

# e-Newsletter



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International Federation of Clinical Chemistry and Laboratory Medicine



January - February  
2015

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## Introducing the new IFCC President and the Executive Board

*Compiled by Prof. Tahir Pillay  
e-NewsLetter Editor*

### New IFCC Executive Board

The new IFCC executive board took office in Jan 2015. The first two months of this year have been extremely busy for the board with the first meeting having taken place in Milan, at the IFCC office, on 30 and 31 January. The Board addressed a large number of routine and special items and approved the Strategic Objectives for the triennial period 2015-2017.

### The new IFCC President

**Maurizio Ferrari (M.D.)**, is Full Professor of Clinical Pathology, University Vita-Salute San Raffaele, Director of Clinical Molecular Biology and Cytogenetics Laboratory, and Head of Genomic Unit for the Diagnosis of Human Pathologies, Division of Genetics and Cell Biology, IRCCS San Raffaele, Milan, Italy. He received his Degree in Medicine at the Milan Uni-



## IFCC Executive Board 2015 - 2017



**Maurizio FERRARI**  
President



**Graham BEASTALL**  
Past President



**Sergio BERNARDINI**  
Secretary



**Tomris OZBEN**  
Treasurer



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Corporate Representative



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Member



**Rosa SIERRA-AMOR**  
Member



**Vanessa STEENKAMP**  
Member

versity, is Specialized in Pediatrics, Haematology and Medical Genetics. He was a postdoctoral fellow at Hospital Paul Brousse, Villejuif, Paris and Honorary Registrar in Haematology at UCH, London.

He was Scientific Coordinator of Clinical Research, IRCCS H San Raffaele, Milan (1996-1999), Chairman of Committee on Clinical Molecular Biology Curriculum of IFCC (2002-2007), member of the Education and Management Division of IFCC (2008-2011).

He was Chairman of the Education and Management Division of IFCC (2012-2014), member of IFCC Task Force on Pharmacogenetics (from 2008), advisor of CLSI Committee on Molecular Methods.

He is Dean of Masters Degree in Molecular and Cellular Medical Biotechnology (2008 at present) and President of the European Society of Predictive Medicine (2009 at present).

In 2004, he received the IFCC-Abbott Award for Significant Contributions in Molecular Diagnostics.

His scientific interests are oriented mainly on molecular diagnostic methods, nucleic acids circulating in maternal plasma and molecular studies of several genetic diseases. He developed methods for DNA analysis such as multiplex PCR and capillary electrophoresis, also in a temporal thermal gradient, set up a method involving the ligase chain reaction (LCR) and developed a new method known as double-gradient DGGE (DG-DGGE) for the identification of unknown mutations.

In the last 4-5 years he has focused his research activity on the detection of foetal DNA in maternal plasma for non-invasive prenatal diagnosis and for diagnostic application in the genetic and oncology field. At present, his research is focused on the development of diagnostic tests with the application of the next generation sequencing.

He is author of 849 publications: peer reviewed journals: 246; other journals: 67; books: 1; book chapters: 45; as well as 490 abstracts at international and national congresses. Total I.F. 1113,83; h-index:42 (scholar Google); citations: 8846; i-10 index:131.

## Position statement of Prof. Ferrari

In the future it is vitally important that IFCC continues to support the following existing programs:

- to increase scientific credibility by adding new task forces and by increasing the activities of the different divisions;
- to link laboratory medicine strongly to patient healthcare;
- to improve the globalization of laboratory medicine by increasing the activities both in developed and developing countries;
- to be globally active by establishing new collaborations with international organizations and by supporting international and regional congresses, i.e., through the Visiting Lecturer Programme;
- to have a clear and watchful financial management.

I strongly believe that new IFCC initiatives should focus on:

- an increasing effort in the different activities in the developing countries;
- adding new developing countries to IFCC;
- improving the quality standards of laboratory medicine all over the world;
- starting new activities in the advanced technological areas;
- increasing the relationships of IFCC with clinical organizations to establish a leading role in personalized medicine;
- adding new connections to international organizations to increase the leadership in the quality of laboratory medicine and to have a greater recognition of the clinical value of our profession;
- increasing IFCC income in order to increase the services and support to its members and Regional Federations.

## Executive Board's strategic direction

The Executive Board work focused on the possible projects for the next three years: the result of this effort is being organized in the IFCC Strategic Plan 2015-2017, that will be the guideline of all IFCC activities in the next triennial period. Representatives of Regional Members have been invited to participate and contribute to the definition of IFCC priorities.

## IFCC Specialized Conference “Biomarkers in Alzheimer Disease” Rome – 14 November 2014

*by Prof. Sergio Bernardini*  
*IFCC Secretary*

The aim of this Conference was to bring together laboratory professionals, neuroimaging experts, neuropathologists and clinicians to debate the possible role of biomarkers in the differential diagnosis of Dementia in a sort of brainstorming. Some of them are among the greatest experts in the world in this issue and they have shed some light in this complex topic.

In particular, Dr. Marina Boccardi, from The National Alzheimer Center in Brescia, focussed his presentation on the AD definition; Prof. Kay Blennow, from the Dept. of Clinical Neuroscience, University of Gothenburg, gave a glance at the role of laboratory biomarkers in the diagnosis of dementia; Prof. Gabor Kovacs from the Institute of Neurology, Medical University of Vienna showed the neuropathological aspects in AD; Prof. Lucilla Parnetti, from the Centre for Memory Disturbances at the Perugia University, talked about the potential new issues and challenges in the laboratory diagnosis of AD; Prof. Armand Pierret Laudet, from the Department of Biochemistry and Molecular Biology-Center Hospitalier Universitarie de Lyon, focussed on the preanalytical and analytical aspects of CSF biomarkers assay, Prof. Agneta Nordberg from the Clinical Neuroscience at the Karolinska Institute in Stockholm talked about the Molecular imaging techniques in AD and their correlation with CSF biomarkers.

From this meeting it was clear that dementia is a tremendous challenge for the future. A human and social challenge and a challenge for sustainability on the part of the health system. It is an extremely complex world even if dementia can represent the evolution of many different neurodegenerative diseases with AD being the most common form of dementia.

Often the clinical symptoms of these disorders are the culmination of a long road and it is necessary to

advance the diagnosis as early as possible to slow the progression of the disease. Sometimes the clinical, neuroimaging and pathologic phenotype may be heterogeneous, and the coexistence of other pathologies, can complicate the differential diagnosis with other diseases that lead to dementia or to a cognitive impairment without dementia: fronto-temporal dementia, Parkinson's disease, synucleinopathies, vascular dementia, prion disease, multiple sclerosis and pseudo-dementias.

From the laboratory point of view it should be pointed out that to date the overall variability of available biomarkers (both diagnostic and progression markers) remains too high to allow assignment of universal biomarkers cut-off values for a specific intended use. The harmonization and standardization between different methods are absolutely needed including the creation of certified reference materials which is being carried out as a collaborative effort between Alzheimer's Association, IFCC and the Institute for Reference Materials and Measurements.

Moreover the new approaches in biomarkers discovery, the pathogenesis-driven approach or screening technology-driven approach (proteomics, metabolomics), often show conflicting results because of different analytical platforms, different matrices, different panel of metabolites studied, different clinical cohorts, and preanalytical confounding factors. Many promising studies are ongoing with amyloid oligomers, neurofilaments, CSF-F isoprostanes, CSF aminoacids and microRNAs.

At the same time the integration of the data from the routine laboratory with other laboratory techniques (Proteomics, Genomics, Flow Cytometry) and diagnostic tools (Radiology) is desirable for example the integration of laboratory data and positron emission tomography data for amyloid tracer retention (PiB and others) or for bilateral parieto-temporal hypo-

*Article continued on next page*

metabolism (FDG) or MRI for medial temporal/hypocampus atrophy as has been shown in the the last IWG 2 criteria for AD classification Moreover other roles of biomarkers have to be considered in clinical trials. To date clinical trials were driven by the amyloid cascade hypothesis and showed disappointing results with a small cognitive benefit in mild cognitive impairment. Probably a centralized laboratory analysis is needed as well as biomarkers which are

able to improve diagnostic accuracy, stratification of patients, to characterize the mechanism of action and the biochemical effects of drugs, to monitor disease progression, and assess the response to treatment. It is really a big challenge!

I'd like to thank Dr. Graham Beastall, President of IFCC, who opened the Conference with an excellent overview on the future of Laboratory Sciences and the Roche Diagnostic for its support.

## DIVISIONAL REPORT

### C-CMBC: Beginner's Course in Molecular Diagnostics - Manila, Philippines A short overview

*by Madelein Hoffman<sup>1\*</sup>, Verena Haselmann<sup>2</sup>, Parviz Ahmad-Nejad<sup>3</sup>,  
Atsushi Watanabe<sup>4</sup>, Andrea Ferreria-Gonzalez<sup>5</sup>, and Evi Lianidou<sup>6</sup>*

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\* IFCC Junior member

The IFCC Beginner's Course in Molecular Diagnostics is an initiative that is offered by the IFCC Clinical Molecular Biology Curriculum (C-CMBC) to all National Societies (1). This intense 6 day course teaches from the very basics to advanced molecular biology and is based on the idea that everything needed to perform basic Molecular Biology can fit into a suitcase and therefore would make it fairly inexpensive to perform Molecular Diagnostics all over the world. With the recent introduction of the IFCC junior member initiative, it also provides an opportunity for one member from each country visited to travel to the next, and help out in the practical sessions, network

and gain some invaluable experience. In this way this course brings people from different countries together allowing them to experience each other's customs, make friends and network.

Preparation for this year's 6<sup>th</sup> molecular Biology course started in May 2014, with announcements being sent to representatives of all IFCC member societies asking to express their interest in the course. Eight countries responded and expressed their interest in hosting the C-CMBC course. Applicants were then asked to attend the IFCC World Congress in Istanbul in June 2014 and to meet with the C-CMBC Committee members for further discussions.



*C-CMBC Manila Course group photo*

Two countries' representatives met with the committee members and after fruitful discussion it was decided to hold the next course in Manila, Philippines. Dr. Romeo Joseph Ignacio, President, and Dr. Leila Florento, former President of the Philippine Association of Medical Technologists (PAMET), Manila, acted as local partner covering organizational issues. Dr. Florento was sent by the PAMET as a trainee to the Institute for Clinical Chemistry, in Mannheim, Germany to receive an introduction to the course and upon her return to the Philippines, she was instrumental in locating a suitable venue for the course and confirming that all laboratory and lecture room requirements were met.

The Course was held from 14-19 December 2014 at the United Laboratories, Inc. in Manila. At the official course start, the IFCC Tutors' group was welcomed by Dr. Ignacio and Dr. Florento. The course was attended by 19 participants of heterogeneous professional backgrounds in molecular biology diagnostic skills ranging from "no idea" to "some DNA sequencing experience". The first day was dedicat-

ed to pre-course lectures, given by Dr. Andrea Ferreria-Gonzalez to bring everyone to the same level. On the first day it was announced that one participant would be chosen as an IFCC junior member based on his/her performance during all these days as well as on the results of the final written evaluation exam. Every morning thereafter started with an introductory lecture for the day's practical and ended off with informative and educational lectures from the C-CMBC tutors. Students randomly divided themselves into 5 groups for the practical sessions and followed a detailed practical manual provided by C-CMBC and printed by PAMET. All participants were enthusiastic about the practicals, asked questions and performed all steps with precision and in record time, resulting in successful solution preparation, DNA isolation, performing PCR reactions, allelic-specific DNA amplification, hybridization, and computer-lab work which entailed gene identification in OMIM, variant analysis in SNPdp/SNPedia, primer design in Primer 3, NEB cutter for *in-silico* restriction fragmentation analysis. This was the first time that a quantitative PCR experimental work was

added in the course. More specifically, the basics and clinical applications potential of qPCR were introduced to participants, by giving a specific lecture on that topic, and by combining this lecture with CMV quantitation in DNA isolated from peripheral blood. The last day finished off with computer-lab work and state of the art lectures, followed by a 30 mark question paper, and course questionnaire and last but not least the IFCC-Certificate Ceremony, where each participant received an IFCC certificate of completion and a CD containing all the course lectures, practical videos, results from each practical session and photographs that were taken during the course. Thereafter, goodbyes were said with everyone going their separate ways and back to their respective countries.

The hospitality and organization of all PAMET board members was impeccable. Everything was very comfortable, friendly and well organized. C-CMBC tutors were hosted by PAMET board members al-

most every evening after the course. We would like to thank all participants for their enthusiasm, and all the PAMET board members for their excellent hospitality and perfect organization of the course. We would also like to thank all IFCC C-CMBC course sponsors: Biorad, Eppendorf, Lesser-Loewe Foundation and Roche Diagnostics for providing essential equipment and reagents.

## References

1. Lianidou et al, *Advancing the education in molecular diagnostics: The IFCC-Initiative "Clinical Molecular Biology Curriculum" (C-CMBC); A ten year experience.*, *Clin.Chim. Acta*, 2014, Sep 25; 436:5-8
2. *IFCC C-CMBC Course Website:*  
<http://www.ifcc.org/ifcc-education-division/emd-committees/c-cmbc>



*C-CMBC Manila Course:  
Lab- training in setting up a PCR reaction*



*C-CMBC Manila Course: The Tutors and PAMET board members*



*C-CMBC Manila Course group photo*



*C-CMBC Manila Course: Experimental work*



*C-CMBC Manila Course: Lab training in setting up a PCR reaction*



*C-CMBC Manila Course: In-silico training in Molecular Diagnostics*



*C-CMBC Manila Course: The exams*



*C-CMBC Course Tutors (from left to right: Dr. Parviz Ahmad-Nejad, Dr. Atsushi Watanabe, Dr. Evi Lianidou, Dr. Verena Haselmann, and Dr. Andrea Ferreira-Gonzalez)*



*C-CMBC Manila Course: the IFCC Award ceremony*



## European Federation of Clinical Chemistry and Laboratory Medicine

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Join the *EFLM circulation list* from the EFLM homepage at [www.efcclm.eu](http://www.efcclm.eu)

### EFLM's initiatives for EUROMEDLAB 2015 in Paris

*by Maria Stella Graziani*  
*Chair of the EFLM Communications Committee*



#### 1. BURSARY PROGRAMME FOR YOUNG PARTICIPANTS

We are proud to announce that EFLM is promoting a bursary programme for young scientists attending the 21st IFCC-EFLM EuroMedLab Congress on 21-25 June 2015 in Paris (<http://www.paris2015.org>).

The bursaries will cover the cost of the travel and 4-night accommodation for a maximum of 900 Euros and the registration fee will be kindly offered by the local Congress Organizing Committee.

Eligible candidates must come from an EFLM Member Society and meet the following criteria:

- Young participants ( $\leq 40$  yrs at the date of the conference);
- Have a poster abstract accepted.

#### Applications must be accompanied by:

1. Short CV;
2. Copy of the ID or passport;
3. List of publications;
4. Document proving the membership of the National Society;
5. Notification of poster acceptance (notification of abstract acceptance/rejection will be sent by the congress organizers by March 31).

#### Please send your applications to:

[silvia.cattaneo@efcclm.eu](mailto:silvia.cattaneo@efcclm.eu)  
by **April 10, 2015**

### Invitation

# EFLM-Roche Scientific Award for Laboratory Medicine



### Announcement

This award has been created to honour an individual, who is a member of an EFLM National Society and has made unique contributions to the promotion and understanding of clinical chemistry throughout Europe or has made one or more contributions that have had a major impact on laboratory medicine.

The award consists of an amount of EUR 7.500 and will be presented at the 21<sup>st</sup> IFCC-EFLM EuroMedLab Congress to be held in Paris (FR) from 21 to 25 June 2015.

### Criteria

The nominee's contributions to promoting laboratory medicine at European level and/or promoting European laboratory medicine internationally should be well known and demonstrated by measurable outputs that made significant impact at scientific/clinical/educational/quality/organisational/policy/public level.

### Application procedure

- The nominated individual must be from a National Society which is a member of EFLM who fulfils the criteria and purpose of this award.
- None of the officers of the EFLM (i.e. members of the executive board and committee chairs) are eligible for the Award during their term of office.
- Nomination must be made through a formal letter submitted by a National Clinical Chemistry and Laboratory Medicine Society which is a full member of EFLM. The EFLM Executive Board encourages nominations of individuals from a country different from that one of the nominating person.
- Applications must include a statement with the reasons for the nomination, highlighting the accomplishments of the candidate along the lines of the listed eligibility criteria.
- Each nomination must be accompanied by curriculum vitae of the nominee including a bibliography demonstrating the individual's scientific or professional achievements.
- The nominee needs not be aware that a nomination has been made.
- The nomination must contain a statement that the individual was not nominated in the same year for any other EFLM or IFCC award.

Nominations and all supporting documents must be in English and submitted electronically to the EFLM office ([eflm@efcclm.eu](mailto:eflm@efcclm.eu)) by **31 March 2015**. Applications will be assessed by a panel of independent judges appointed by the EFLM Executive Board.

*For any further information please contact the EFLM Office at [eflm@efcclm.eu](mailto:eflm@efcclm.eu)*



# European Federation of Clinical Chemistry and Laboratory Medicine

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# EFLM SYMPOSIUM

Education in Clinical Chemistry and Laboratory Medicine

Prague, April 24 – 26, 2015



Meeting venue:

**First Faculty of Medicine  
Charles University in Prague**

U Nemocnice 4, Prague 2, Czech Republic

[www.educationprague2015.cz](http://www.educationprague2015.cz)

Dear colleagues,

We would like to invite you to the EFLM Symposium "Education in Clinical Chemistry and Laboratory Medicine," organized by the EFLM in cooperation with the Czech Society for Clinical Biochemistry. Our society was established in 1959 and belongs to long-time active members of IFCC and EFLM. We hosted EuroMedLab 2001 and the FESCC Symposium 2004 focused on postgraduate education. The announced symposium will pick up the threads of the first EFLM Education Symposium which met in Prague in March 2012. Its main topics will be:

- Harmonisation of education in laboratory medicine in Europe;
- Postgraduate training in laboratory medicine;
- Profession of the Specialist in Laboratory Medicine in Europe.

During lectures, workshops and round-table discus-

sions we aim to find the consensus on future orientation of education in clinical chemistry and laboratory medicine in Europe.

See you in Prague in April 2015!

**Tomáš Zima**, Conference chair

**Jaroslav Racek**, Conference chair



#### New deadlines for:

- Abstract submission – February 28, 2015
- Early fee registration – March 15, 2015

*The Preliminary Programme* is now available!



## European Federation of Clinical Chemistry and Laboratory Medicine

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### Report from the first EFLM strategic conference

The first EFLM Strategic Conference "Defining analytical performance goals 15 years after the Stockholm Conference" held in Milan (Italy) last November (24th - 25th) was very successful, with 241 participants (speakers included) from 41 different Countries, embracing the five Continents. The delegates came from the clinical laboratories, from EQAs provider, from professional organizations and from the manufacturers as well, demonstrating that the topic was of interest for the whole world of laboratory medicine.

The Stockholm Conference in 1999 was a landmark in trying to achieve a consensus on how quality requirements should be set and a hierarchy of models was established. The time has come to revisit this hierar-

chy (see Table 1), investigating to what extent it is still valid or if it should be modified or expanded, incorporating performance goals for qualitative tests and for the whole testing process (pre- and post-analytical aspects included).

#### Table 1: The Consensus Hierarchy from Stockholm Conference

**1. Evaluation of the effect of analytical performance on clinical outcomes in specific clinical settings**

**2. Evaluation of the effect of analytical performance on clinical decisions in general:**

- Data based on components of biological variation
- Data based on analysis of clinicians' opinions

*Article continued on next page*

### 3. Published professional recommendations:

- a. From national and international expert bodies
- b. From expert local groups or individuals

### 4. Performance goals set by:

- a. Regulatory bodies
- b. Organizers of External Quality Assessment (EQA) schemes

### 5. Goals based on the current state of the art:

- a. As demonstrated by data from EQA or Proficiency Testing scheme
- b. As found in current publications on methodology

According to Sverre Sandberg, Co-Chair of the conference with Mauro Panteghini, the ultimate goal of the meeting was to propose models to set analytical performance goals and to present these models in a new Consensus Document.

The Conference comprised 5 Sessions. The first day Sessions N 1, 2 and 3 examined the possibility and the pros and cons to base the performance criteria on clinical needs, on biological variation data, on state of the art, respectively. The second day, Session N 4 discussed the setting of performance criteria in different situations, such as the performance criteria needed for reference measurement procedures and reference materials preparation, or which criteria should be established in the implementation of metrological traceability (uncertainty budget). Furthermore, performance criteria for internal QC and EQA schemes and for qualitative tests were examined. Session 4 included also a summary on which models should be used to derive performance criteria for laboratory tests.

The last session was dedicated to the performance criteria and quality indicators to be adopted for the pre- and post-analytical phases.

At the end of the Conference, Sverre Sandberg summarized the content of the different presentations and illustrated the Consensus Document that was elaborated and approved by the Scientific Committee before the Conference and that was distributed to all the participants at the end of day 1, for further discussion.

Input to this document was given during and after the conference, and the document will be amended according to this before being published in Clinical Chemistry and Laboratory Medicine.

After two days of brilliant presentations and fruitful discussions, a number of issues are secured:

- The essence of Stockholm hierarchy is still valid, although new perspectives were forwarded including cautious modifications and explanatory additions.
- Three main models are available to set performances goals: some of these are better suited for certain measurands than for others:

#### Model 1

Based on the effect of analytical performance on clinical outcomes. This model is the most rationale since it is based on the actual clinical outcome; however, in practice it is applicable only to a few tests since it is difficult to show the direct effect of laboratory tests on medical outcome. Different options are available:

- Use the results of the outcome studies: how the analytical performance influences the clinical outcome
- Investigate by a simulation study the impact of the analytical performance on the probability of clinical outcomes
- Use surveys of clinicians or “experts” opinions to check the impact of analytical performance on medical decisions

#### Model 2

Based on components of biological variation of the measurand. This model seeks to minimize the ratio of the analytical noise to the biological signal. Its applicability can however be limited by the validity and robustness of the data on biological variation.

#### Model 3

Based on the state of the art. This model is the one where data is most easily available. It is linked to the highest level of analytical quality achievable with the currently available techniques. If the best laboratories can achieve only a “certain” analytical

quality not at the level required by Models 1 and 2, then manufacturers have to strive to develop better assays. On the other hand, if the majority of laboratories can achieve the analytical quality required by Model 1 and 2, then the laboratories that cannot, have to change their practice. With this model, however, there is no link or only a weak one between what is technically achievable at present and what is needed to obtain a better outcome for the patient (Model 1) or to minimize the ratio of the analytical noise to the biological signal (Model 2). For this reason, Model 3 is the least preferable model.

- The three models use different principles; the hierarchy applies only when high quality studies are available for each model. If the studies are of insufficient quality, then we have to be prepared to shift to a model where better data are available.
- Some measurands could have different performance goals dependent on the different clinical applications of the test. A typical example is the blood glucose that can be used in critical care units, for self-monitoring, for the diagnosis of glucose intolerance in outpatients.
- Concerning the performance goals for the pre- and post-analytical phases, it is time to go further and to include performance goals for these extra-analytical phases. The criteria should ideally follow the same models as those of the analytical phase.

To reinforce and continue the activities arisen from the Conference, EFLM is now launching a Task Force on “Performance goals in Laboratory Medicine” (TF-PG).

The Task Force comprises 5 groups (see Fig 1); these will have the structure of Task and Finishing Groups (TFG) and preferentially will end their work within two years. The names and the terms of reference of the TFG are the following:

**Performance criteria models for specific laboratory tests**

Aim is to allocate different tests to the different models described above, and to give an overview and a reason for why tests are allocated to different models.

**Harmonization of allowable limits in EQAS**

Aim is to define performance criteria for the most common analytes that can be used by EQAS organizers.

**Measurement total error**

Aim is to define how to use the total error concept or if it should be used at all (how can performance criteria for bias and imprecision be combined into performance criteria for total error?).

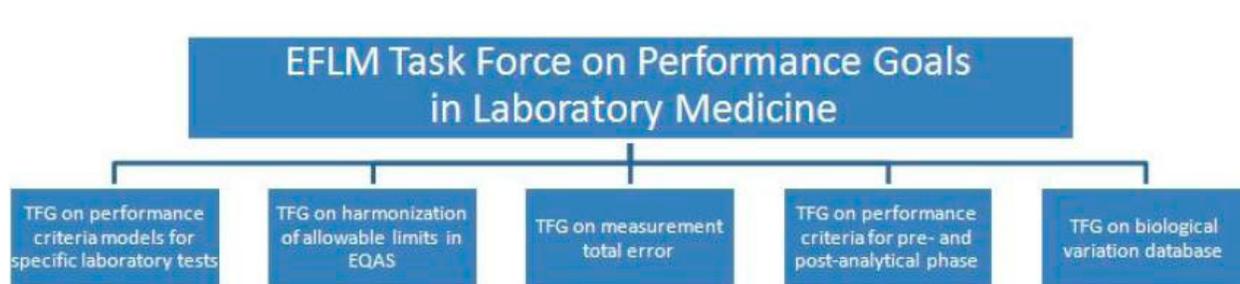
**Performance criteria for pre- and post-analytical phases**

Aim is to generate performance criteria for the pre- and post-analytical phases (and the total measurement process).

**Biological variation database**

Aim is to use a critical appraisal list to evaluate literature on biological variation and to generate a database containing, for each analyte, essential summary information from selected papers, so that it can be used for setting performance criteria based on biological variation.

**Figure 1 – Structure of the EFLM Task Force**





# European Federation of Clinical Chemistry and Laboratory Medicine

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**3<sup>rd</sup> EFLM-BD**

**European Conference on Preanalytical Phase**

*Preanalytical quality improvement -  
In pursuit of harmony*

**Porto**  
**2015**  
March 20-21



The focus of the conference is the management of the quality of the preanalytical laboratory practices. We have designed for you an attractive scientific programme with interactive discussions and e-voting to enable the exchange of ideas and knowledge related to some most common issues and everyday problems. Conference speakers will offer participants practical solutions and guidance for some most critical laboratory procedures.

We hope that you will enjoy both the scientific content of this meeting as well as the beauty of Porto - a vibrant as well as romantic city with a fascinating mixture of urban culture, rich historical heritage and beautiful surroundings and nature.



**Meeting venue:**

Porto Palácio Hotel  
Av. Boavista 1269  
4100-130 Porto, Portugal

**Organizers:**

**European Federation of Clinical Chemistry and Laboratory Medicine**

[www.efcclm.eu](http://www.efcclm.eu)



in collaboration with

**BD Diagnostics, Preanalytical Systems**

[www.bd.com](http://www.bd.com)



**To learn more about the conference, please visit:**

[www.preanalytical-phase.org](http://www.preanalytical-phase.org)





# European Federation of Clinical Chemistry and Laboratory Medicine

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## A renewed EFLM working group on “Distance education and e-learning”

*by Dragana Segulja*

*WG-DE Chair*

*Elizabeta Topic*

*C-ET Chair*

The working group Distance Education (WG-DE) has been re-established in autumn 2014 in the frame of EFLM Committee for Education and Training (C-ET). The main task of this working group is organising and administrating e-seminars as an efficient educational channel available to all EFLM societies' members. Distance education and e-learning offer many advantages: you have the renowned lecturer in your room, you can discuss and communicate with him, ask questions and finally you are invited to evaluate and judge the e-seminar. Finally, it should be mention that EFLM offers this kind of education free of charge.

In 2014 two e-seminars were organized. The first entitled “How can biological variation data for high sensitive troponins be related to current recommendations for diagnosing acute myocardial infarction” presented by Dr. Kristin Moberg Aakre from Norway, in October 2014, covered many important aspects of troponin measurement in diagnosis and monitoring acute coronary syndromes.

The second e-seminar entitled “Bias in clinical chemistry” was presented by Prof. Elvar Theodorsson from Sweden in December 2014. Since the issue of bias in analytical measurements has generated a lot of debate, the presenter underlined that the estimation and minimisation of bias in clinical chemistry is one of the most important tasks for laboratory organizations.

The presentations of both education events, together with adjunctive educational material have been posted on the EFLM web site (<http://www.efcclm.org/index.php/educational-material.html>), to be available to those EFLM members who could not attend the e-seminar.

In 2015 the WG-DE is going to organize a series of e-seminar. The speakers of these seminars are internationally recognized experts in different fields of Laboratory Medicine.. The list of the planned e-seminars is:

1. Opportunities for our profession and actions that need to be taken ahead of transposition of the Directive into national law. Prof. Gilbert Wieringa on January 29, 2015.
2. Interferences in the laboratory assessment of LDL cholesterol and HDL cholesterol, Presenter Prof. Michel Langlois in February, 2015.
3. Diagnosis and management of inherited metabolic disease - emerging therapies and the role of the laboratory. Presenter Prof. Ksenija Fumić in Spring 2015.
4. Managing the quality of phlebotomy Presented by Dr. Kjell Grankvist in November, 2015.
5. Models to set measurement performance requirements. Presenter Prof. Sverre Sandberg, in late autumn, 2015.
6. Quality indicators and performance characteristics in extra-analytical phases of laboratory testing. Presenter Prof. Mario Plebani in early winter 2015.

All information about e-seminars will be posted in due time on the EFLM web site home page.

We do hope that many people will be able to attend one (or more) of the 2015 EFLM e-seminars and that everybody find the available educational material useful for their continuous education.



## News from the Mexican National Society

### Eighth International Conference on Quality Mexico City 6 October 2014

*by Dr. Rosa Isabel Sierra-Amor*  
Corresponding member, IFCC News  
IFCC EB Member



To date, quality topics are of great interest to laboratory professionals with accreditation, risk management and cost analysis being at the top of the list in Latin America.

This year, BIORAD Mexico and Latin America organized the eighth International Conference on Quality, under the auspices of the Mexican Association of Clinical Laboratory Sciences, a Full Member society of IFCC, and IFCC C-CC.

The scientific programme included speakers from Mexico and the United States.

- The first topic was *“Laboratory accreditation and quality control”*, by Lic. Oliver Iruegas and QCB Isabel Alvarez, from the Laboratorio Dr. Moreira, Monterrey, NL, Mexico, an accredited laboratory based on ISO 15189 by UKAS since 2005 (Photo 1).
- The second talk was on *“How does poor quality affect total cost”*, by Ann Daley, MS, a laboratory consultant from Chi Solutions in the US (Photo 2).
- In addition, John Youth-Pacheco, PhD., a fellow researcher from BioRad US, spoke about *“Risk management: the new way to determine the frequency of control material”* (Photo 3).

*Article continued on next page*



Photo 1: Lic. Oliver Iruegas and QCB Isabel Alvarez from Mexico



Photo 2: Ann Daley, MS from the US



This important conference was organized in collaboration with BioRad local distributors from all around México and Latin America, giving the opportunity for 1491 professionals to attend the eighth International Conference on Quality either in person or by internet broadcast in real time.

Delegates were from Argentina, Chile, Ecuador, Dominican Republic, México, Uruguay and Venezuela. Chile had 32 remote sites and Mexico another 17 allowing more professionals to listen to the experts.

In Mexico City, attendees had the opportunity to shake hands with the speakers and discuss in person the topics. In addition, speakers were responding *in real time* to the questions that audience was asking by Messenger or Whatsapp.

For Mexico and Latin America, this conference was sponsored in full by BIORAD and has contributed extensively to improve the knowledge of quality issues of laboratory medicine professionals.

We hope to have several more conferences such as this in the years to come.

Photo 3:  
John Youth-Pacheco, PhD from the US



## COLABIOCLI CONGRESS INVITATION

### The XXII Latin American Congress of Clinical Biochemistry 2015

*by Dr. María del Carmen Pasquel  
President, Organizing Committee, XXII Congreso COLABIOCLI 2015*

Congreso  
Latinoamericano de  
Bioquímica Clínica y  
Ciencias de Laboratorio  
COLABIOCLI 2015

COLABIOCLI

ifcc  
International Federation  
of Clinical Chemistry  
and Laboratory Medicine

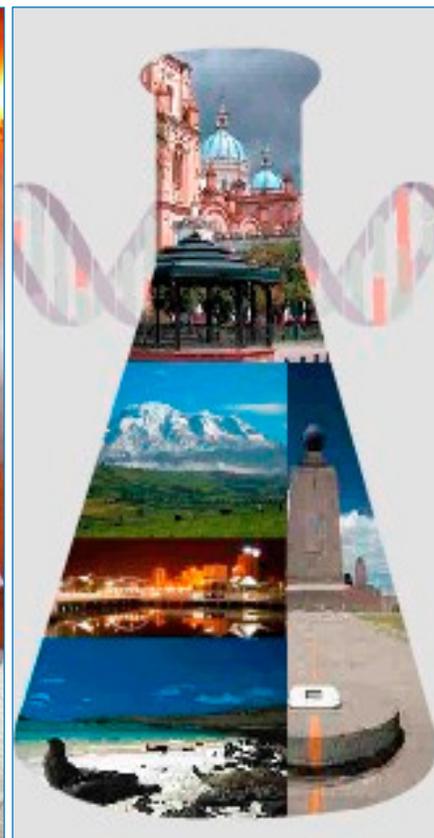
“Desde la Mitad del Mundo hacia la Bioquímica del nuevo Milenio”  
"From the Middle of the World to the Biochemistry of the New Millennium"  
"A partir da metade do mundo à bioquímica do novo milênio"

24, 25 y 26 Septiembre 2015

Quito - Ecuador

Informes en: [www.sebiocli-ec.org](http://www.sebiocli-ec.org)  
[congresocolabiocli2015@gmail.com](mailto:congresocolabiocli2015@gmail.com)

The Organizing Committee of the XXII Latin American Congress of Clinical Biochemistry and Laboratory Sciences and the Ecuadorian Society of Clinical Biochemistry "SEBIOCLI" cordially invites all professionals working in Clinical Laboratory Sciences to attend the conference in Quito, from 24 - 26 September 2015.



**From left to right:** Dr. María del Carmen Pasquel - OC President, Dr. Myriam Hail, Dr. Consuelo Valencia, QF Mary Saldarreaga - President SEBIOCLI, BF. Piedad Jaramillo - Secretary Organizing Committee, Dr. Isabel Fierro - Dean Faculty of Chemical Sciences UCE, Dr. Miriam Fernández, QF Amalia Suarez Treasurer Organizing Committee

## DRAFT PROGRAMME

### PRE-CONGRESSES

#### ➤ ADVANCED TECHNIQUES OF ANALYTICAL QUALITY

**SPONSOR:** Fundación Wallace Coulter y AACC

City: Quito

Date: Tuesday, Wednesday 22- 23 September 2015

Time: 09h00 - 18h00

Capacity: 50 Professionals

Location: JW Marriott Hotel Marriott

#### ➤ BIOMARKERS IN CARDIOVASCULAR DISEASES AND BRAIN VASCULAR - RISK FACTORS

**SPONSOR:** Fundación WIENER - LAB

City: Quito - SEBIOCLI PICHINCHA

Date: Tuesday, Wednesday 22-23 September 2015

Time: 09h00 - 18h00

Capacity: 50 Professionals

Location: Colegio de Químicos y Bioquímicos Farmacéuticos de Pichincha "CQBFP"

Address: Calle El Tiempo N39-106 y El Universo



## ➔ 5 COURSES DURING THE CONGRESS

City: Quito

Date: Thursday, Friday and Saturday 24- 26 September 2015

Time: 07h00 - 09h00

Capacity: According to room capacity

Location: JW Marriott Hotel

1. Hematology (07h00 - 10h00)
2. Preparation of internal auditors for management system
3. Instrumental control program  
quality control phase pre – analytical
4. Celiac disease
5. New concepts, diagnosis and immune diseases

## CONGRESS

Symposiums, conferences, round tables and plenary sessions covering different topics related to clinical laboratory science current scientific interest, discussed by professionals, scientists and researchers, Europeans and Americans who together with national exhibitors will make this scientific event will be presented efficient support and quality for your practice.

City: Quito

Date: 24-26 September 2015

Time: 09h15 - 18h00

Venue: Hotel JW Marriott

## EXPOLAB

Participants will have at their disposal the technological support of their work by the direct communication of their requirements to representatives of top international brands in equipment, reagents, and technology for the clinical laboratory, who will attend the Congress COLABIOCLI 2015.

## QUITO – CAPITAL OF ECUADOR

Quito is a World Heritage Site in 1978 for its architectural beauty in the Baroque art, has a constant spring climate. Its colonial town encloses culture, beauty and history.

Ecuador is a small country which is biodiverse, multicultural, multi-ethnic and has four worlds for you to enjoy and move in.

Quito and Ecuador await you!!!



## INFORMATION AND REGISTRATION

[congresocolabiocli2015@gmail.com](mailto:congresocolabiocli2015@gmail.com)

Detailed information and registration at:

[www.sebiocli-ec.org](http://www.sebiocli-ec.org)



*by Dr. María del Carmen Pasquel*

*President, Organizing Committee, XXII Congreso COLABIOCLI 2015*



Wiener Lab supports scientific work that has a direct and positive impact on laboratory science research carried out at the global level. With the Congress of the Latin American Confederation of Clinical Biochemistry, held every two years in different countries of Latin America under the auspices of scientific societies, the group is collaborating directly by providing the Wiener Lab prize.

The President of the Organizing Committee, Dr. María del Carmen Pasquel had the opportunity to talk directly with Dr. Rafael Rey - Marketing Manager, Wiener Lab during his visit to the city of Rosario in November. In this workshop it was possible to enter into such agreements, guidelines and support to be given by the Company Wiener Lab to the Ecuadorian Society of Clinical Biochemistry organizer COLABIOCLI XXII Congress 2015 to be held from 24 -26 September 2015 in Quito - Ecuador.

The award consists of a bonus incentive of USD 2000.00 plus all expenses paid (lodging, transportation) for the scientific winner, who will receive the award at the Opening Ceremony of the event. The guidelines to follow are on the conference website [www.sebiocli-ec.org](http://www.sebiocli-ec.org). The participant sends an anonymous description of their research to the President of the Organizing Committee.

An experienced panel composed of professionals from different countries review the scientific papers and one month before starting the conference the winner will be announced. The winner will attend the Congress to receive their prize and the work will be published in different media and magazines in the scientific world.

We encourage all professionals to submit their scientific research in Laboratory Sciences, for consideration at the XXII Congress COLABIOCLI 2015 in Quito - Ecuador, by sending an e-mail to the address below.

### INFORMATION AND REGISTRATION

[congresocolabiocli2015@gmail.com](mailto:congresocolabiocli2015@gmail.com)

Detailed information and registration at: [www.sebiocli-ec.org](http://www.sebiocli-ec.org)



#### **From left to right:**

*Dr. María del Carmen Pasquel - XXII Congress Organizing Committee President COLABIOCLI 2015*

*Dr. Rafael Rey - Wiener Lab Manager Marketing Group*

*Dr. Lida Morisoli - President Foundation Wiener Lab Scientific Committee*

# 4th Congress of the African Federation of Clinical Chemistry (AFCC) Victoria Falls, Zimbabwe – 28-30 April 2015



## Integrating Clinical Chemistry and Laboratory Medicine in Evidence Based P4 Medicine

Dear Colleagues,

As Chair of the Conference Organizing Committee (COC), I would like to invite you to the 4th Biennial Conference of the African Federation of Clinical Chemistry (AFCC), hosted by the Association of Clinical Biochemistry Zimbabwe (ACBZ). The conference will be held between April 28-30, 2015 in Victoria Falls.



Vanessa Steenkamp

The theme for the conference “Integrating Clinical Chemistry and Laboratory Medicine in Evidence Based P4 Medicine” is very appropriate as it encompasses the Preventive, Predictive, Personalized and Participatory aspects of Medicine all of which are essential to improve patient care.

The Scientific Committee is planning a diverse program with lectures by many eminent speakers from the continent and globally. I believe that this will be a great opportunity for the participants to have formal and informal mutual communication from other countries, pertaining to the most recent advances in the various exciting fields of clinical biochemistry.

I trust that participants from all AFCC Member Countries will attend, to ensure togetherness in the pursuit of our common goal in ensuring the advancement of clinical chemistry and laboratory medicine on our continent.

I hope that you will take this opportunity to visit the breathtaking sights, and enjoy the warm Zimbabwean spirit of friendship from this conference.

We look forward to welcoming you to this event.

**Vanessa Steenkamp**  
Chair, AFCC LabMed 2015  
Past-President, AFCC

### Pre-Congress Courses – Harare 21-24 April 2015

1. Quality Laboratory Management, Genomics and Proteomics, Metabolics-Informatics ‘Hands On’;
2. Atomic Absorption Spectrometry in Endocrinology and TDM, Drugs of Abuse and Toxicology;
3. Young Scientist Networking and Paediatric Pathology Including POCT;
4. Nanotechnology in Clinical Chemistry.

### For more information on the conference contact:

Box A1877 Avondale, Harare, Zimbabwe  
+263 4791631 ext 2126  
Fax 263 4705155  
[afccafrica@gmail.com](mailto:afccafrica@gmail.com)

Hilda T. Marima-Matarira  
Secretary of the African Federation of Clinical Chemistry and Laboratory Medicine  
[matarirah@yahoo.com](mailto:matarirah@yahoo.com)  
and

Vanessa Steenkamp  
Congress Chair  
[vanessa.steenkamp@up.ac.za](mailto:vanessa.steenkamp@up.ac.za)

### Supporting organizations





## POCT Congress in Africa – Cape Town, 14-15 February 2015

The first ever meeting in Africa exclusively devoted to Point of Care Testing (POCT)

*by Prof. Rajiv Erasmus*

The POCT Research Network for Africa, based in the Department of Pathology at Stellenbosch University, Cape Town, South Africa, organized the first ever meeting in Africa exclusively devoted to Point of Care Testing in various clinical settings. The co-chairs of the meeting were Professors R. Erasmus and W. Preiser.



This event was held from 14 - 15 February 2015 in Cape Town at the Hotel Verde, an exciting new venue known as Africa's greenest hotel.

The theme for the congress was 'Promoting Quality Point-of-Care Testing for Optimal Patient Care in Africa'.

This meeting was supported by the Faculty of Medicine and Health Sciences of Stellenbosch University, Cape Town and has been a special event for pathology and laboratory medicine, in that it focused on point-of-care testing on the African continent that, arguably, has the greatest need for it: an attractive scientific programme included several highly renowned keynote speakers from across the globe.

They shared unique insights into:

- POCT Health System Integration;
- POCT Quality Management System;
- POCT for Non-communicable Diseases, Drugs of Abuse, Infectious Diseases, Emergency Medicine Intensive Care and Connectivity.



*Stellenbosch University, Cape Town, South Africa*

# The XIIIth International Congress of Pediatric Laboratory Medicine (ICPLM)



## A “virtual postcard” from Istanbul

by Dr. Sharon M. Geaghan

### “Wish you were here”!

The historic, majestic and colorful venue of Istanbul hosted the XIIIth International Congress of Pediatric Laboratory Medicine (ICPLM) on June 20-22<sup>nd</sup>, attracting over 200 registered participants. The collegial interchange was exceptional for the degree of diversity: scientific representation hailed from more than 40 different countries around the globe. From the Istanbul Congress Center, stunning city views remind the visitor of the amalgamation of cultures, religions and peoples where the continents of Asia and Europe meet.

### The mission

The mission of the IFCC Task Force on Paediatric Laboratory Medicine is to improve the diagnosis and management of patients from birth to adolescence. The Congress continues a tradition which begun in Jerusalem in 1980, of providing a venue for specialists in pediatric laboratory medicine to meet and exchange scientific work and ideas.

### The Congress

The Congress is offered every three years as a three-day satellite meeting, preceding the IFCC WorldLab. Four plenary lectures and twelve symposia offered more than 30 speakers. More than 50 scientific posters in pediatric laboratory medicine were exhibited. Li Wang (British Columbia) and Jakob Zierk (Germany) were poster award winners.

### The organizers

Conference Chair, Professor Vijay Grey, worked tirelessly with Feyza Darendeliler and Ümit Tırkoğlu, the IFCC Congress Presidents, to execute an excellent educational program. The Organizing Committee includ-



*Grand Bazaar, Istanbul*

ed: Chair Vijay Grey (Canada), Past Chair Klaus Kohse (Germany), Vice-Chair Michael Metz (Australia), and members Tim Lang (UK), Patti Jones (USA), Sharon Geaghan (USA)

Fortunately, adequate funds were raised from sponsorships and registration fees, for a fiscally sound Congress. The Organizing Committee gives a colossal thank you to the AACC’s Pediatric Maternal Fetal Division, German Society of Clinical Chemistry, Canadian Society of Clinical Chemists (CSCC), Australasian Association of Clinical Biochemists (AACB), The Royal College of Pathologists, Turkish National Pediatric Society, Sarstedt, ABSciex, Mayo Clinic/ Mayo Medical Laboratories, Instrumentation Laboratory Canada, Dr. Neumann & Kindler Labcore, and Waters, for their generous support for this Congress.

### Day one:

#### A tour de force from the Turkish Ministry of Health

The Congress opened Friday night with welcoming remarks by Professor Vijay Grey, Chair of the IFCC Task-force. Dr Bekir Keskinkiliç, Deputy General Director of the Turkish Ministry of Health, gave the first plenary

*Article continued on next page*

lecture, which was a tour de force covering remarkable progress in Turkey's neonatal screening program. A welcome reception offered an opportunity to reconnect with old friends and make new acquaintances.

#### Day two:

#### Dr. Bennett rocks the Congress, and seven symposia focus on the pediatric laboratory

The Congress was kicked off by Michael J. Bennett (Director of the Metabolic Disease Laboratory, Children's Hospital of Philadelphia, USA), who gave the second plenary lecture: Newborn screening for metabolic diseases: saving children's lives and improving outcomes. Then, the first and second symposia focused on neonatal screening and specialized diagnostics for the neonate, respectively. The third and fourth symposia were on nutrition and endocrinology. Next, immunology and allergy testing and pediatric cancers comprised Symposia 6 and 7.

#### Day three:

#### A panel on critical values and communications; news on paediatric reference ranges

Wildly popular was a panel discussion on critical values. Global representation provided unique opportunities for discussion of variability in practices and collectively consider what might be best practice.

Dr. Wieland Kiess (University of Leipzig, Germany) gave the third plenary lecture, Metabolic syndrome in childhood and adolescence.

Additional offerings on day three included:

- Symposia 8 and 9, featuring a spectrum of topics unique to Pediatric Laboratory Testing;
- Symposium 10, abstracts selected for oral presentation;
- Symposium 11, Educational Opportunities in Pediatric Laboratory Medicine; and

- Symposium 12, Pediatric Reference Intervals. In this last symposium, speakers from the Swedish national project, the German KiGGs national survey, and the Canadian CALIPER project highlighted progress and new data, along with audience participation.

Founding scientist in the field of pediatric laboratory medicine, Professor Jocelyn Hicks (Washington DC) closed with the fourth and final plenary session on the role of the paediatric laboratory medicine in developing countries and the support required to best serve patients.

A special issue of Clinical Biochemistry comprises the XIIIth International Congress of Paediatric Laboratory Medicine, thanks to Guest Editors, Vijaylaxmi Grey and Klaus P. Kohse, Tim Lang and Michael Metz. The link to this volume (v47 (9):691-864), published June 2014, follows: <http://www.sciencedirect.com/science/journal/00099120>

Looking ahead, we are extending an early invitation to join an exceptionally collegial and astute group of pediatric laboratory scientists for the next IFCC Pediatric Task Force Congress, jointly held with the October 2017 IFCC World Congress in Durban, South Africa.



*Istanbul at night, with Bosphorus*





# e-Newsletter



Communications and Publications Division (CPD) of the IFCC

Editor: Tahir Pillay, MB ChB, PhD, FRCPath (Lon), FCPATH (SA)

Department of Chemical Pathology - University of Pretoria - Pretoria - South Africa - e-mail: [ifccnewsletter@ifcc.org](mailto:ifccnewsletter@ifcc.org)

## 2015 AD Pricelist for the IFCC eNewsletter

The IFCC eNewsletter is delivered to more than 30000 laboratory medicine specialists throughout the world and also published on the IFCC website. Circulation includes laboratory directors, clinical chemists, and other clinical laboratory specialists and technologists, as well as leading manufacturers, distributors and dealers in the field.

As an advertiser you get a unique opportunity to showcase your business, your initiatives and products to thousands of readers and potential customers. The latest issue of the IFCC eNewsletter as well as past archives can be viewed and read online, in full digital format, from either a PC or a mobile device. The digital edition is fully interactive and allows the readers to reach the links by way of a simple click on the editorial content, product news items, or display ads.

The IFCC eNewsletter is issued in English, and it is free-of-charge to all registered readers.

We feature useful information for IFCC and not IFCC members and we include a calendar of the major events in the Clinical Chemistry and Laboratory Medicine field.

The advertising banners are available in the following formats:

ADVERT SIZE	SINGLE EDITION PRICE	*ANNUAL PRICE (6 editions)
Quarter page	€ 250	€ 1250,00
Half Page Horizontal/Column	€ 500	€ 2.500,00
Full page (215,9 x 279,4)	€ 750	€ 3.750,00
Advertorial full page (215,9 x 279,4)	€ 1000	€ 5.000,00

\*PRICES QUOTED ARE YEARLY FOR ADVERTISING IN SIX EDITIONS (February, April, June, August, October, December)

**IFCC Corporate members receive a 25% discount on the above listed prices**

### How to advertise with us on our IFCC eNewsletter

1. Email us at: [ifccnewsletter@ifcc.org](mailto:ifccnewsletter@ifcc.org) to let us know you would like to advertise.
2. Once you have your advert ready please email us the image (get help from our useful tips listed below)
3. Payment must be done before your advert appears in the newsletter, by paying the invoice we will email to you.

### Useful tips when making your advert

1. Make sure you have all your contact details on the advert including website, email and telephone number
2. Create the advert using high quality image software programme
3. Supply the advert as a jpg or PDF file in high resolution
4. Size the advert correctly. Available sizes in height x width (mm):

- ▶ full page = 215,9 x 279,4 mm
- ▶ half page (horizontal) = 215,9 x 139,7 mm
- ▶ half page (column) = 107,95 x 279,4 mm
- ▶ quarter page = 107,95 x 139,7 mm

5. All advertising copy/images and payment must be submitted by the following deadlines to ensure inclusion in the newsletter:

N° 1	Jan 22 <sup>nd</sup>	N° 2	Mar 26 <sup>th</sup>	N° 3	May 21 <sup>th</sup>
N° 4	Jul 16 <sup>th</sup>	N° 5	Sep 24 <sup>th</sup>	N° 6	Nov 20 <sup>th</sup>

6. Send your advertising material by email to: [ifccnewsletter@ifcc.org](mailto:ifccnewsletter@ifcc.org)

If you have any questions please get in touch with us, sending an email to [ifcc@ifcc.org](mailto:ifcc@ifcc.org)

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## IFCC-PROFESSIONAL SCIENTIFIC EXCHANGE PROGRAMME (PSEP)

### The Lipoprotein Metabolism Section (LMS) at the National Institutes of Health (NIH) in the USA



by Anna Wolska  
Poland



Dr. Alan T. Remaley's laboratory - the Lipoprotein Metabolism Section (LMS) in the Cardiovascular and Pulmonary Branch of the National Heart, Lung and Blood Institute (NHLBI) at the National Institutes of Health (NIH) in USA, the host laboratory, in cooperation with the Special Chemistry Section in the Department of Laboratory Medicine (DLM) of the Clinical Center at NIH, is particularly interested in the nuclear magnetic resonance (NMR) and cardiovascular biomarkers.



SOWA-med Ltd. (pol. *Systemy Oceny Wiarygodności Analiz Medycznych*), the base laboratory, is a national external quality assessment (EQA) project developed according to guidelines of the Polish College of Laboratory Medicine serving EQA schemes in cooperation with the Labquality for all areas of laboratory medicine.

**The objective of this PSEP was to evaluate existing NMR measurements of lipids and lipoproteins and to develop novel NMR based tests of lipoproteins.**

NMR is used to measure most of the size subfractions of each of the major lipoproteins, such as very low-density lipoproteins (VLDL), low density lipoproteins (LDL), intermediate density lipoproteins (IDL) and high density lipoproteins (HDL) simultaneously. Both size and particle number of the lipoprotein subfractions show promises in improving cardiovascular risk prediction, as well as other diseases, such as diabetes.

All lipid analysis were done on the Vantera® Clinical Analyzer – the ©LipoScience Inc. proprietary platform - the first Food and Drug Administration-approved clinical analyzer based on NMR technology. This instrument quantifies lipid concentrations, size and particle counts of lipoproteins in serum and plasma samples. Moreover, an insulin resistance score is generated from the measured parameters. The Vantera® Clinical Analyzer analyzes samples by subjecting them to a short pulse of radio frequency energy within a strong magnetic field. Each particle within a given diameter range simultaneously emits a distinctive radio frequency signal. The amplitude of NMR signal measured by the Vantera® Clinical Analyzer is directly proportional to the concentration of the particles emitting the signal.



Anna Wolska, PhD



Maureen Sampson  
and Anna Wolska, DLM, NIH

Article continued on next page

Using a proprietary software the Vantera® Clinical Analyzer collects, records and analyzes the composite signals emitted by all the particles in the sample in real time, and separates the signals into distinct subclasses.

1150 sera samples were obtained from the ClinSeq Project of the National Human Genome Research Institute (NHGRI) in USA and analyzed for lipids. ClinSeq Project is a pilot project to investigate the use of whole-genome sequencing as a tool for clinical research. This allows the association of gene polymorphisms with lipoprotein particle size and number was examined. It is a very important aspect as it is commonly known that cardiovascular



*From left: Suzanne Albright, Anna Wolska and Marie Conrad, DLM, NIH*

disease is a complex disorder caused not only by dietary and environmental factors, but is strongly influenced and regulated by genes involved in the metabolism of cholesterol.

I also participated in some of the NIH training sessions and videocasts, for example:

- Working Safely with HIV and Other Bloodborne Pathogens;
- Radiation Safety in the Laboratory; or
- Special Grand Rounds on Ebola in West Africa.

I would like to express my sincere gratitude to the International Federation of Clinical Chemistry, especially to Dr. Graham Beastall, the IFCC President and the IFCC selection panel for giving me the opportunity to work on this project under the supervision of Dr. Alan T. Remaley.



*National Institutes of Health*

It has enabled me to learn about NMR methodology, which has great future potential for diagnostic testing. By using the knowledge gained at NIH, I can improve EQA in the field of lipids and lipoproteins at SOWA-med Ltd. and contribute to improvements in diagnostic testing in Poland.

I extend my heartfelt gratitude to Dr. Alan T. Remaley for hosting me, planning my project and letting me be a part of his wonderful team.

I wish to sincerely thank Dr. Maureen Sampson and Dr. Denis Sviridov, my direct trainers and supervisors, for their time and shared work experiences.

I am indebted to all of the Lipoprotein Metabolism Section members and the Department of Laboratory Medicine members for making my stay at NIH both

productive and happy. This experience means very much to me, both professionally and personally.

I am very grateful to Prof. Grażyna Odrowąż-Sypniewska, the Vice-President and National Representative of Polish Society of Laboratory Diagnostics at IFCC, Prof. Bogdan Solnica, the President of Polish Society of Laboratory Diagnostics at IFCC, Prof. Jerzy Rogulski, the President of SOWA-med Ltd. and Prof. Andrzej Szutowicz, my PhD supervisor at Medical University of Gdańsk for all their support and recommendations of my candidature for PSEP. Finally, I wish to give thanks to Mrs. Rebecca FitzSimons and her sons – Charles and Isaac – for letting me feel in their home like in my own. You took care of me whenever I needed it. Thank you!



**From left:** Abdalrahman Zarzour, Robert Shamburek, Alan T. Remaley, Edward Neufeld, Dmitriy Stashishin, Anna Wolska, Denis Sviridov, Megumi Nishimukai, Seth Thacker, Vida Bayat Mokhtari, Toshihiro Sakurai, Boris Vaisman, Milton Pryor, Scott Gordon, Georgina Kemeh, Lita Freeman and **not present in the picture:** Marcelo Amar, Stephen Demosky, Cornelio Duarte, Akiko Sakurai and Zhihong Yang, LMS, NIH



**From left:** Anna Wolska, Rebecca, Charles and Isaac FitzSimons

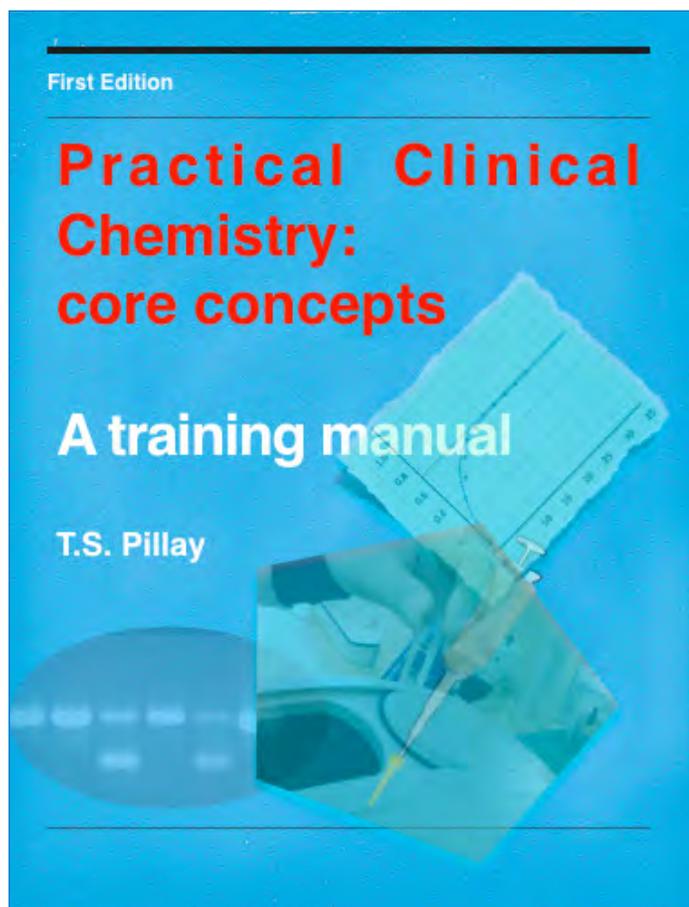


**From left:** Zhihong Yang, Vida Bayat Mokhtari, Akiko Sakurai, Abdalrahman Zarzour, Toshihiro Sakurai, Dmitriy Stashishin and Anna Wolska

## Textbooks of the future: implications for clinical chemistry

by Tahir Pillay

With the expansion of digital publishing, the world of books has exploded, much like the internet. Whilst many students across the world still use the traditional hardcopy book, many institutions are now moving over to providing students with tablets containing the relevant learning material, including textbooks. In the province where I work in South Africa, many schools have now switched to providing PDFs of textbooks to new students so that the students do not have to carry heavy bags to school.



My own in-depth exposure to digital publishing had its baptism in late 2014 with the publication of a textbook called "Practical Clinical Chemistry: core concepts" using the Apple iBooks Author platform (a preview of the book can be seen on *YouTube*: <http://youtu.be/uHPeW2KbH5E>).

This was a steep learning curve since I have been a Windows PC user for several decades, although I spent my formative years using Apple Macintosh™. This was because at that stage, Apple was leading the pack in personal computers and really developed the mouse-computer interface, which was later adopted by Microsoft, when it moved on from MS-DOS. I only switched to Microsoft Windows™ because it was more ubiquitous and the universities I worked at gave more support to Windows™ than to Macintosh. In addition, Windows machines were cheaper and this is still case.

I chose to use the Apple platform because I happened to discover iBooks Author™ whilst working on this book and started exploring it. The strategy of Apple has been interesting: iBooks Author™ is provided free but you have to use a Macintosh. This meant investing in an Apple computer, although like many, I had owned an iPad since they were first introduced. I also had to learn how to use the software and also discovered the many challenges in developing and publishing an e-book.

Although iBooks Author is the most sophisticated e-book software available, it means that the finished product is limited to use on an Apple platform, in this case iPad™ or Apple Mac and the book has to pass through the stringent formatting requirements of Apple. However, the features available are highly engaging to the reader producing a "4-dimensional experience" with videos, interactive presentations, review questions, etc.

For the field of clinical chemistry and indeed any other interactive discipline in medicine, biochemistry, mathematics, the possibilities are immense. The world of digital publishing has moved to create a new uniform standard called EPUB 3.0. Software for creating e-books is available on other platforms such as Android™ and Windows, as well as Amazon's Kindle™ etc., but most of these do not have

Article continued on next page

the interactive features currently available on digital books created with iBooks Author, although the gap is closing slowly. In addition, the creation of EPUB2 or EPUB 3.0 books requires some programming knowledge (HTML) but is becoming less essential as new programs with good interfaces for the novice writer, are appearing daily. However, many of them are commercial programs and therefore require purchase of software, eg: Adobe In-Design™.

Compared to the traditional textbook, an electronic textbook can be updated and the updates can be sent to the user's devices when they are connected to the internet (much like a software update).

In the case of a traditional textbook, new editions take years to develop after publication of a first edition. It is also now possible to rapidly create books in languages that do not use roman characters (eg.

Chinese, Japanese, Arabic, Hebrew) opening a world of possibility.

Another drawback of the iBooks Author platform is that books created with iBooks Author can only be sold on Itunes (free books can be given away by the author or made available on Itunes). Moreover, the iBook store is not available in all countries and this is a problematic restriction for countries such as China, India and also South Africa!! Ironically, this book was written with a local audience in mind. This is different from e-books on other platforms where books can be made available through multiple vendors.

All in all, the world of digital publishing is evolving rapidly like the smartphone and innovations will appear regularly.

(NB: iBooks, iBooks Author and iPad are trademarks of the Apple Computer Corporation)



## NEWS FROM THE IFCC WEBSITE

2015.01.28 eJIFCC 2015, Vol 26 n°1



This themed issue of the journal is focused around the impact of laboratory medicine on clinical management and patient outcomes. The guest editor of the issue is Mike Hallworth (UK), Chair of the IFCC

Task Force on the impact of laboratory medicine on clinical management and outcomes (TF-ICO).

Laboratory medicine has a fundamental role in delivering safe and effective patient care and improving individual patient outcomes by enabling faster, more accurate diagnosis and effective treatment. Laboratory medicine has also had a broader impact upstream of diagnosis and management, playing a key role in areas such as risk assessment and screening of healthy subjects for latent disease. These areas are becoming increasingly important with the recognition that early diagnosis and intervention reduces overall healthcare costs for a wide range of common diseases. Laboratory doctors and scientists of the future must be involved in producing guidelines for investigation, advising clinical staff on the best strategy for individual clinical presentations and the further tests needed to confirm a diagnosis, and ensuring that results are not misinterpreted or missed and that resources are used to do the right test on the right person at the right time. It's a daunting challenge and the Editors hope that the Task Force report and the contents of this special issue will inspire and equip laboratorians across the world to rise to the challenge!

[Read More](#)

News continued on next page

## 2014.12.18 Paris online registration now open!

The online registration system for the Paris Congress is now open. The early registration discount is available until 30 April 2015.



Please visit the registration section and follow the instructions: you will find it simple to register and enjoy the discount available until 30 April 2015.

<http://www.paris2015.org/go/delegates-registration>

## 2014.12.04 TF-YS Social Network



The aim of TF-YS is to ensure that young scientists make a significant and growing contribution to the activities of IFCC and to the promotion of laboratory medicine at the centre of healthcare. You can participate by joining the TF-YS networking community via their Facebook, Twitter and LinkedIn groups.

[Read More](#)

## 2014.11.26 IFCC Task Forces: the "Dream Team" for collaboration



The 'better together' approach has proven itself time and again – and the world of laboratory medicine is no different. The IFCC is committed to progression through partnership. In a recent "The Pathologist" article, seven IFCC Task Forces describe their focus, discuss what further challenges must be addressed to achieve ambitious goals, and highlight how those issues are likely to affect the pathology community.

The cover story (pages 18-29) is dedicated to seven of the IFCC Task Forces. These are international groups of multi-disciplinary teams formed in response to issues raised by IFCC members as being of "international significance". As a result, the IFCC TFs have been making progress that could have some impact on everyday pathologist's work.

[Click here to access the latest issue of The Pathologist](#)

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

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

Apr 28-30, 2015	<i>4th Congress of the African Federation of Clinical Chemistry (AFCC)</i>	Victoria Falls, ZW
Jun 21-25, 2015	<i>IFCC-EFLM EuroMedLab 2015</i>	Paris, FR
Sept 24-26, 2015	<i>COLABIOCLI 2015 - XXII Congreso Latinoamericano de Bioquímica Clínica</i>	Quito, EC

*Calendar continued on next page*

Nov 01-02, 2015	<i>ArabMedLab 2015 - 14th Arab Congress of Clinical Biology (AFCB)</i>	Khartoum, SD
Nov 26-29, 2016	<i>14th Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine Congress</i>	Taipei, TW
Jun 11-15, 2017	<i>IFCC-EFLM EuroMedLab 2017</i>	Athens, GR
Oct 22-25, 2015	<i>XXIII IFCC WorldLab 2017</i>	Durban, ZA
May 24-28, 2020	<i>XXIV IFCC WorldLab 2020 Seoul</i>	Seoul, KR

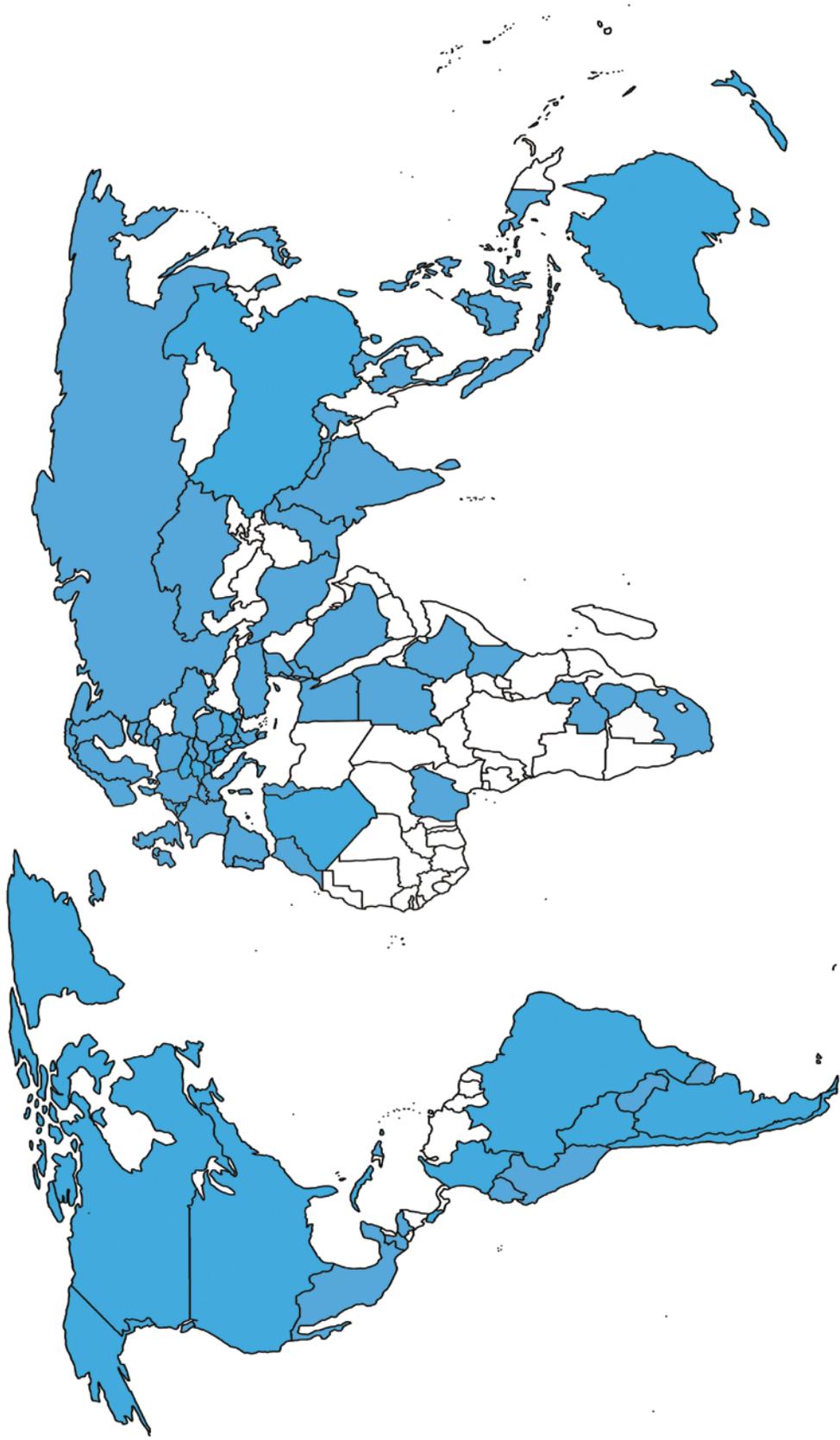
## Calendar of events with IFCC auspices

Mar 18, 2015	<i>Science meets Medicine</i>	Hamburg, DE
Mar 20-21, 2015	<i>3rd EFLM-BD European Conference on Preanalytical Phase</i>	Porto, PT
Apr 22-25, 2015	<i>8th International &amp; 13th National Congress on Quality Improvement in Clinical Laboratories (IQC13)</i>	Tehran, IR
May 5-6, 2015	<i>8th European Symposium on Clinical Laboratory and In Vitro Diagnostic Industry "Point of care testing"</i>	Barcelona, SP
May 6-10, 2015	<i>Second World Congress on Water Channel Proteins (Aquaporins and Relatives) Celebrating the 30th Anniversary of the Discovery of the First Water Channel Protein</i>	Cluj-Napoca, RO
May 7-9, 2015	<i>8th Congress of Chemical Sciences: "Looking sustainable future"</i>	Asuncion, PY
May 14-15, 2015	<i>11th EFLM Symposium for Balkan Region</i>	Belgrade, SRB
May 20-23, 2015	<i>1st Congress of Romanian Association of Laboratory Medicine</i>	Sighisoara, RO
Jun 20-24, 2015	<i>Canadian Laboratory Medicine Congress</i>	Montreal, CA
Jun 26, 2015	<i>EuroMedLab 2015 Satellite Meeting 'HbA1c and management of Diabetes Mellitus in the 21st Century'</i>	Reims, FR
Aug 21-Oct 23, 2015	<i>Biochemical and Molecular Basis of Multifactorial Diseases</i>	Moron, AR
Sep 01- 03, 2015	<i>6th International Conference and Exhibition on Analytical &amp; Bioanalytical Techniques</i>	Valencia, ES
Sep 22-26, 2015	<i>8th Congress of the Croatian Society of Medical Biochemistry and Laboratory Medicine</i>	Rijeka, HR
Oct 7-9, 2015	<i>23rd Meeting of the Balkan Laboratory Federation</i>	Sarajevo, BA
Oct 7-9, 2015	<i>3rd ESPT Conference "Integration of Pharmacogenomics in Clinical Decision Support"</i>	Budapest, HU
Oct 7-10, 2015	<i>XIII Congreso Nacional Bioquímico (CUBRA)</i>	Catamarca, AR

# IFCC Members

## Full Members

Albania (AL)	Kenya (KE)
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Argentina (AR)	Latvia (LV)
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Belgium (BE)	Luxembourg (LU)
Bolivia (BO)	Macedonia (MK)
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China (Beijing) (CN)	Nepal (NP)
China (Taipei) (TW)	Nigeria (NG)
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Costa Rica (CR)	Pakistan (PK)
Croatia (HR)	Paraguay (PY)
Cuba (CU)	Peru (PE)
Cyprus (CY)	Philippine (RP)
Czech Republic (CZ)	Poland (PL)
Denmark (DK)	Portugal (PT)
Dominican Republic (DO)	Romania (RO)
Ecuador (EC)	Russia (RU)
Egypt (EG)	Saudi Arabia
Estonia (EE)	Serbia (SRB)
Ethiopia (ET)	Singapore (SG)
Finland (FI)	Slovak Republic (SK)
France (FR)	Slovenia (SI)
Germany (DE)	South African (ZA)
Greece (GR)	Spain (ES)
Guatemala (GT)	Sri Lanka (LK)
Honduras (HN)	Sudan (SD)
Hong Kong (HK)	Sweden (SE)
Hungary (HU)	Switzerland (CH)
Iceland (IS)	Syrian Arab Republic (SY)
India (IN)	Thailand (TH)
Indonesia (ID)	Tunisia (TN)
Iran (IR)	Turkey (TR)
Ireland (IE)	Ukraine (UA)
Israel (IL)	United Kingdom (UK)
Italy (IT)	United States (US)
Japan (JP)	Uruguay (UY)
Jordan (JO)	Vietnam (VN)
Kazakhstan (KZ)	Zambia (ZM)
	Zimbabwe (ZW)



## Affiliate Members

- Brazil: Sociedade Brasileira de Patologia Clínica / Medicina Laboratorial (SBPC/ML)
- Eritrea: Eritrean Medical Laboratory Association
- India: Association of Medical Biochemists of India (AMBI)
- Mexico: Federación Nacional de Químicos Clínicos (CONAQUIC A.C.)
- Palestine: Palestinian Medical Technology Association (PALMTA)
- Philippines: Philippine Council for Quality Assurance in Clinical Laboratories (PCQACL)
- Romania: Romanian Association of Medical Laboratories (RAML)
- Russia: Regional Association for Clinical Laboratory Diagnosis, St. Petersburg
- Spain: Asociación Española de Farmacéuticos Analistas (AEFA)
- Ukraine: Association of Clinical Chemistry & Laboratory Medicine of Ukraine (ACCLMU)

## Regional Federations

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

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#### Division (CPD) of the IFCC

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### January-February Edition

- submission deadline: [January 22](#)

### March-April Edition

- submission deadline: [March 26](#)

### May-June Edition

- submission deadline: [May 21](#)

### July-August Edition

- submission deadline: [July 16](#)

### September-October Edition

- submission deadline: [September 24](#)

### November-December Edition

- submission deadline: [November 20](#)

If you want to submit an article or advertisement to be published in the e-NewsLetter, send them to:

Tahir Pillay, Editor, IFCC e-NewsLetter  
e-mail: [ifccnewsletter@ifcc.org](mailto:ifccnewsletter@ifcc.org)

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