by Wahid Ali*

*King Georges Medical University, Lucknow, India*

***Dr. Wahid Ali (M.Sc., Ph.D., MISAR, MISSRF, MABS) is an Associate Professor in the P.G Department of Pathology, King Georges Medical University, Lucknow.***

I was hosted by Prof. Sergio Bernardini (MD, PhD), Professor of clinical biochemistry at University of Rome, and Head Physician of clinical molecular biology of the Department of internal medicine unit at Tor Vergata University Hospital.

University of Rome Tor Vergata, established in 1982, is known for providing high quality education in field of medicine and surgery to students. The University possesses one of the most modern University Hospitals

in Italy (Tor Vergata Polyclinic), with state-of-the-art medical equipment on campus. The university hospital is well equipped with diagnostic and therapeutic vanguard structures and is considered a flagship hospital at national and international level.

#### THE AIM OF MY VISIT WAS THE FOLLOWING:

- To learn the basic analytical differences between cTnT and cTnI in the population of the host institution.
- To standardize the laboratory methodology for hsTropI assay in our setup.

*Article continued on next page*

- To characterize the silent features and superiority of hsTropI over routine TropT test.
- To explore the molecular mechanism for the raised hsTropT in acute MI subjects.
- To correlate the molecular and biochemical indices further to recommend the hsTropI in ACS patients of northern India.

#### THE FOLLOWING OUTCOMES WERE ACHIEVED:

- The basic analytical differences between cTnT and cTnI in the population of host institution were analysed.
- The laboratory methodology for hsTropI assay in our setup was standardized.
- The salient features and superiority of hsTropI over routine TropT test were characterized.
- The molecular mechanism for the raised hsTropT in acute MI subjects was explored.
- The molecular and biochemical indices were correlated and hsTropI assay is recommended in ACS patients of northern India.

- The laboratory sketch and the things learned are being implemented in our laboratory to produce good results.

I would like to express my special thanks of gratitude to Prof. Sergio Bernardini from University of Rome for giving me the golden opportunity to be a part of IFCC Professional Exchange Programme. It has been a real pleasure to work with these very fine and capable professionals.

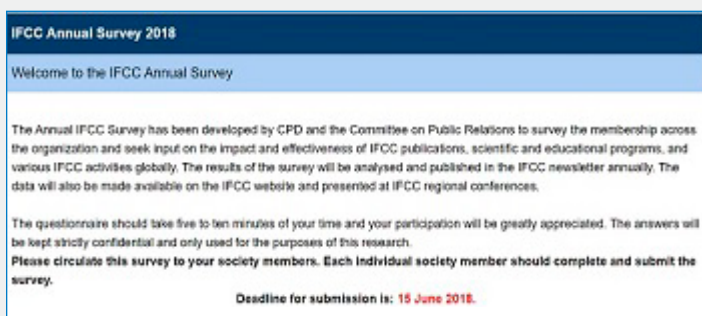
I would also like to give my vote of thanks to our honourable Vice-Chancellor, Prof. M.L.B Bhatt, for his extensive support and encouragement. I have insufficient words to express my gratitude to him.

My sincere thanks to the Indian Association of Clinical Biochemists (ACBI), recognizing their support. Without it, I would have done very little.

Through participation in this exchange, I feel particularly privileged to be acting as a catalyst between the two great nations.

The full report can be accessed [here](#).

## News from the IFCC Website



### 2018 IFCC Membership survey

The Annual IFCC Survey has been developed by CPD and the Committee on Public Relations to survey the membership across the organization, and seek input on the impact and effectiveness of IFCC publications, scientific and educational programmes, and various IFCC activities globally.

Your feedback is important to design improved educational and communication tools. Don't miss out! Take 10 minutes to complete the survey today.

**Please circulate this survey to your society members.  
Each individual society member should complete and submit the survey.**

[https://www.surveymonkey.com/r/IFCC-Membership\\_2018](https://www.surveymonkey.com/r/IFCC-Membership_2018)

**The survey closes on June 15.**

## News from the IFCC Website



### C-CLM Interactive Case Scenarios

C-CLM is happy to present a second case scenario on “Short-Term and Long-Term Biases in Internal QC Results”. Prof. Aye Aye Khine Wamono, will evaluate responses and provide feedback through the IFCC webpage. Please submit your answers directly to Prof. Wamono. The C-CLM looks forward to your participation and performing fruitful interactive discussions with you!

[Read more](#)

## IFCC's Calendar of Congresses, Conferences & Events

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

Jun 20 - 22, 2018		<i>International IFCC Course on Flow Cytometry</i>	Istanbul, TR
Jul 2 - 4, 2018		<i>1st IFCC, EFLM, AFCB Conference "Laboratory Medicine: Meeting the needs of Mediterranean Nations"</i>	Rome, IT
May 19 - 23, 2019		<i>XXIII IFCC - EFLM EuroMedLab Barcelona 2019</i>	Barcelona, ES
Sep 11 - 13, 2019	 COLABIOCLI	<i>COLABIOCLI Regional Congress 2019</i>	Panama, PA
Nov 17 - 20, 2019		<i>APFCB Regional Congress 2019</i>	Jaipur, IN

*Calendar continued on next page*

May 24 - 28, 2020		<i>XXIV IFCC WorldLab - Seoul 2020</i>	Seoul, KR
May 16 - 20, 2021		<i>XXIV IFCC - EFLM EuroMedLab - Munich 2021</i>	Munich, DE
May 21 - 25, 2023		<i>XXV IFCC - EFLM WorldLab - EuroMedLab - Rome 2023</i>	Rome, IT

### Calendar of events with IFCC auspices

May 28 - Oct 11, 2018	<i>Virtual Postgraduate Course in Control of Analytical Quality in the Clinical Laboratory - MODULE I - VIII</i>	Online
Jun 12 - 15, 2018	<i>XXXVI Nordic Congress of Clinical Chemistry</i>	Helsinki, FI
Jun 18 - 19, 2018	<i>2nd EFLM Strategic Conference "The end of Laboratory Medicine as we know it? Handling disruption of Laboratory Medicine in digital health"</i>	Mannheim, DE
Jun 21 - 22, 2018	<i>7th International Symposium on Critical Care Testing and Blood Gases</i>	Antibes, FR
June 27, 2018	<i>Student Conference prior the Clinical Chemistry Iberoamerican Symposium and Expolab, Guatemala 2018</i>	Guatemala City, GT
Jun 28 - 29, 2018	<i>Clinical Chemistry Iberoamerican Symposium and Expolab Guatemala 2018</i>	Guatemala City, GT
Jun 28, 2018	<i>Vietnam Chemical Pathology Course 2018</i>	Ho Chi Min, VN
Jun 30 - Jul 3, 2018	<i>International Society for Enzymology Conference</i>	Naxos, GR
Jul 13 - 14, 2018	<i>Turning Science Into Caring (TSIC)</i>	Shanghai, CN
Aug 25 - 28, 2018	<i>15th Iranian National Congress of Biochemistry and the 6th International Congress of Biochemistry and Molecular Biology</i>	Isfahan, IR
Sept 3 - 5, 2018	<i>AACB AIMS 2018 Combined Scientific Meeting</i>	Sydney, AU
Sept 6 - 7, 2018	<i>6th Chromatography Mass Spectrometry Satellite Meeting and Inaugural Chromatography Mass Spectrometry Educational Workshop</i>	Sydney, AU
Sept 6 - 8, 2018	<i>The 15th Asian Society of Clinical Pathology and Laboratory Medicine</i>	Ulaanbaatar, MN

Calendar continued on next page

Sep 26 - 29, 2018	<i>15th Annual Meeting of the German Society for Clinical Chemistry and Laboratory Medicine - The foundation for diagnosis and therapy</i>	Mannheim, DE
Sep 30 - Oct 3, 2018	<i>Santorini Conference "Systems medicine and personalised health &amp; therapy" - "The odyssey from hope to practice"</i>	Santorini, GR
Oct 3 - 5, 2018	<i>26th BCLF Meeting and 6th National Congress of MSMBLM</i>	Skopje, MK
Oct 10 - 13, 2018	<i>5th EFLM UEMS European Congress in Laboratory Medicine</i>	Antalya, TR
Oct 10 - 13, 2018	<i>16th National Congress of Clinical Chemistry</i>	Alexandroupoli, GR
Oct 15 - 20, 2018	<i>Conference of the Association of Clinical Chemists of Nigeria (ACCN)</i>	Lagos, NG
Oct 16 - 17, 2018	<i>2èmes Journées Francophones de Biologie Médicale</i>	Paris, FR
Oct 17 - 20, 2018	<i>XIII Ecuadorian Congress of Clinical Biochemistry and IX International Congress of Clinical Biochemistry</i>	Riobamba, EC
Oct 18 - 19, 2018	<i>Journées de l'innovation en biologie (JIB 2018)</i>	Paris, FR
Oct 23 - 25, 2018	<i>Patologia e Medicina di Laboratorio 4.0</i>	Acicastello, IT
Oct 30, 2018	<i>International Conference on Laboratory Medicine "Laboratory Medicine: 25 Years On"</i>	Padova, IT
Nov 1 - 4, 2018	<i>2nd International Cell Death Research Congress</i>	Izmir, TR
Nov 1 - 3, 2018	<i>LMCE 2018 and KSLM 59th Annual Meeting</i>	Seoul, KR
Nov 9 - 12, 2018	<i>18º Congreso Internacional del Colegio Nacional de Bacteriología</i>	Barranquilla, CO
Nov 28 - Dec 1, 2018	<i>II International Conference of the Bolivian Society of Clinical Biochemistry</i>	La Paz, BO
Nov 29, 2018	<i>International Scientific Meeting of the Centre of Metrological Traceability in Laboratory Medicine (CIRME) "Standardization in Laboratory Medicine and Patient Safety"</i>	Milan, IT
Dec 7 - 8, 2018	<i>52e Journée de Biologie Praticienne</i>	Paris, FR
Jun 9 - 12, 2020	<i>XXXVII Nordic Congress in Medical Biochemistry</i>	Trondheim, NO

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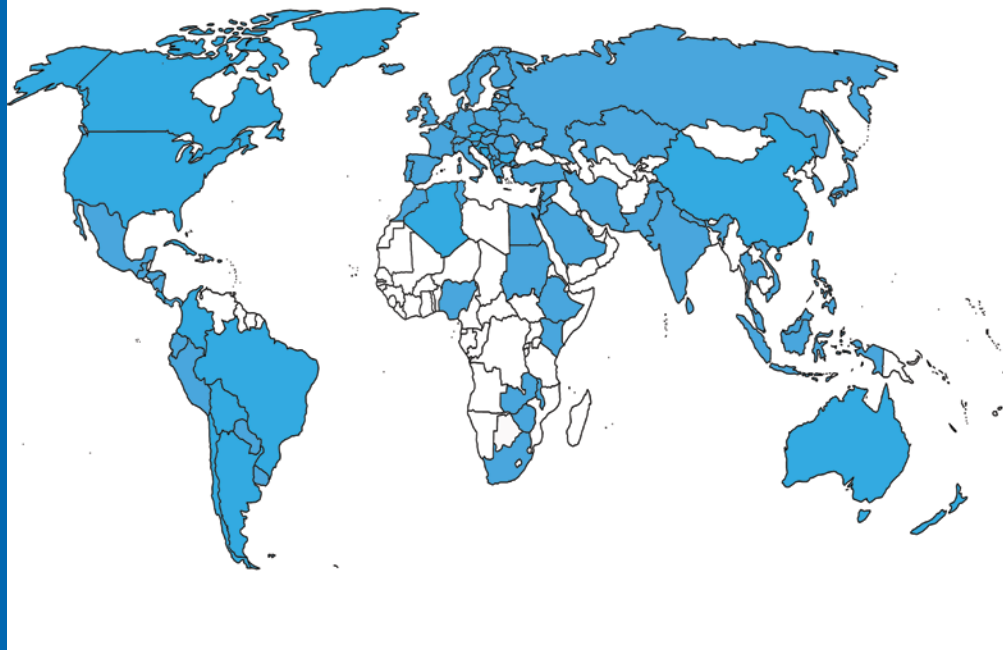
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