

e-Newsletter



Communications and Publications Division (CPD) of the IFCC
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International Federation of Clinical Chemistry and Laboratory Medicine



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Dr. Graham BEASTALL
IFCC President

Those of us interested in soccer were well aware that the IFCC WorldLab congress in Istanbul coincided with the Soccer World Cup in Brazil. This coincidence is a rare event since IFCC WorldLab happens every three years and the Soccer World Cup occurs every four years.

You will read about the IFCC WorldLab congress in other articles. The purpose of this short piece is to comment on the triennial IFCC Council meeting, which took place on 22 June 2014. The Council is responsible for overall IFCC policy and governance, which is delegated to the Executive Board for implementation. The Executive Board bases its three year programme on the views of Council and then reports back to the next Council meeting to give a progress report.

The Istanbul Council meeting was the first since the introduction by IFCC of electronic voting. Consequently, no formal votes were taken during Council, allowing for open attendance and time for an informed debate on the future of laboratory medicine. A large number of individuals attended from across IFCC membership contributing to a lively session conducted in good humour.

The morning session commenced with reports from the current Executive Board. Highlights included:

- A growing membership of Full, Affiliate and Corporate Members

by Dr. Graham BEASTALL
IFCC President for the IFCC
Executive Board
gbeastall@googlemail.com

- Excellent progress with the published Strategic Action Plan
- Consolidation of IFCC finances. Details can be obtained from the IFCC Office
- Announcement of the seven IFCC awards
- Announcement that Seoul in Korea will host the IFCC WorldLab 2020 congress

After coffee the Chairs of the three IFCC Divisions reported on the many projects that they oversee:

- Scientific Division
- Education and Management Division
- Communications and Publications Division

In all cases there has been considerable progress and significant achievement during the past three years. Details are available from the IFCC Annual Report for 2013, which is available from the IFCC website (www.ifcc.org).

The final session of the morning was discussion of two Motions seeking to change the composition of future IFCC Executive Boards (with effect from January 2018). Formal voting on these Motions will take place by electronic ballot during September 2014 but the informal opinion of Council was:

- To support replacement of the three Board Members currently elected by all IFCC Full Members by representatives elected by each of the IFCC Regional Federations



- To agree that the representatives elected by IFCC Regional Federations should be in close liaison with the Regional Federation Executive Committees. There were mixed views on whether the Regional Federation President should be the person elected to serve on the IFCC Executive Board.

After lunch the Council had an extended debate on 'Shaping the Future of Laboratory Medicine'. After an introduction from the President (featured the previous issue of IFCC e-News) and five short examples of good practice there was a vibrant plenary discussion with many high level contributions. The Executive Board will consider the points made in the debate in more detail but the headline messages were that the IFCC Council recognised:

- Common international drivers for change in laboratory medicine
- That laboratory medicine at national and international level is not as integrated as it should be

for maximum patient benefit

- That IFCC Member societies and companies should be more proactive in promoting the contribution of laboratory medicine to healthcare, embracing change as opportunities present themselves

There were mixed views on whether IFCC should open up its membership by removing the 'one country, one Full Member' statute, the balance of opinion was against change.

Overall, the general view seemed to be that the Council meeting had been an interesting and interactive session with an eye to the future. The next Executive Board will take note of the views of Council when preparing its Strategic Action Plan for 2015-17.

Meanwhile the world at large noted that Germany was the deserving winner of the Soccer World Cup!

A MEMORABLE IFCC WORLDBLAB CONGRESS IN ISTANBUL
AT THE CONNECTION OF TWO CONTINENTS

by Nazmi Özer
IFCC WorldLab Congress President

IFCC-WorldLab

ISTANBUL 22-26 JUNE 2014



The 22nd International Federation of Clinical Chemistry and Laboratory Medicine (IFCC WorldLab 2014) Congress was held with 5133 participants from 116 countries at the Istanbul Congress Center on June 22-26, 2014.

After the welcome speech of Congress President Professor Nazmi Özer and IFCC President Professor Graham Beastall, Professor Gökhan Hotamışlıgil, who currently continues his work at Harvard University, gave a lecture themed “Immunometabolism of obesity and diabetes” at the opening of the Congress. A music performance by Cihat Aşkın and Göksun Çavdar (clarinet solo) covered the 19th century Ottoman music.

The scientific program included a wide range of high quality and innovative topics through plenary lectures,

symposia, and oral and poster presentations. There were also satellite meetings and short courses before and after the main Congress.

Plenary lectures were presented by outstanding scientists including Professor Kamil Ugurbil (Minnesota University, USA), Professor Göran Hansson (Karolinska Institute, Sweden, the former President of the Nobel Committee), Professor Mustafa Djamgoz (London Imperial College, United Kingdom) and Professor Dennis Lo (Chinese University of Hong Kong, Hong Kong). Topics of plenary lectures were on relatively virgin or emerging areas of laboratory medicine such as molecular imaging and brain function; immune system, atherosclerosis and autoimmune reactions; mechanism and prevention of prostate and mammary gland in cancer metastasis and plasma genome and related applications on prenatal diagnosis and oncology.

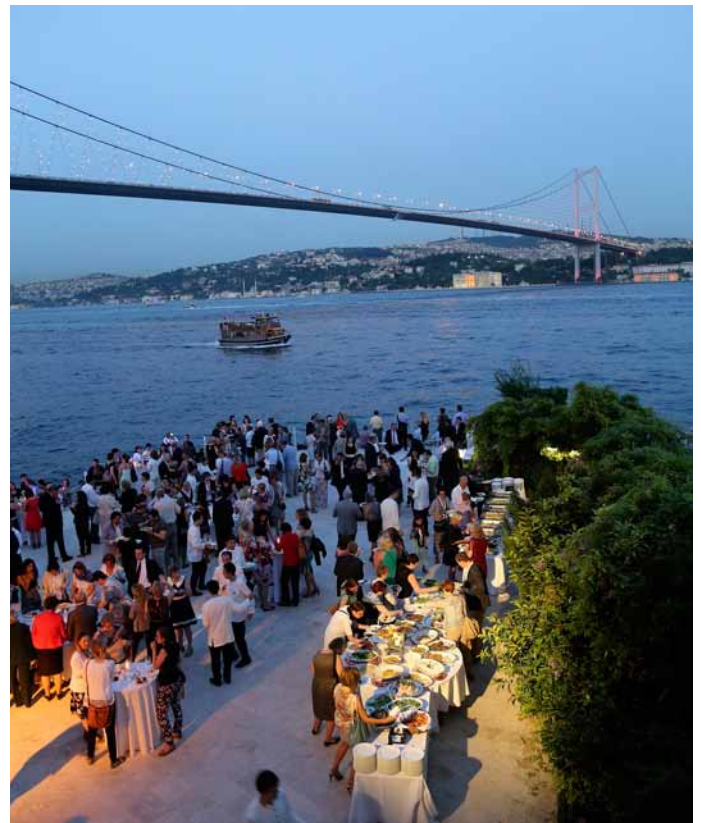
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Prof. Dr. Nazmi Özer, IFCC WorldLab Congress President

The 21st general symposia were held simultaneously in eight halls throughout the Congress. The symposia provided platform to discuss the latest technological developments regarding hemostasiology, vascular markers, autoimmunity, neurodegenerative diseases and epigenetic, and as well as point of care testing, practice guidelines, decision making, patient-focused laboratory medicine, ISO15189, personalized medicine. In addition, current laboratory practices related to obesity, infectious diseases, bleeding and clotting, immune deficiencies, tumor markers, bone metabolism and hematologic diseases were discussed.

Moreover, for the first time in the history of IFCC WorldLab Congresses eight symposia were organized by regional federations and sister associations such as World Association of Societies of Pathology and Laboratory Medicine (WASPaLM), American Association for Clinical Chemistry (AACC), Latin America Confederation of Clinical Biochemistry (COLABIOCLI), European Federation of Clinical Chemistry and Laboratory Medicine (EFLM), Balkan Clinical Laboratory Federation (BCLF), African Federation of Clinical Chemistry (AFCC), Arab Federation of Clinical Biology (AFCB)



Conference social evening at the Marmara Esma Sultan Palace

and Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine (APFCB). The contribution of these entire organizations made it possible to cover a very wide area of clinical chemistry. All delegates of the congress received the latest updates of laboratory medicine from exceptional speakers of these symposia.

Poster sessions are an integral part of congresses and 1552 abstracts were displayed on second, third and fourth days of the Congress.



Speakers dinner



Conference social evening at the Marmara Esmâ Sultan Palace

IFCC Specialized Conference: "Biomarkers in Neuropsychiatric Disorders" Toronto - 24-25 October, 2014

by Sergio Bernardini

The IFCC-Siemens Specialized Conference
**BIOMARKERS IN
NEUROPSYCHIATRIC
DISORDERS**

October 24-25, 2014
Toronto – Canada
Omni King Edward Hotel

IFCC
International Federation
of Clinical Chemistry
and Laboratory Medicine

in collaboration with
Canadian Society of
Clinical Chemists (CSCC)

The poster features a stylized blue silhouette of the Toronto skyline, including the CN Tower, against a dark blue background. The IFCC logo is in the top left, and the CSCC logo is in the middle left. The conference title and dates are prominently displayed on the right side.

Neurodegeneration is primarily a histological term used to describe neurons with varying abnormal features in the cytoplasm and nucleus, which can also present different types of intracellular and extracellular proteinaceous inclusions characterizing specific nosological entities. Neurodegeneration occurs for unknown reasons, progresses in a relentless manner leading to an irreversible process of diffuse neuronal death in selected areas of the central nervous system, and is associated with reactive gliosis. Thus Neurodegenerative Disease, that leads to Neuropsychiatric Disorders, is an inclusive term for a range of heterogeneous disease processes usually classified on the clinical features, the types of the eventual proteinaceous inclusion and the topography of the

pathological lesions, distinguishing diseases of the cerebral cortex, the basal ganglia, the brain stem and cerebellum, or the spinal cord. Advances in biochemical, immunocytochemical and molecular genetic investigations have opened the route to new neuropathological classification of the neurodegenerative diseases based on the molecular identifications of the proteinaceous cellular or extracellular inclusions. However, establishing the diagnosis of a specific proteinopathy in vivo can be challenging as it requires neuropathological investigations that cannot be done during life. If the brain is practically inaccessible in vivo, the cerebrospinal fluid (CSF) is easily and safely accessible, and in bathing the brain can drain proteins and other metabolites released by neurons

Article continued on next page

and glial cells that are reflective of their normal and pathological conditions. There are a number of different analytical techniques available to determine the eventual presence of few pg/ml of specific CSF proteins involved in the processes of neuronal damage. The molecular markers in biological fluids can provide essential supportive features to the clinical diagnosis of neurodegenerative diseases, useful not only for research purposes and in clinical trials but also in routine clinical practice and in current patient management. Ideal biomarkers should be able to detect fundamental features of pathology, validated in neuropathologically confirmed cases, be precise and reliable, non-invasive, simple to perform and inexpensive and reach sensitivity and specificity not lower than approximately 85%, and 75-85%, respectively.

To date, the variability in concentration and diagnostic performance of the same biomarker across different studies has significantly hampered the application of these molecular tests for general clinical diagnostic purposes. Cut-off values are surprisingly widely variable in different countries and within every country. Such discrepancy in the detection of CSF biomarkers could be the result of several pre-analytical and analytical factors, or could be dependent on manufacturing processes that impact assay-related factors. Experimental studies in CSF have demonstrated the importance of both in vivo and in vitro pre-analytical confounding factors influencing the biochemical analysis. In particular, procedures of Lumbar puncture(LP), handling temperature after LP, sample collection, type of test tubes, tube/plate adsorption, freeze/thaw cycles and length of storage can alter the stability of CSF samples and produce a great variability in the levels of the biomarkers measured in different studies or in different centres. All of these considered in applying CSF biomarkers into routine clinical practice and clinical trials. Thus, there is an compelling need to establish Standard Operating Procedures (SOPs) for CSF handling and processing, which would allow comparison of methods and diagnostic conclusions among different laboratories and favour the inclusion of CSF biomarkers in routine analysis.

Biomarkers would also be very useful in clinical trials, indeed the lack of reliable aetiological biomarkers is considered to be one of the greatest limitations for developing successful treatments and one of the main problems for failed trials, because it is not possible to identify specific pathological mechanisms and to evaluate whether an intervention could influence and alter the course of the disease. Apart from the diagnostic values of CSF biomarkers, their changes could allow monitoring of eventual disease modifying effects during pharmacologic treatments and assessing primary or secondary end points at follow up. Moreover biomarkers can help to stratify patients into subgroups which may respond differently to the therapy. This would allow one to distinguish between responder and non-responder diagnostic subgroups and to prevent the dismissal of therapy that seems to be ineffective in the whole cohort of treated patients.

Finally, the contribution of CSF and plasma new biomarkers and metabolomic or proteomic “signatures” to the diagnosis of Neuropsychiatric Disorders, as suggested by changes of CSF amino acids, proteins and metabolites, should be further validated in clinical setting and large autopsy confirmed studies. The many obstacles in biomarker discovery and development should not discourage but rather give a boost for the research on neurodegenerative diseases.

The IFCC Specialized Conference “Biomarkers in Neuropsychiatric Disorders” that will be held in Toronto October 24-25, 2014, will give a glimpse of the new laboratory diagnostic opportunities in Alzheimer’s Disease, Multiple Sclerosis, Peripheral Neuropathies, Parkinson’s Disease, Schizophrenia and Bipolar Disorders.

It will be a brainstorming approach attended by the best scientists in the different fields.

Defining early diagnosis and developing the basis for new diagnostic and therapeutic strategies are the target of the Conference.

Labs Are Vital is “still” changing and we “still” want you to be involved

by *Ellis Jacobs*, Labs Are Vital Board, IFCC Representative
Graham Beastall, IFCC President



We are pleased to tell you that the **Labs Are Vital** Members Board, with representatives from IFCC, WASPaLM (World Association of Societies of Pathology & Laboratory Medicine), ASCP (American Society of Clinical Pathology) and IFBLS (International Federation for Biomedical Laboratory Science), has successfully transitioned the program to one driven and managed by a consortium of global professional bodies.

We all stand by the original goals for the program, and are committed to making **Labs Are Vital** a powerful voice in support of the essential contribution laboratory medicine makes to our healthcare system.

The success of the new **Labs Are Vital** program depends on active engagement from large numbers of individual laboratory medicine specialists. Over sixty blogs have been posted on the **Labs Are Vital** website, www.labsarevital.com, on topics ranging from evidence of clinical value of lab and disease state management to patient safety and professional development. There are also LRV Facebook and Twitter accounts. We are seeking to expand involvement and invite you to help by promoting **Labs Are Vital** through indi-

vidual participation as well as through your society.

As an individual specialist you are actively encouraged to **register on the new program website at www.labsarevital.com** to:

- Post blogs and start discussions
- Comment on stories
- Share your own experiences and contribute to our online toolbox

As an IFCC Member society you are encouraged to provide a link to www.labsarevital.com on your society website. Your society, or regional federation, is also invited to consider becoming an Affiliate Member of **Labs Are Vital**, which provides the opportunity to have a community page on the LRV website, in your native language, which can contain subject matter of unique interest to your area of the world.

Please contact Ellis Jacobs (labsarevital@ifcc.org) for further information about becoming an Affiliate Member.

By working together, we can continue to spread the message that **Labs Are Vital**.



IFCC PROGRAMMES FOR DEVELOPING COUNTRIES

by *Prof. Vanessa Steenkamp*
Prof. Jocelyn Hicks

One of the goals of IFCC is to help improve the quality of Clinical Laboratory testing and management, with the ultimate goal of assisting laboratories to achieve accreditation. With this in mind a leaflet was designed, under the coordination of Immediate Past-president Professor Jocelyn Hicks and EB member Professor Vanessa Steenkamp, to assist developing countries in understanding the programmes that are available for Member associations and their individual members. It serves as an interpretation of the 'Developing Quality Competence in Medical Laboratories' (DQCML) programme.

IFCC recognizes that the extent and quality of laboratory testing in many developing countries lags behind what is accepted as needed in advanced countries. In many developed countries it is stated, although without scientific proof, that 50-70% of medical decisions are based on laboratory test results. This underlying importance of laboratory testing is a primary reason why IFCC, within the limits of its resources, is determined to assist the progressive evolution of laboratory testing in developing countries.

This leaflet provides a list of IFCC programmes available for developing countries which will make it easier for scientists to assess information in a way that will not cause them a financial burden. We trust that you will benefit from this list of Programmes, which is available on the website at:

<http://www.ifcc.org/ifcc-education-division/working-groups-special-projects/developing-quality-competence-in-medical-laboratories-dqcml/>

For further information, contact:

Vanessa Steenkamp
email: vanessa.steenkamp@up.ac.za

and

Jocelyn Hicks
email: hicksjmb@gmail.com





V International Clinical Laboratory and Quality Symposium

Improved quality significantly reduces incorrect interpretations in the clinical laboratory

by Josephina Mora

The quality of the clinical laboratory is fundamental for the safety of patients as it implies the reduction of errors, the analysis of the causes of their pathology and the avoidance of their recurrence.

The Spanish Society of Clinical Biochemistry and Molecular Pathology (SEQC), whose members are seeking to obtain the highest level of quality in their work, has organised the **V International Clinical Laboratory and Quality Symposium**, with the

vision on patient care and the formal recognition of the laboratory quality.

According to Dr. Francisco Ramón Bauzá, member of the SEQC and of the Symposium organising committee, “the regular organisation of this type of training activities has contributed to the notable improvement seen in recent years in the quality of laboratories.”

This improvement has been evident, for example, in the reduction in the variability, shown through external quality guarantee programmes or the increase in laboratories certified by the ISO 9001 standard or accredited according to the ISO 15189 standard. Specifically, the variability between laboratories in some tests, such as blood glucose, has gone from the 10% in 1995 to the current 4%.



The venue

objective of disseminating and updating knowledge to help the doctor to diagnose, forecast, treat and follow up patients in the most effective way possible. In order to do this, the 200+ attendees have reviewed subjects covering all laboratory activities, such as the change in the analysis request and the current tools for the preparation and handling of samples, the comparison between laboratories with first rate programmes, the impact of the pro-



The venue

“It is also important to highlight the cooperation between several Scientific Societies in order to guarantee quality, such as the existence of a common journal, the organisation of a unified congress or the existence of joint working groups on quality,” said Doctor Carmen Ricós, member of SEQC and of the organising committee.

Currently, to measure quality levels of laboratories, the SEQC organises 28 programmes covering a total of 189 biological quantities, a pre-analysis quality programme and quality indicators programme.

Internationalisation

The Symposium’s programme has included vastly experienced, widely published, relevant international speakers who are members of internationally recognised working groups.

“We wanted to invite speakers from other countries, because the laboratory organisations in different countries are becoming more and more alike and it allows the discussion of common problems and the suggestion of possible solutions,” both speakers said.



The Symposium organising committee with some of the speakers visiting the modernist pavilions in Hospital de la Santa Creu i Sant Pau

XII Conference of the Scientific Committee of the Spanish Society of Clinical Biochemistry and Molecular Pathology (SEQC)

by Josephina Mora



Over 150 experts met in Madrid on 12-13 May 2014 for the XII Conference of the Scientific Committee of the Spanish Society of Clinical Biochemistry and Molecular Pathology (SEQC).

“The objective of this conference is to disseminate the activity and work carried out by the Society’s different Commissions and Working Groups through the delivery of various workshops. These have a basic focus, with a training objective, but there are also advanced sessions in which the latest innovations in the relevant area are described,” said Dr. Javier Gella, president of the SEQC Scientific Committee.

This edition included the novelty of a keynote speech to remember Dr. Felip Antoja, delivered by Dr. José Ignacio Monreal, who suggested similarities between forms of relationships and social communication and some biological processes.

This forum concluded that the results generated by the clinical laboratory should be sufficiently precise to allow a correct clinical interpretation and to be comparable between different centres and at different points in the life of one patient.

Furthermore, any new analytical test intended for addition to a laboratory should be submitted to a process of validation.

Among the subjects addressed was an update of the role of the clinical laboratory in the diagnosis and treatment of lung cancer and the use of tumour markers “which permit a better understanding of tumour biology and make the use of more specific and effective treatments with greater response and survival rates possible,” explained Dr. Rafael Molina, of the SEQC Cancer Biological Markers Commission.

There have also been advances in the serological markers used in the diagnosis of rheumatoid arthritis, a very frequent chronic inflammatory disease. Dr. M^a Jesús Llorente, of the SEQC Biological Commission of Immunological Diseases, showed the difficulty in clinically identifying the start of RA and highlighted the identification of a new serological marker, the anti-cyclic citrullinated peptide (anti-CCP) antibodies, which have shown their usefulness for diagnosis and have even been included in the new ACR criteria (2010). However, there is no evidence of its usefulness in the response to treatment, so serial measurements of this marker are not advised. Therefore, for Dr. Llorente “the use of commonly agreed diagnostic algorithms favours the optimisation of laboratory resources”.

As well as this, in the course of the conference, the SEQC Scientific Committee Prize was awarded to Dr. Montserrat Mauri, in recognition of her outstanding scientific activity and her work within the Society. A member since 1980, she is a point of reference for many clinical laboratory professionals, especially in the field of hormone analysis.



EUROPEAN SURVEY OF NATIONAL GUIDELINES ON PHLEBOTOMY

An Important Study by the EFLM WG on Preanalytical Phase

(EFLM-WG-PRE)

by *Maria Stella Graziani*

The preanalytical phase of the testing process has been repeatedly and consistently associated with the largest part of diagnostic errors. The most frequent source of problems in this specific phase include, in descending order of frequency, spurious haemolysis, samples with insufficient volume or altered blood to anticoagulant ratio, samples collected in inappropriate container(s), undue clotting (e.g., in citrate or EDTA samples), misidentification and sample contamination by intravenous fluids. Reliable statistics attests that errors in this phase may affect the clinical management in up to one fourth of all cases. More specifically, a preanalytical error may cause inappropriate test repetition (with patient discomfort and increased expenditures), further and often inappropriate investigations (with the chance of misdiagnosis or inappropriate management), as well as inappropriate therapeutic management or hospitalization.

Most of the aforementioned preanalytical problems emerge from a specific medical activity, that is collection of diagnostic samples. Considering that blood drawing is a virtually inevitable process for obtaining diagnostic samples (in vivo diagnostic testing is still being regarded as a chimera), standardization or at least harmonization of this phase is essential for increasing the quality of testing, safeguarding patient safety and optimizing human and economical resources. The EFLM WG on Preanalytical Phase (EFLM-WG-PRE) is pursuing the important target of identifying the most critical elements and making recommendations to reduce the impact of the preanalytical phase throughout the diagnostic process. In this challenging enterprise, and with the

awareness that collection of diagnostic samples is by far the leading source of problems in laboratory medicine, the EFLM-WG-PRE has designed and disseminated an European survey to assess presence and compliance of national phlebotomy guidelines, the specific interest of national societies for an EFLM phlebotomy guideline, as well as to identify by whom phlebotomy is done and what level of education is required for this specific task.

The results of this survey (Clin Chem Lab Med 2013;51(8):1585-1593), which are summarised in figure 1, are of concern, though not really unexpected. Overall, the response rate was acceptable (28 out of 39 EFLM member countries replied, 72%). The number of Countries with national phlebotomy guidelines is low (7/28, 25%) and similar to those using other recognized guidelines (5/28, 17%). This implies that approximately two third of the Countries (16/28, 58%) are not currently using any type of recommendations or guidelines for phlebotomy. Even more worryingly, the results of the survey attest that the compliance with phlebotomy guidance is rather poor, irrespective of whether or not the phlebotomy is under the laboratory control (Fig. 1). In accordance with these findings, most Countries declare a specific interest in having EFLM guidelines and participating in piloting EFLM preanalytical phase external quality assessment (EQA) schemes. With regard to the educational level, which is probably the most important issue to be targetted at a national level, the largest number of phlebotomies appear to be performed by nurses and laboratory technicians in Europe, with a basic education entailing 4 to 5 years of high school followed by 2 to 5

years of college or university studies. It is also noteworthy that in less than one third of the responding Countries, specific training for phlebotomy is not part of the education required to become qualified.

According to these results, it can hence be concluded that there is an urgent need to further analyze the quality of current practices of blood collection. A major compliance with official guidelines, such as those issued by the Clinical and Laboratory Standards Institute (CLSI) or World Health Organization (WHO), is also needed. It, therefore, seems advisable that a major harmonization effort should be pursued, preferably by implementation of the available CLSI H3-A6 document, especially in those Countries which have not developed local recommendations. The member societies of the EFLM need should also be actively involved in training programs and continuous education of healthcare phlebotomy personnel. Last but not least, certification of competence in phlebotomy may be regarded

as a reliable strategy to decrease the vulnerability of this essential phase of the total testing process. Additional activities have been already planned by EFLM-WG-PRE for the future, including a second survey aimed to define local practices in blood collection and potential areas of further improvement, as well as an official meeting to be held in Porto in 2015, which should present the ideal place to exchange ideas and provide supplementary strategies for harmonization.

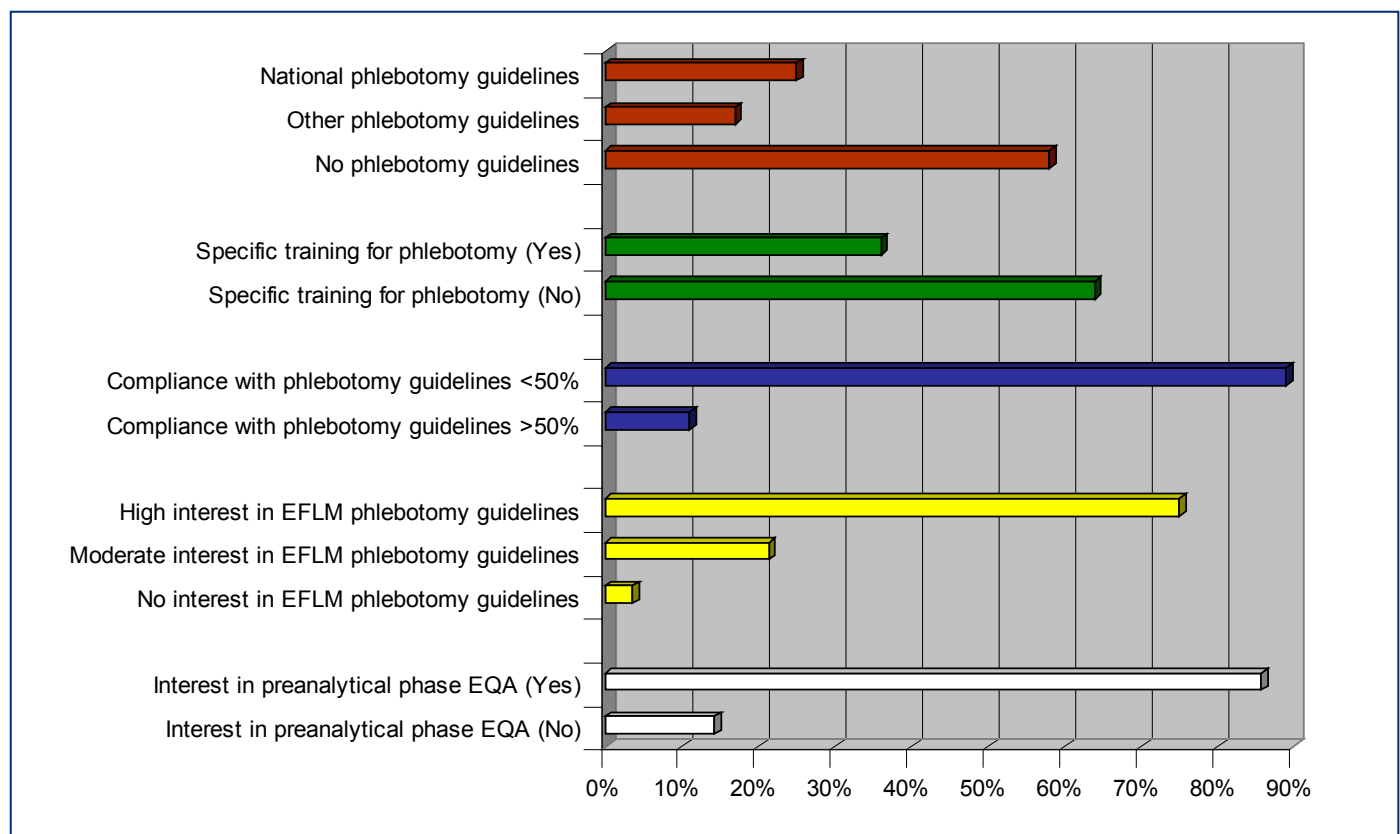
Giuseppe Lippi

Member of the EFLM WG on Preanalytical Phase Laboratory of Clinical Chemistry and Hematology, Academic Hospital of Parma, Italy

Ana-Maria Simundic

Chair of the EFLM WG on Preanalytical Phase University Department of Chemistry, Sestre Milosrdnice University Hospital Center, Zagreb, Croatia

Figure 1. The most relevant findings of the EFLM-WG-PRE (WG on Preanalytical Phase) survey about phlebotomy practices in Europe.





European Federation of Clinical Chemistry and Laboratory Medicine

EFLM represents IFCC in Europe

EFLM Speakers Bureau

by *Maria Stella Graziani*

We are glad to inform you that the 14th EFLM EFLM has established a pool of EFLM speakers (from EFLM officers) to encourage the National Societies to engage EFLM speakers at their meetings. These experienced speakers have been selected by the EFLM Committee on Education and Training according to their competence, accomplishments and their commitment to education.

The list of the main topics covered by the EFLM speakers includes the following:

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- | | |
|--|---|
| 1. Accreditation and ISO/CEN Standards | 18. IVD Directive |
| 2. Analytical Quality Specifications | 19. Molecular Diagnostics |
| 3. Biological Variation | 20. Patient Focused Laboratory Medicine |
| 4. Biosensors and Nanotechnologies | 21. Personalized Laboratory Medicine |
| 5. Biostatistics | 22. Point of Care Testing |
| 6. Cardiac Markers | 23. Postanalytical External Quality Assurance |
| 7. Clinical Laboratory Management | 24. Postgraduate Education |
| 8. Coagulation | 25. Preanalytical Phase |
| 9. Common Training | 26. Professional Qualifications |
| 10. Congresses and Postgraduate Education | 27. Standardisation and Harmonization |
| 11. Critical Results | 28. Test Evaluation |
| 12. Ethics | 29. Toxicology |
| 13. Evidence Based Laboratory Medicine | |
| 14. Guidelines | |
| 15. Laboratory Information Systems | |
| 16. Laboratory Management | |
| 17. Instrumentation in Clinical Laboratories | |
-
-
- For the name of the recommended speakers and for any further information, please contact:
eflm@efclm.eu

EFLM WG-Promotion

CSCC 2014 | June 8-11, 2014 | Charlottetown PE

58th Annual Conference of the Canadian Society of Clinical Chemists

*“Clinical Chemistry:
A bridge to better health”*



by Drs. Andrew Lyon and Isolde Seiden Long

The 58th annual meeting of the CSCC, **Clinical Chemistry: A bridge to better health**, offered a number of firsts: **First CSCC meeting with an 'app' version of the program, first with a conference T-shirt, the first CSCC charity run and the first in the province of Prince Edward Island, Canada. Delegates arrived in Charlottetown to find the tulips in full bloom and being lightly watered with a hope that the conference would have blue skies for the week ahead.**

The 58th annual meeting of the Canadian Society of Clinical Chemists was a very full itinerary this year with four Symposia on the topics of:

- 1) Appropriate Laboratory Utilization
- 2) Recent Advances in Molecular Diagnostics
- 3) Advances in Pediatric and Critical Care and
- 4) Men's Health.

In addition to the symposia, there were 5 scientific workshops, Breakfast Roundtable sessions, Industry Workshops and meetings for all the CSCC Interest groups, working groups and committees. CSCC currently has 7 active interest groups in the areas of:

- Autoverification
- CALIPER (Canadian Laboratory Initiative on Paediatric Reference Intervals)
- Fluids testing, Monoclonal Gammopathies (MGIG)
- Pediatric and Perinatal Biochemistry
- Point-of-Care Testing and Toxicology.

Additionally, CSCC currently has a

- Working Group on Quality Management (QM) and
- Committee for Educating the Public On Clinical Chemistry (EPOCC). All these groups are now featured on the CSCC website: <http://www.csc.ca/en/about-us/csc-special-interest-groups.html>

Together with the 58th annual meeting of the society, the CSCC council met for their 3rd meeting of the year.

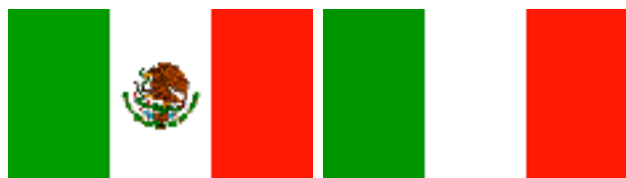
CSCC President, Dr. David Kinniburgh opened the meeting with his report on both national and international levels. Dave has continued this year on the executive of the Canadian Leadership Council on Laboratory Medicine (CLCLM). A committee on lab utilization has been struck to align common interests in use of lab tests among different lab disciplines. The theme of improving use of lab tests continued with a report on the Canadian Choose Wisely initiative. Internationally Dr. Kinniburgh has been consulted by IFCC regarding North American representation with IFCC. The IFCC executive board elected last year did not include a representative from North America. The possibility of CSCC and AACC having a joint representative to the IFCC EB is underway. Dr. Kinniburgh also discussed the upcoming IFCC discussion and vote to change the definition of an IFCC member (the motion would allow multiple societies per country to be IFCC members, rather than the current practice that only one society per country can be an IFCC member). This motion will be discussed at the IFCC general conference in Turkey this summer followed by an electronic ballot. Dr. Kinniburgh led a 'Town Hall' meeting during the CSCC meeting to discuss health professions acts and recognition of clinical laboratory doctoral scientists in several provinces and the potential of working more closely with geneticists, microbiologists and immunologists in Canada.

Dr. Andrew Lyon as president-elect confirmed that that the 2015 annual meeting will be held in Montreal in partnership with the Canadian Association of Pathologists. Dr. Mary Ann Kallai-Sanfacon is co-chair and she will announce the overall theme, committee members and symposia topics shortly. The 2016 CSCC annual meeting will be held in Edmonton, possibly as a joint meeting with the Canadian College of Medical Genetics (CCMG).

CSCC executive director Elizabeth Hooper reported that the office organized a series of lectureships this year in critical care medicine, cardiovascular medicine and the travelling lectureship in addition to 13 educational roundtables. Dr. Mario Plebani will be the 2014 CSCC travelling lecturer.

IFCC Professional Scientific Exchange Programme (PSEP)

Optimization and Evaluation of a New HbA1c Reagent on Siemens ADVIA 2400 Chemistry Analyzer



*by Ku Chulim, Carlos Alberto, B.S. BPC
Specialist Candidate in Clinical Biochemistry
Autonomous University of Yucatan
Clinical Laboratory Scientist
Medical Center of the Americas Hospital
Merida, Yucatan, Mexico*

IFCC Programa de Intercambio Científico Profesional Reporte PSEP

INTRODUCTION

The objective of this laboratory exchange, included in the IFCC exchange program, was to evaluate the analytical performance of a new reagent, developed by Axis Shield Laboratories (Dundee, Scotland), based on an immunoassay for the determination of HbA1c on the ADVIA 2400 chemistry analyzer commonly used in the clinical chemistry laboratory.

For this project a new reagent for the determination of HbA1c was kindly provided by Axis Shield Laboratories together with calibrators and controls to perform all the experiments needed.

Blood samples used, were obtained from San Raffaele Hospital. The samples selection was prepared considering the features required for each protocol performed in order to evaluate the new reagent.

The new reagent met the requirements for the clinical laboratory: to be aligned to the NGSP and IFCC materials, to be robust to endogenous interferences and to meet the NGSP pre-requirements.

We obtained valuable information regarding the reproducibility and trueness of the measurement system and were able to determine its advantages and disadvantages. Therefore, with all this information, we were able to find a solution more efficiently when the method showed some problems.

CONCLUSION

Method validation is a process that requires time and a considerable economic expense. Through the development of this work, I had the opportunity to be acknowledged and to learn how to evaluate a new method following the guidelines established in several CLSI protocols. Owing to this experience, in the future I will be able to evaluate the current methods and those new methods that need to be introduced in the clinical laboratory.

All my new knowledge will allow me also to detect problems when the method has been already used as diagnostic tool through the application of a quality control system leading me to evaluate the long-term performance of the method.

In a similar way, this experience will be useful for me to carry out studies with the objective to evaluate the performance of new experimental reagents.

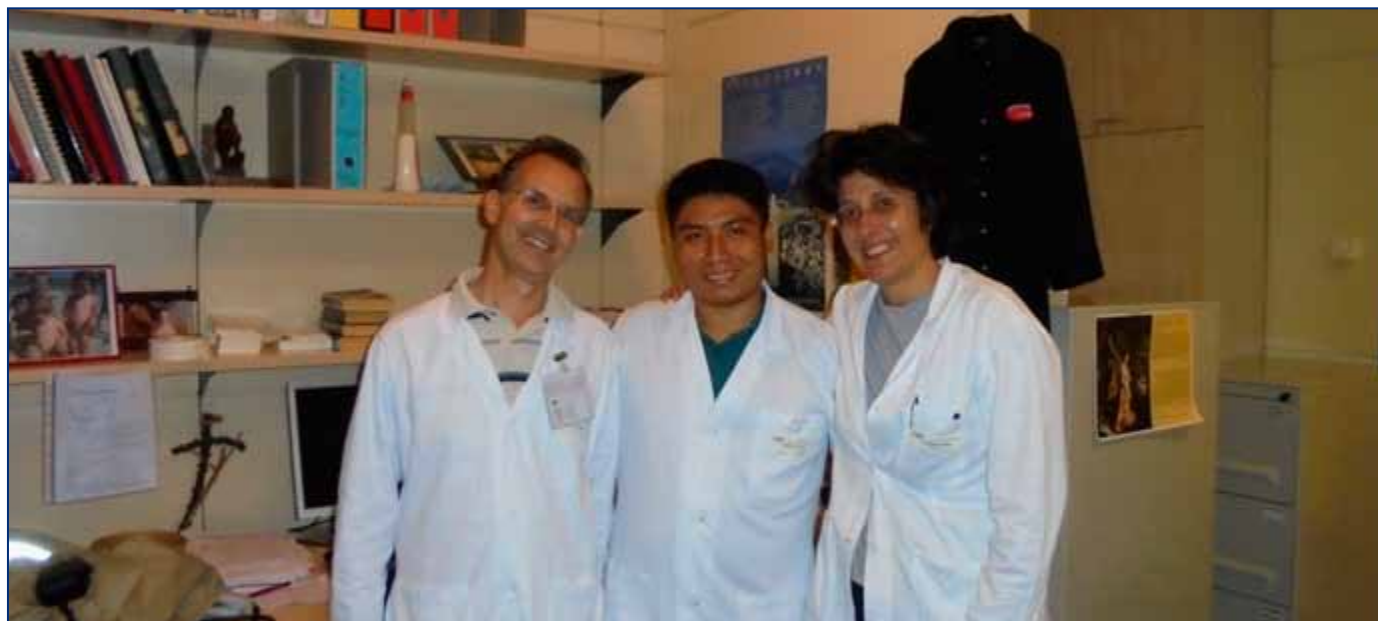
ACKNOWLEDGEMENTS

I wish to thank the International Federation of Clinical Chemistry (IFCC), especially Dr. Graham Beastall and Silvia Colli Lanzi for all the support provided through the PSEP that allowed me to be exchanged in the laboratory at San Raffaele Hospital in Milan, Italy. I would like to thank also the Mexican College of Clinical Laboratory Sciences, with special atten-

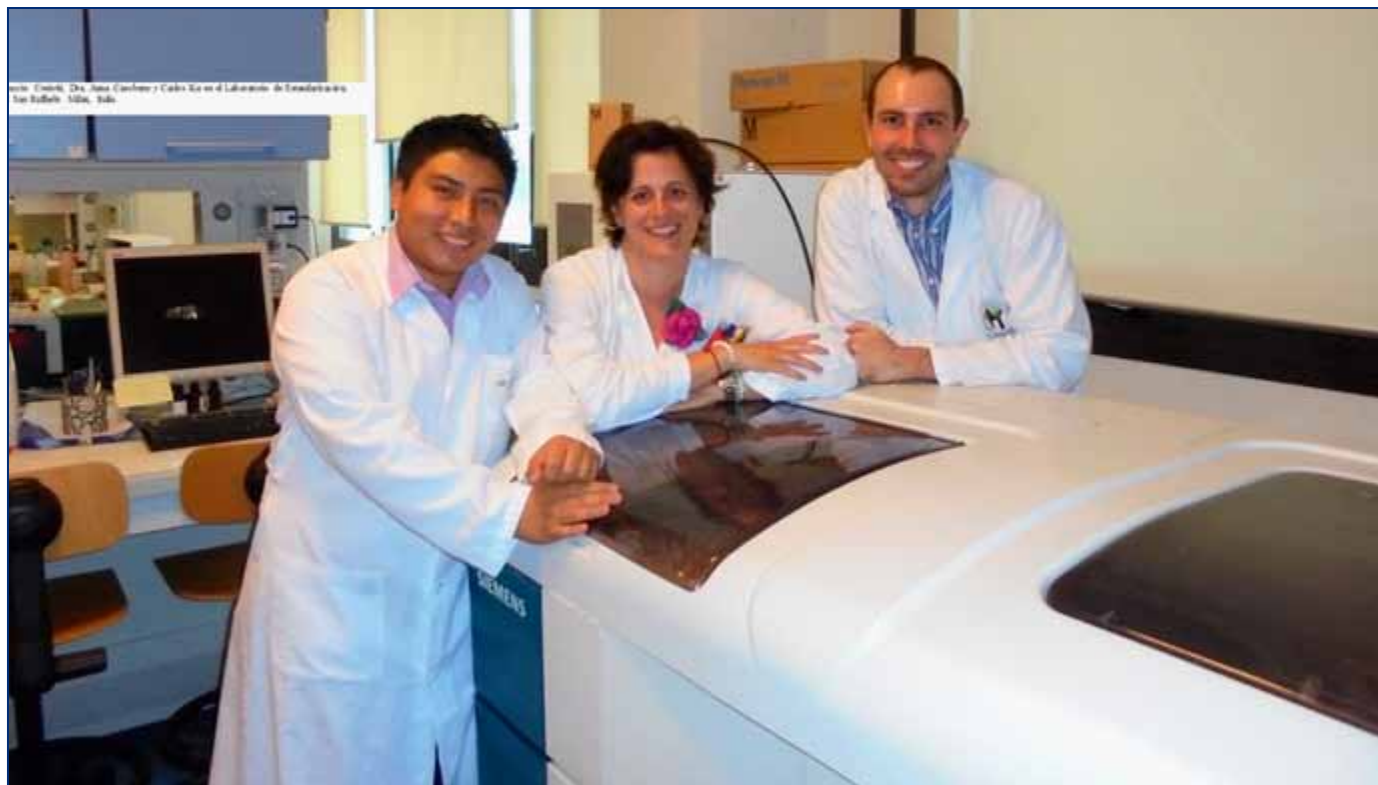
tion to Dr. Rosa Isabel Sierra Amor for all the help provided in searching opportunities to achieve my laboratory exchange in recognized institutions; and Dr. Julio Lara for being my mentor and my reference professionally and academically.

Due to the instruction, guidance and patience during my academic laboratory exchange, I would like

to thank Dr. Anna Carobene, Dr. Mose Barbaro and Dr. Elena Guerra because all the experience and knowledge I got from them will be part of my path toward success. I thank also Dr. Ferruccio Ceriotti because it would not have been possible for me to be exchanged at San Raffaele Hospital without his authorization, supervision, advices and kindness provided during my time at the laboratory.



Dr. Ferruccio Ceriotti, Carlos Ku and Dr. Anna Carobene at Standardization Laboratory, San Raffaele Hospital - Milan, Italy



Carlos Ku, Dr. Elena Guerra and Dr. Mose Barbaro at Standardization Laboratory, San Raffaele Hospital. Milan, Italy

IFCC Professional Management Exchange Programme (PMEP)

Laboratory Quality And Management Course at the Division Of Chemical Pathology Stellenbosch University (Tygerberg Hospital), Cape-Town South Africa



by Idris Yahaya Mohammed

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TRAVEL AND ARRIVAL IN CAPE-TOWN

My home institution in Nigeria is located in Kano and it is a tertiary hospital known as Aminu Kano Teaching Hospital. Aminu Kano Teaching Hospital was established in August, 1988 when the Kano State Government formally handed over the then Aminu Kano Cottage Hospital to the Federal Government to be used as a Teaching Hospital. Today the hospital has grown to be a full 500 bedded Teaching hospital with some modern equipment and facilities. It serves as a training center for Bayero University College of Health Science students as well as Post graduate training of Doctors.

I travelled to Cape-Town via Lagos - Nigeria, through a local flight from Kano to Lagos

The International office at Tygerberg Campus made arrangement for us to be accommodated at Aurio's Guest Accommodation which is within walking distance to the University and Hospital. We really liked this accommodation which offered us a competitive value for money and transport to the Hospital on a daily basis. We usually walked back home to familiarize ourselves with the environment. The neighborhood was quite safe and serene. On arrival at the department we were first referred to the University International Office where we registered as affiliate students, which is a requirement for all students visiting the University for Short Course. This was very useful as it allowed us access to the university facilities including Library facilities and

short courses without the need for additional fees. After payment of the registration fees we were given student ID Cards and a short tour of the facilities available at the Tygerberg Campus.

The head of department took us round the department where we were introduced to all the members of the department and we were then given cards that gave us access to enter all the Laboratories under the NHLS without restriction. I must say here that we were warmly received by all the members of the department and everybody was eager to help us in the best possible way they could. We interacted with all staff freely and enjoyed a good working relationship with everybody. They adjusted and shared office space with us without any troubles. We were given access to a computer and internet with access to their Laboratory Information Services. This helped us a lot to study their laboratory services and quality documents. This was a major achievement as we all come from laboratories that are not ISO accredited and it provides us with a chance to know how to prepare our own lab documents back at home.

The administrative staff in the department was also very helpful providing us with all the schedule of activities for the course, organizing our lectures and appointments. We were added to their departmental mailing list to keep us informed on departmental activities. We were treated like members of the department.

Article continued on next page

LABORATORY MANAGEMENT LECTURE SERIES

We had several resourceful and interactive lectures on Laboratory Quality and Management. We learned from people that are experienced and know their jobs very well. I really enjoyed all the sessions which were Power point lectures in a conducive lecture room and atmosphere. The lecturers were skillful and all of them encouraged an atmosphere of active learning and discussion.

LABORATORY AUDIT OBSERVATION

We were assigned to separate groups that conducted audits in different sections of the Laboratory. I really enjoyed this session as it teaches us a practical approach on how to use the laboratory quality documents in detecting Non-Conformances and most importantly the mechanisms in Place to report and correct them. It was a very practical session that allowed us to apply what we learned during the lecture session into practice. We observed and learned from the auditors.

CLINICAL ACTIVITIES AT TYGERBERG HOSPITAL

During our stay in Tygerberg Hospital we were instructed to apply ourselves well and encouraged to participate in as many activities as possible. The clinical sessions we attended had a major purpose of bridging the gap at the Laboratory and Clinic Interface. We attended and interacted with Physicians during their ward round and review sessions and this helped us academically as well. Some clinical activities we attended include the following:

- University of Cape Town (UCT) Visiting Lecturer Programme 2014 (Prof John Burnett)
- Chemical Pathology Departmental Sessions:
 - Academic Updates, Seminar and Journal Club Meetings
 - Management Meetings (1 per month)
 - Personnel Meetings (1 per month)
 - Quality Control Meetings (1 per month)
- Renal Unit Talks and Ward rounds: Mondays at 10.30am (Prof. Moosa)
- Endocrine Talks and Ward rounds: Thursday 8.30am and Friday 10.30am (Prof. Ascott-Evans)

The department arranged for us to visit other laboratories in Cape-Town in order to see how they operate and the services they offer. This gave us a view on how different labs function in their own way and use the resources they have to achieve the required level of quality in their own special ways. All the labs were headed by Pathologist and they were on site to receive us and to give us a guided tour of their facilities. We really appreciate the warm reception we received from them all and we are all grateful we had this tour. The laboratories we visited include the following:

- UCT – Lipid Clinic and Lipid Laboratory
- Green Point NHLS Lab
- Red Cross Children’s Hospital (Inherited Metabolic Disease Lab)
- Pathcare Laboratories
- Synexa Life Sciences Laboratories (Montague Gardens, Cape Town)

UCT VISITING LECTURER PROGRAMME

We were invited by the Head of Department to attend series of lectures which ran for 2 weeks and the University of Cape-Town, Chemical Pathology department. This event includes the following lectures and group teaching by Visiting Professor John Burnett from Australia:

OTHER SHORT COURSES AND INFORMATION SESSION AT STELLENBOSCH UNIVERSITY

We utilised the opportunity of being in Stellenbosch to attend several Short courses and information session:

- Research Africa: 12 June 2014, Gerga 2 SUN
- Mendeley for Reference management: 11 June 2014, E-Classroom, Library, SUN
- Pro Quest Training: 12 June 2014, JS Gericke Library, SUN
- Finding Information using e-Journals and Database: 17 June 2014 Gerga 2, SUN
- Postgraduate Supervision in Health Science: 18 and 19 June 2014, Gerga 2, SUN

TRANSITION TO ISO 15189:2012 AT PATHCARE ACADEMY

This course was organized by Pathcare Academy and the resource Person participated in Drafting ISO documents including the ISO 15189:2012.

MOLECULAR PATHOLOGY COURSE

The department of Chemical Pathology organized a Molecular Pathology course for Trainee Doctors running the MMed Programme and we were given permission to join this module. We joined both the lectures and Practical sessions and we participated in DNA extraction, Conventional and Real time PCR, HRM analysis and Flow Cytometry.

COURSE PROJECT

As part of the requirement for this course I conducted an audit on serum Potassium disorders in the medical emergency ward F1 of Tygerberg Hospital. I applied and got an ethical approval from the research and Ethics committee and I have finished data mining. I am presently writing it up as an article out of which I expect two publications. IFCC will be acknowledged in this publication and I am hoping to submit it for publication in the Journal.

BENEFITS OF THIS TRAINING TO ME AND MY INSTITUTION

I have gained a lot during my stay at Stellenbosch and this is a career breaking event in my life. I will certainly use this to bring changes in my own field in Nigeria and in my Hospital in a variety of ways.

Quality Plan: I have already discussed with our Chief Medical Director and my Head of department and I have their support to write a proposal on how to change our laboratory practice in Aminu Kano Teaching Hospital to develop a quality of culture. I plan to develop several documents that will be used for this Including a Quality manual and Safety manual. I also plan to develop a Laboratory handbook that will bridge the gap between our laboratory users/clinicians and the laboratory.

Departmental Library: I currently have the support of the management to write a list of books and doc-

uments that we need to procure for our departmental library. I have recommended buying ISO 15189 documents and the CLSI Quality documents. I plan to use the Key to quality documents developed by CLSI to perform a gap analysis and identify areas we need to strengthen. In addition I bought many textbooks that are useful and have donated them to the departmental library for the use of everybody in the department.

Training: I plan to introduce short information sessions that I will organize with the support of my colleagues to training for resident doctors and senior laboratory technologists on laboratory management. This short course for 3 days will cover essential aspects of lab management and will involve resource persons from my own institution and I will serve as a coordinator. We will register it as a University Course in Bayero University Kano. We plan to send invitations to laboratories around the Northern Nigeria and we are confident that we will have a lot of participants. We are also currently planning to introduce short courses on Laboratory Management in collaboration with the National Postgraduate medical College of Nigeria. This will be a National Programme and a requirement for all Resident doctors before taking the exit examination.

I also realize that I have a duty to encourage younger colleagues to develop interest in this field and to attend courses like this. We have already identified others that are willing to travel out of the country to Stellenbosch for this course before we develop our own.

I have been scheduled to present several talks in the Hospital which will serve as a step-down training on what I have learned so far.

Research: We are currently organizing an African network together with Professor Erasmus on Pre-Analytical Quality. The aim is to encourage research in this area given that most errors in the Laboratory occur in this Phase of Laboratory testing. We also have a National plan with my colleagues in Lagos and Ibadan to conduct a Multicenter study with the aim of identifying the peculiarities in Nigeria in terms of laboratory errors. This we plan to do by involving our colleagues in various centers across Nigeria. We

hope this will serve as a Justification to develop a National policy on our healthcare laboratories that will improve lab services across the country.

Networking and Collaboration: By attending this course I have already established linkages with many colleagues in different parts of the world like the US, Australia, Zambia, Kenya and South Africa. I have also registered and become a member of many associations such as CLSI, AACC, South African Association of Clinical Biochemistry and ASLM. I hope that this will in the future serve as a means for collaboration and exchanging academic knowledge.



Laboratory Quality Management Course 2014.
From L to R: Dr. Idris, Mr. Aaron, Prof. Erasmus, Dr. Soriyan and Mr. Mathius

CONCLUSION

I would like to use this opportunity to thank the IFCC for offering me this chance to develop myself academically and professionally. I highly appreciate your contribution towards my career and I will use this positively influence my practice in Nigeria. My sincere thanks also go to Professor Erasmus and all the members of his department for making our stay in their laboratory both resourceful and full of pleasant memories. Thank You.



At the University Entrance



Department of Chemical Pathology TBH CAPE POINT



Molecular Pathology Course: Real Time PCR



Welcome to a New IFCC Member: Saudi Society for Clinical Chemistry Saudi Commission for Health Specialties

We welcome the 89th Full Member of IFCC: the Saudi Society for Clinical Chemistry. The new IFCC member had been established in the Kingdom of Saudi Arabia, in Riyadh City.

The second main branch of the Society is established in Jeddah.

The Saudi Society for Clinical Chemistry focuses on:

1. Development of scientific and professional thinking in the sphere of the society specialization and promotion of the performance of the society members in field of chemical laboratories and medical chemistry and diagnosis of diseases on the basis of the laboratory testing results.
2. Providing opportunities for those working in the field of the society, to participate in the process of scientific development as guided by the Society.
3. Facilitating exchange of scientific achievements that occur in the Society field of specialty. Such exchange can be made inside and outside the Kingdom.
4. Providing advice and studies to the different organizations concerned with respect to matters which are within the activities of the Society.
5. Participation in laying down professional standards in the field of the Society activities and following up on the proper utilization of those standards.
6. Participation in elevating the level of awareness among the public in the different health fields within the field of Society activities.



News from the IFCC website

Interview with Thomas Sudhof, the 2013 Nobel Laureate in Physiology



The El Microscopio, the IFCC web radio, interviewed the recipient of the Nobel Prize in Physiology or Medicine 2013, Prof. Thomas C. Südhof, (co-awardee with James Rothman, PhD, and Randy Schekman, PhD). They were awarded the prize for their discoveries of machinery regulating vesicle traffic, a major transport system in our cells. In his interview, Prof. Südhof talks us about his discoveries and the contribution to clinical chemistry and laboratory medicine.

[Click here to listen to the interview.](#)

IFCC Task Force-on Cardiac Biomarkers



Implementation and use of high-sensitivity cardiac troponin assays in practice, and the calculation of the clinically-relevant change (delta) values, can be challenging. The IFCC Task Force on Clinical Applications of Cardiac Bio-markers (TF-CB) has prepared two helpful documents that are now available in both extended and pocket formats for immediate and easy consultation.

Click on the images below to download the documents.



APFCB News 2013



The Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine 2013 News is now available. This special issue, published after the 13th APFCB Congress in Bali, will allow you to enjoy a glimpse of this well organised and successful event. This issue also features useful updates on member society activities and some useful articles from both regular and corporate members. An article on the Importance of Warfarin Genotyping in Asians completes the issue. The attractive painting on the cover page, "Cherry Blossom Time in Japan", has been graciously contributed by Prof. Tan It Koon, founder and past president of APFCB, from his precious artwork.

Click on the image to download the document.

IFCC - 2013 Annual Report



The IFCC Annual Report 2013 is now available. All the activities performed in 2013 by IFCC at a glance. The Annual Report 2013 includes the reports of the IFCC Officers, National or Area Societies and Regional Federations, giving the opportunity to communicate their activities to other members. The Annual Report 2013 has been compiled by Dr. Sergio Bernardini, IFCC Secretary. A message from the IFCC President, Dr. Graham Beastall, welcomes the reader.

Click on the image to download the document

IFCC 's Calendar of Congresses, Conferences & Events

Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses

2014 - Oct 20-21	Turning Science into Caring 2014, 7th Annual Asia Pacific and Japan Scientific Symposium	Ho Chi Minh City, VN
2014 - Oct 24-25	The IFCC-Siemens Specialized Conference "Biomarkers in Neuropsychiatric Disorders	Toronto, CA
2014 - Nov 14	IFCC-ROCHE Specialized Conference on "Biomarkers of Alzheimer Disease"	Rome, IT
2015 - Apr 28-30	4th Congress of the African Federation of Clinical Chemistry (AFCC)	Victoria Falls, ZW
2015 - Jun 21-25	EuroMedLab 2015 - 21th-IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine	Paris, FR
2015 - Jun 26	EuroMedLab 2015 Satellite Meeting 'HbA1c and management of Diabetes Mellitus in the 21st Century'	Reims, FR
2015 - Sept 24-26	COLABIOCLI 2015 - XXII Congreso Latinoamericano de Bioquímica Clínica	Quito, EC
2015 - Nov	ArabMedLab 2015 - 14th Arab Congress of Clinical Biology (AFCB)	Khartoum, SD
2017 - Jun 11-15	EuroMedLab 2017 - 22nd IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine	Athens, GR
2017 - Oct 22-25	WorldLab 2017 - 23rd International Congress of Clinical Chemistry and Laboratory Medicine	Durban, ZA

Calendar of events with IFCC auspices

2014 - Aug 14-16	8 th Palestinian Conference of Medical Technology	Ramallah, Palestine
2014 - Aug 18-20	5th International Conference and Exhibition on Analytical and Bioanalytical Techniques	Beijing, CN
2014 - Aug 27-29	II Congreso Bioquímico del NEA	Corrientes, AR
2014 - Sept 9-13	10th EFLM Symposium for Balkan Region under the title Paediatric Laboratory Medicine: Some aspects of the Obesity, Metabolic Syndrome, Neonatal Screening, Reference Intervals and Critical Values and 19th Congress of Medical Biochemists of Serbia	Belgrade, SRB
2014 - Sep 16-19	XXXIV Nordic Congress in Clinical Chemistry	Göteborg, SW
2014 - Sep 17-20	AACC Symposium: Critical and Point-of-Care Testing: Real World and Emerging Applications for Improved Clinical Outcomes	San Diego, US
2014 - Sept 18-20	XII Baltic Congress in Laboratory Medicine (BALM)	Riga, LV

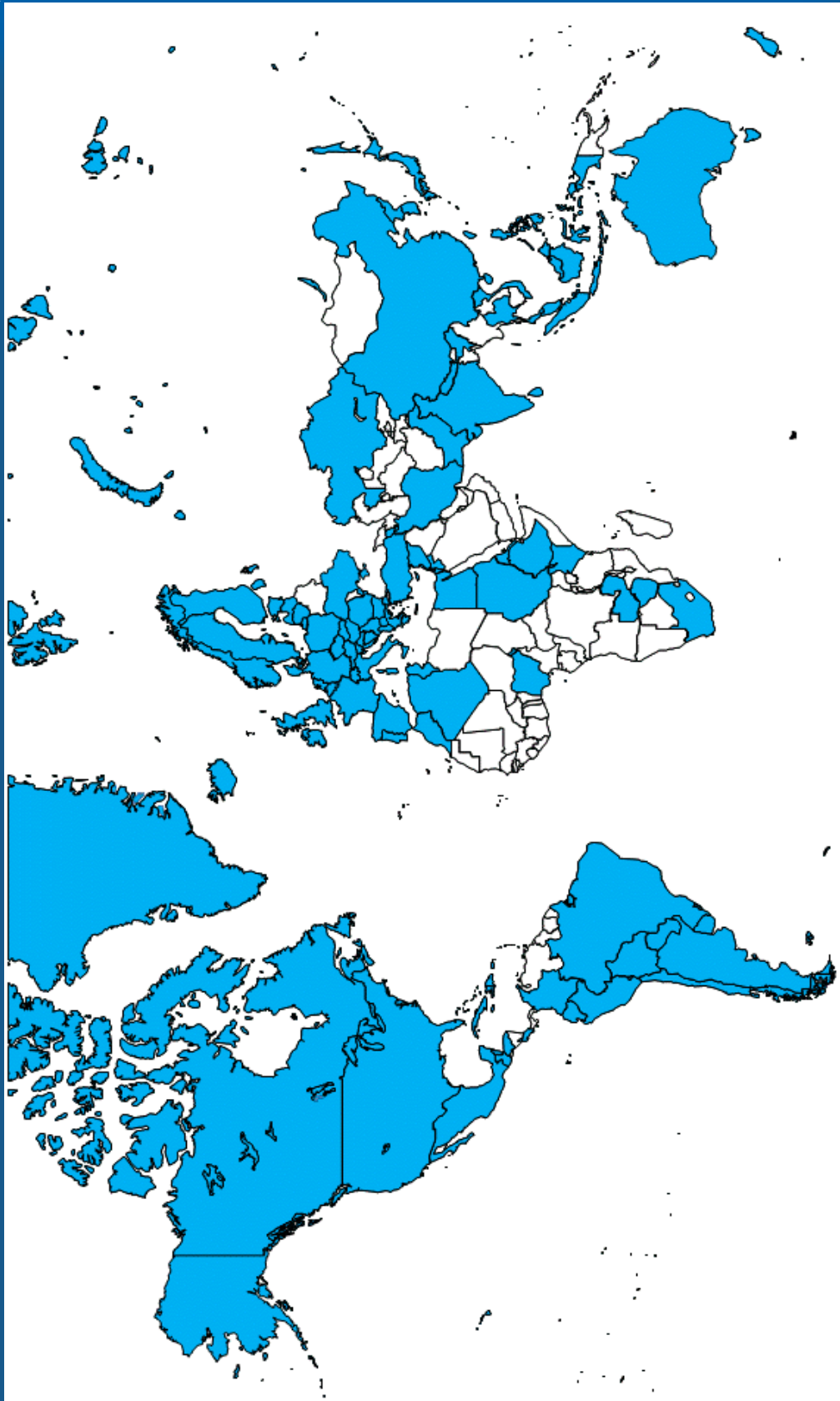
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2014 - Sep 19-21	Unipath 2014 - 54th Annual Pathology Congress of the Federation of South African Societies of Pathology	Pretoria, ZA
2014 - Sep 24-27	German Congress for Laboratory Medicine (DKLM)	Mannheim, DE
2014 - Sept 25-27	7th Santorini Conference "Systems Medicine Personalized Health and Therapy"	Santorini, GR
2014 - Sep 25-27	"Atherosclerosis and Cardio-Endocrine Biomarkers" Course	Bruges, BE
2014 - Sep 25-27	XX Jornadas Bioquímicas del Noa	Tucuman, AR
2010 - Oct 7-10	3 rd EFLM/UEMS Congress "Laboratory Medicine at the clinical interface"	Liverpool, UK
2014 - Oct 15-17	VIII National Congress of Clinical Laboratory	Seville, SP
2014 - Oct 16-18	Laboratory Management Symposium	Malatya, TU
2014 - Oct 23-28	360-degree Lysosome: from structure to genomics, from function to disease	Izmir, TU
2014 - Oct 25-26	14th EFLM Continuous Postgraduatemistry and Laboratory Medicine	Dubrovnik, HR
2014 - Oct 27-29	52nd Annual Scientific Conference of the Australasian Association of Clinical Biochemists	Adelaide, AU
2014 - Oct 31-Nov 3	14th Congreso Internacional del Colegio Nacional de Bacteriología	Bogota, CO
2014 - Nov 7-8	12th National Congress of Clinical Chemistry	Athens, GR
2014 - Nov 14	3rd European Forum on Diabetes - World Diabetes Day 2014: the contribution of laboratory medicine to the best possible outcome	Barcelona, ES
2014 - Nov 24-25	1st EFLM Strategic Conference "Defining analytical performance goals - 15 years after the Stockholm Conference"	Milan, IT
2014 - Dec 10-13	ACBICON 2014 - 41st National Conference of Association of Clinical Biochemists of India	Jodhpur, IN
2015 - Feb 5-6	Labquality Days	Helsinki, FI
2015 - May 5-6	8th European Symposium on Clinical Laboratory and In Vitro Diagnostic Industry "Point of care testing"	Catamarca, AR
2015 - May 6-10	Second World Congress on Water Channel Proteins (Aquaporins and Relatives) Celebrating the 30th Anniversary of the Discovery of the First Water Channel Protein	Cluj-Napoca, RO
2015 - Oct 7-10	XIII Congreso Nacional Bioquímico (CUBRA)	Catamarca, AR

IFCC Members

Full Members

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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)

Publisher

Communications and Publications

Division (CPD) of the IFCC

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January-February Edition

- submission deadline: [January 23](#)

March-April Edition

- submission deadline: [March 20](#)

May-June Edition

- submission deadline: [May 22](#)

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- submission deadline: [July 24](#)

September-October Edition

- submission deadline: [September 25](#)

November-December Edition

- submission deadline: [November 27](#)

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Tahir Pillay, Editor, IFCC e-NewsLetter
e-mail: ifccnewsletter@ifcc.org

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