e-NewsLetter

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International Federation of Clinical Chemistry and Laboratory Medicine

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e-NewsLetter

IFCC International Federation of Clinical Chemistry and Laboratory Medicine

In this issue

The Dawn of a New Era for IFCC

by Dr. Graham BEASTALL
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Dr. Graham BEASTALL
IFCC President

In writing my final article as President there is a temptation to focus on the experiences and achievements of the past six years. There will be a little reflection but the article will also look forward to the opportunities that lie ahead for laboratory medicine for the specialists in our profession and for IFCC.

Reflection:

It is impossible to record all the IFCC achievements of the past six years in a single paragraph. Here are a few headlines (in no particular order):

- Growth in Full Affiliate and Corporate Membership
- Empowerment of the IFCC Regional Federations
- Enhanced scientific reputation in the wider healthcare community
- Expansion of activities from clinical chemistry into a wider laboratory medicine
- Greater focus on laboratory medicine at the clinical interface
- Collaboration with international scientific and clinical organisations
- Education and management support for developing countries
- Improved website publications and communications
- Promoting both quality and the added value of laboratory medicine
- Facilitating more professional congresses conferences and meetings
- Restructuring of the Executive Board
- Introduction of electronic voting
- Greater responsiveness to the ambitions and needs of our Members
- Financial transparency and stability
- Development of an efficient and much valued IFCC Office team
- Strengthening 'The Family of IFCC'
- Stimulating debate on the future direction for laboratory medicine and IFCC

A Position of Strength:

IFCC is a vibrant organisation which enjoys growing international recognition andrespect:

- IFCC currently has 89 Full Members 10 Affiliate Members and 52 Corporate Members. These are all 'record highs' and together they represent >40000 senior laboratory medicine professionals across the globe. In the last year it was especially pleasing to welcome the Saudi Association for Clinical Chemistry as a new Full Member
- There are five IFCC Regional Federations each of which is implementing its own strategic plan to improve the quality of laboratory medicine and its central role in laboratory medicine
- At any point in time IFCC is undertaking more than 50 specific projects involving >300 volunteers who give freely of their time and expertise. Regional Federations also undertake specific projects; the combination of global and regional activity is one of IFCC's strengths.

Shaping the Future of Laboratory Medicine:

From our position of strength IFCC is ideally placed to play a leadership role in helping to shape the future of laboratory medicine at both national and international levels. Laboratory medicine results already influence a high percentage of all clinical decisions. As we look towards the future 'mega-trends' in healthcare

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it is clear that laboratory medicine will be even more influential contributing both to improved clinical outcomes and cost effectiveness.

Future drivers for change in laboratory medicine include:

- Globalisation arising from instant global communication
- Technological advance in methods equipment and informatics
- The need for smarter working to cope with medical advances and rising workloads in an ageing population
- Integrated diagnostics which brings together laboratory medicine imaging endoscopy and bioinformatics
- Patient centred care comprising both personalised medicine and patient focused care
- The need to add value to laboratory medicine data by converting it into knowledge for the benefit of patients and society

An excellent review entitled 'The Future of Laboratory Medicine – A 2014 Perspective' has been written by Larry Kricka and colleagues. It can be found at Clin Chim Acta 2015; 438: 284-303

In facing this world of opportunity laboratory medicine specialists have to question whether they are fully prepared. Commonly the answer is 'no'. Whether it is at local national or international level laboratory medicine specialists have tended to look inwards to what we do (well) at the expense of looking outwards to how we can work with others to be more effective for patients. We have an identity crisis because our multiplicity of names; we have divisions among staff grades and between sub-specialties of laboratory medicine; and we have historic professional rivalries that have no place in modern patient-centred care. In order to realise the opportunities ahead we should be more visionary more inclusive more involved in multidisciplinary teams and show greater pride in and leadership of our profession. This debate needs to happen at local national and international level and IFCC will continue to inform and stimulate that debate.

Appreciation:

A number of key individuals complete their contribution to IFCC at the end of 2014:

- Larry Kricka (US) Board Member for 3 years
- Howard Morris (AU) Vice President for 3 years
- Thomas Brinkmann (DE) Corporate Member Representative for 6 years
- Ulisses Tuma (BR) Board Member for 6 years
- Bernard Gouget Treasurer and Board Member for 6 years
- Jocelyn Hicks Past President and Board Member for 12 years

All have made huge personal and collective contributions to the work of IFCC and have helped to create a happy and constructive Board. In Jocelyn's case she retires after a lifetime of vision and dedication to laboratory medicine during which time she has become an inspiration for many most recently across the continent of Africa.

Of course IFCC is much bigger than its Executive Board. Its achievements owe everything to the hundreds of experts who give freely of their skill time and experience to support the work of IFCC Divisions Committees Task Forces and Working Groups both at global and at Regional Federation level. These colleagues are the strength of IFCC and they are supported by our wonderful Office team of Paola Silvia and Silvia. I thank them all for their support.

Final Thoughts:

It has been a privilege and a pleasure to serve for six years as IFCC President. I have visited 50 countries (several on more than one occasion) and attended more than 100 conferences and meetings. I have been able to represent IFCC at several influential global healthcare organisations. During this period I have met thousands of people and developed hundreds of lasting friendships. My abiding memory will be of the skill commitment and collective determination to make a difference for the benefits of patients. This is matched by a wonderful spirit of friendship and harmony. This is truly the 'Family of IFCC'.

From January IFCC will have a new President and a new Executive Board. They will develop a new vision and a new strategic plan to take IFCC forwards for the next three years. In Maurizio Ferrari we have an inspiring President who is in touch not only with the evolving science of laboratory medicine but also with the capabilities and aspirations of IFCC and its Members. He is supported by a talented team and I know that we can look forward with confidence to the 'Dawn of a New Era for IFCC'.

CLSI: Who we are and what we do

by Patrick McGinn
Clinical and Laboratory Standards Institute

The Clinical and Laboratory Standards Institute (CLSI) brings together the global medical laboratory community for a common cause: fostering excellence in laboratory medicine. It does so by facilitating a fully inclusive process of developing clinical laboratory testing standards (documentary, not physical, best practice standards) based on creation by and consensus among three constituencies: government, health care professions, and industry.

CLSI standards are developed by experts in their respective fields of laboratory medicine through a creation and revision process in which materially affected, competent, and interested parties reach consensus on the content of the standards. CLSI maintains wellhoned policies for participants' requirements for disclosing potential conflicts of interest and an appeals process for real or perceived bias. Finally, CLSI's portfolio of approximately 200 standards is reviewed every three to five years to ensure the standards are continually relevant and up-to-date.

CLSI standards are widely held as global "gold standard" resources for timely, reliable, and globally applicable guidance—and have become the trusted foundation on which laboratories can confidently develop operating procedures, and government bodies can base their laboratory regulations.

IFCC and CLSI: A Longstanding Partnership

Since 2003, the IFCC and CLSI have had a partnership agreement whereby IFCC-designated content experts are identified and actively participate on the development and revision of these standards, which subsequently include joint logos. There are approximately 25 such standards in CLSI's active standards portfolio A few examples of these standards include:

- C49-A—*Analysis of Body Fluids in Clinical Chemistry*
- C50-A—*Mass Spectrometry in the Clinical Laboratory: General Principles and Guidance*
- EP17-A2—*Evaluation of Detection Capability for Clinical Laboratory Measurement Procedures*
- EP28-A3C—*Defining, Establishing, and Verifying Reference Intervals in the Clinical Laboratory*
- EP29-A—*Expression of Measurement Uncertainty in Laboratory Medicine*
- EP30-A—*Characterization and Qualification of Commutable Reference Materials for Laboratory Medicine*
- MM12-A—*Diagnostic Nucleic Acid Microarrays*
- MM13-A—*Collection, Transport, Preparation, and Storage of Specimens for Molecular Methods*

Quality System Regulation for Laboratory-Developed Tests (LDT's)

The US FDA has issued new draft guidance to clinical laboratories that develop LDTs. Laboratories that perform LDTs will likely be held accountable to the same standards as IVD manufacturers for high risk tests. Through the FDA's proposed phased-in implementation over a number of years, enforcement of premarket review requirements for the highest-risk LDTs will begin.

The new CLSI guide *Quality System Regulation for Laboratory-Developed Tests: A Practical Guide for the Laboratory* has the resources you need to prepare for the FDA's proposed guidance. In this guide, you will find essential information on how to conform with the FDA Quality System Regulation (QSReg) for LDTs.

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This CLSI document was developed by experts in complying with FDA regulations, and succeeding with FDA inspections.

As the regulations can be difficult to understand, the document explains each requirement in plain language, and compares it, where appropriate, to the CLIA regulations. This guide explains what the QSReg requires, above and beyond what laboratories already do for CLIA. Visit *www.clsi.org/LDTs* to find out what you need to know about the proposed changes.

Explore Standards Development Volunteer Opportunities

Volunteers are the lifeblood of CLSI; indeed, they are the workforce and governance "owners" of CLSI. By donating your time and talents to improve the standards that affect your work, you will play an active role in improving public health across the globe.

When new projects are proposed or existing standards require revision, CLSI seeks volunteers to serve on its consensus committees, subcommittees, and document development committees. Volunteers selected to participate on a **consensus committee or subcommittee** are responsible for assisting with development, oversight, and review of consensus documents. **Document development committee members** have primary responsibility for drafting the consensus document; voting to accept the document; and evaluating and addressing comments received during each phase of the consensus process.

More information can be found at:
www.clsi.org/volunteer

Global Health Partnerships

The creation of globally relevant best practice standards is only half of CLSI's goal to meet its mission. In order for health care to be improved, CLSI standards must be implemented. Through our Global Health Partnerships (GHP) program, CLSI provides international outreach services and hands-on support to laboratories to aid in achieving high-quality and sustainable laboratories to better diagnose and treat patients. Our GHP program provides assessment services, training, education, and technical assistance to implement CLSI standards, improve quality, and prepare for international accreditation—establishing the standardized practices needed to better diagnose and treat patients with infectious diseases.

Visit *www.clsi.org* or contact us at *customerservice@clsi.org* for more information about CLSI.

"IFCC-TF YS High Level Meeting" at "IFCC Worldlab Istabul-2014"
Roadmap to Success - Strategy, Planning & Implementation

by Pradeep Kumar Dabla
Chair, IFCC-TF YS

Istanbul, Turkey, Monday, June 23rd 2014: The International Federation of Clinical Chemistry Task Force of Young Scientists (**IFCC-TF YS**) organized a half-day networking session-cum-high level meeting of members at the **"IFCC Worldlab Istanbul-2014".** It was held at the prestigious ISTANBUL CONGRESS CENTER situated in one of the beautiful cities of the world, Istanbul. IFCC WorldLab 2014 differed from the preceding IFCC Congresses because for the first time, in the history of IFCC, all the sister societies contributed to the symposium.

Over more than 50 healthcare professionals from across the world attended this IFCC-TF YS session. The theme of the session was based on planning a need-based Strategy for TFYS and developing concrete steps for its implementation. This session was aimed at creating awareness amongst Young Laboratory Scientists about the TFYS and to achieve long term plans. This was to enhance communication within the profession and to know the current trends in Laboratory Medicine and challenges related to laboratory management. The purpose of this session was to alert new scientists to the importance of the

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leadership and managerial aspects of jobs and to give them practical information as to how TFYS will help them succeed as planners and managers of future programs.

The conclave was addressed by eminent speakers from the IFCC and TFYS fraternity; including **Dr. Graham Beastall**, President, IFCC; **Dr. Bernard Gouget**, Treasurer, IFCC; **Dr. Sergio Bernadini,** Secretary, IFCC; **Dr. V. Steencamp**, Past President AFCC & EB IFCC; **Dr. Pradeep K Dabla**, Chair, IFCC-TFYS; **Dr. Damien Gruson**, Consultant, IFCC-TFYS.

During the opening ceremony, the welcome addresses was given by senior members and continued with Task force introduction by **Dr. Pradeep Dabla**. He summarized the Task Force origins and its members in various countries by stressing the educational activities conducted & future activities for its progression. **Dr. Sergio Bernadini** began the talk by congratulating TFYS for their ambitious initiatives and emphasised creating a book for TFYS which would work as a strategy guideline for the team to follow. **Dr. Bernard Gouget** summarized the networking of IFCC and the Task Force. He also discussed objectives of the IFCC to strengthen the knowledge and technical performance of TFYS. **Dr. Graham Beastall** visited the venue and took part in exchanges with young scientists and solved their queries. He praised the meeting and discussed thoughts with young scientists. He also pressed for the measures to be included on a realtime basis and an extension of TFYS to the other regions as well, so as to form a strong network. He explained that the IFCC is full of experts and resources which can be helpful to TFYS for their development. **Dr. Vanessa Steenkamp** introduced the African Federation of Clinical Chemistry and its initiatives for young scientists. She gave the assurance for giving help in conducting IFCC-TFYS sessions at the AFCC Congresses. **Dr. Damien Gruson** explained the measures to be taken for TFYS development and sustaining it. He shared his vision and experience of working closely with TFYS.

Dr. Bernard Gouget began his talk with the *"Vision of IFCC for Young Scientists*". The session was Chaired by **Dr. Danni Li**, Assistant Professor, University of Minnesota Medical Center, Minneapolis, USA & Core Member TFYS. He explained the importance of young scientists in building the future of Laboratory Medicine and stating how it is essential as the part of healthcare system. He stressed the worldwide networking of young scientists using modern social media and latest technology building a strong working force. Dr. Bernard also described how the working committee Euromedlab2015 is working towards raising scholarship and other funds for the international exposure of YS throughout the world. He also assured young scientists of all possible help and guidance.

Dr Pradeep K Dabla explained the "*Vision of IFCC-TFYS with current activities undertaken and planning strategy at Core Level*". The session was Chaired by **Dr. Guillaine Boursier**, Department of Clinical Biochemistry, CHU Montpellier, France & Core Member TFYS. Introducing the mission and vision of TFYS, he explained the specific objectives of Networking, Training, Participation & Multidisciplinary exchanges. He said "*The key success factors in a knowledge-driven global system are a well-educated workforce and up to the mark technological capability. Thus, education & training of younger generation is of utmost importance and giving them chance to make their own identity*". He re-emphasised participation at a global level, involvement of YS in different programmes to develop future experts, education, training, strengthening financial resources to support YS activities as an important steps for new framework. He discussed the strategic blueprint planning and leadership commitment. He defined various measures and initiatives to be taken to achieve success.

Dr. Damien Gruson, Consultant IFCC-TFYS shared his experience working with TFYS and given advice on "*Strategy Execution Success Factors"* as an expert. The session was chaired by **Dr. Omolara Popoola**, Chemical Pathology, University College Hospital, Nigeria & Core Member TFYS. He said "*We as Young Scientists need to express and develop to build the future of laboratory Medicine together*". We need to balance multiple new demands on top of research, including teaching, administrative tasks and clinical responsibilities. He alerted new scientists to the

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importance of the leadership and requirement of managerial aspects for upcoming new opportunities. He has given them practical information that will help them succeed.

Dr. Pradeep Kumar Dabla,Chair IFCC-TF YS

In the latter half, participants exchanged their views about the TFYS programme which has given a practical approach to prepare the need-based strategy. This was followed by round table discussions between the working committee TFYS and young scientists. YS cleared their doubts and queries related to the subject and the essentials for career enhancement. In conclusion, this workshop provided a unique platform to the new generation of healthcare professionals to exchange ideas and to develop a new vision for the future of laboratory sciences. It also has given an experience of how the young generation interprets Lab medicine and its impact on healthcare. So we as young scientists need a proactive approach to have the bright future ahead.

FOR FURTHER INFORMATION PLEASE CONTACT:

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Meeting Participants - "Roadmap to Success- Strategy, Planning & Implementation "

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WG-LEPS
Quality Indicators: *The time is now*

by Laura Sciacovelli and Mario Plebani
Working Group: Laboratory Errors and Patient Safety (WG-LEPS)

Introduction

In the last few years, the issue of Quality Indicators (QIs) in Laboratory Medicine has received increasing interest. The International Standard ISO 15189:2012 requires the use of QIs for assessing and monitoring the quality of all steps of the Total Testing Process (TTP), but several difficulties dissuade laboratories from effective and reliable utilization of QIs in routine practice. The main difficulties seem to be due to the additional time needed for data collection and the identification of a method that guarantees suitable measures. Moreover, the identification of which QIs have to be used (type and number), the time of monitoring and the criteria to evaluate them, are other reasons that discourage laboratories from their use.

Since 2009, the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) Working Group "Laboratory Errors and Patient Safety" (WG LEPS) has been working on this problem and has already implemented a project with the aim to developing a Model of Quality Indicators (MQI) to be used in clinical laboratories all over the world in order to decrease the error rates and improve patient safety in laboratory testing.

All laboratories, at international levels, have been called to participate in and contribute to the success of the project and an inter-laboratory comparison is ongoing through the:

- use of a common Model of Quality Indicators (MQI);
- collection of data by a dedicated website *(www.ifcc-mqi.com)* which assures the confidentiality of the data treatment and notification;
- reporting of statistical data and laboratory results evaluation.

The Model of Quality Indicators

Three different models of QIs were followed one after the other over time because the use of QIs in experimental phase of the project highlighted the need to improve some aspects such as:

- ***wording:*** for example to assure the correct data collection of clotted samples, it was specified that the number of events under observation have to concern only the sample collected with anticoagulant. Similarly, to identify the haemolysed samples it was specified to count only the sample with a haemoglobin greater than 0.5 g/L;
- ***number of indicators included in the model:*** the number of QIs seems to increase over time. Actually, in order to improve the standardization of data collection and facilitate the identification of suitable corrective actions, some indicators have been split, for example, on the basis of patient typology (outpatients and inpatients) or involved area (chemistry, haematology, immunology, etc.). This is so that, a more effective reporting system was designed with a clear definition of what is to be done in relation to each step of TTP kept under control.
- ***assignment of a priority score to each indicator:*** to overcome the question as to whether or not it is opportune to include in the MQI a lot of indicators and give laboratories a choice about what indicators are going to be used as a first step, a priority score (1 is the highest priority) was given. The priority score was designed to highlight the value of the individual QI to assess not only

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the quality of the service and possible effects on patient safety, but also the feasibility of data collection and to encourage laboratories that are often overwhelmed by the effort and the time needed to collect data. When the staff become proficient and accustomed to the management of QIs and/or development of automated methods for data collection, the gradual introduction into the practice of the other QIs with priority lower (2, 3 and 4) could be easier and more consciously accepted.

On the website is available the accepted list of QIs achieved in the Consensus Conference organized in Padua in 2013, after revising the MQI developed by the IFCC WG-LEPS. It would be the first step for their harmonization.

The website

A specific website has been developed to make available to laboratories a handy tool to input their data, view the report with results processed, find reference documents concerning the specific topic, communicate with the chair and other members of WG. The access to the reserved area of website is guaranteed through the assignment of a personal and confidential username and password that can be required linked to the website

A data entry screen has been designed on the website and the results entered via screen are automatically stored in a corresponding database table. For each indicator, in relation to scheduled time, the data are required in a clear, unequivocal and uncluttered way to make it easy for the user to enter data. Moreover, an operative instruction describing all steps to follow is provided to participating laboratories.

The report

A confidential report is periodically provided to laboratories and summarizes the laboratories results and, when appropriate, the corresponding short term sigma value and its 95% confidence interval concerning all laboratories and laboratories from the The results and sigma values are also presented in a graph form: trend in relation to scheduled time and frequency distribution so that laboratories are able to evaluate the ability of their processes on the basis of sigma scale, verify their changing over time and compare their performance with that of other participants. Before issuing the report, collected data are checked to ascertain their reliability and to guarantee the validity of information provided in the report. Reports are issued and available on the website where laboratory can access it through personal and confidential usernames and passwords.

The analysis of information provided in the reports allows laboratory to identify the need for improving and defining the priority of the action.

National leaders

The creation of a consensus, at an international level, requires the support of "country leaders and/or champions" to promote, encourage and coordinate the participation of clinical laboratories in their own country. In particular, national leaders should:

- promote and support the use of MQI as a tool that supports the process improvements, errors reduction and patient safety;
- manage QIs in routine practice in respect to national practices, requirements and regulatory rules;
- co-operate with the chairman of the WG-LEPS and his co-workers, providing suggestions to add value to the project ensuring that the final MQI may achieve a recognition and validation worldwide and may be applied to all clinical laboratories, aside from number and type of tests, staff, and country/region.

Conclusion

Quality improvement is now a strategic part of the daily routine for laboratory professionals, but quality cannot be improved without being measured, evaluated and corrected, when needed, with suitable actions.

The use of QIs within the framework of an External Quality Assurance Program (EQAP) provides laboratories a tool to monitor and assess the pre-, intra- and post-analytical activities, as well as the support processes and outcome measures and allows the identification of risks predisposing to errors resulting in patient harm.

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All laboratories are, therefore, called on to enrol in the project and contribute to a harmonized management at international level. The participation in the inter-laboratory comparison is free and does not require fees.

All laboratories have to take on this new challenge as a duty for patients as well as to comply with requirements of International Standard ISO 15189:2012. It is important that the National Societies identify a national leader to coordinate the participation to the project of laboratories of its country, contribute to the management of their laboratories and of the information provided in the reports.

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HIGHLIGHTS FROM 'EL MICROSCOPIO'

Phlebotomy

by Giuseppe Lippi
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Source: Belén Landi. El Microscopio, IFCC online radio programme (*www.infobioquimica.org*)
Requested by: Dr. Maria del Carmen Pasquel. Correspondent, Radio Microscope, Chair WG-IANT WG / CPF / IFCC

The term phlebotomy originates from the Greek words "*phlebo*" (which means "pertaining to a blood vessel") and "*tomy*" (which means "producing an incision"). Therefore, this term currently identifies the process of making a vain incision with a needle, a procedure that is also conventionally known as “venipuncture”. In essence, phlebotomy should hence be regarded as an invasive medical procedure, which deserves specific training about the correctness of performance and deep acknowledgement of potential complications.

First and foremost, it is rather obvious that the performance of a phlebotomy is a necessary and almost unavoidable step for obtaining diagnostic specimens, which are then used for diagnostic testing. Basically, a diagnostic specimen can be made of venous blood, arterial blood or capillary blood. Typically, most routine samples are made of venous blood. After collection,

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whole blood specimens are transported to the site of testing, where they are subjected to centrifugation for obtaining serum or plasma in the case of clinical chemistry, immunochemistry and haemostasis testing or are analyzed as a whole in the case of the complete blood cell count. It is hence obvious that the accurate performance of a venipuncture should be regarded as an essential criterion for the quality of testing, since an unsuitable specimen would no longer mirror the clinical condition of the patient in vivo, thus introducing an undue variability that may lead to an inappropriate clinical decision making.

There can be some problems related to the volume or the quality of the specimen. The former condition is mainly due to collection of a blood volume that is insufficient for testing (the so called insufficient samples) or the collection of a specimen with an inappropriate blood to additive ratio. This is the case of a haemostasis sample, in which the ratio between the anticoagulant – that is typically buffered sodium citrate - and the blood must fulfil a fixed ratio, which is 1 volume of anticoagulant and 9 volumes of blood. When this fixed ratio is disrupted, the quality of testing may be substantially impaired for the excess of anticoagulant that would interfere with the normal development of the clotting tests. As regards the latter condition, that is the quality of the specimen, this may be impaired when something goes wrong during sample collection. Specifically, the major problems emerge from a troublesome phlebotomy, in which the blood cells are subjected to injury, up to the full rupture. This would cause the release of a number of intracellular substances in the surrounding serum or plasma, especially haemoglobin and enzymes, which then generate undesirable bias in test results. Another important source of variability is represented by venous stasis. The application of the tourniquet is virtually unavoidable during routine venipuncture, since this practice would allow a better recognition of vein and puncturing site. Several lines of evidence demonstrate, however, that the maintainment of the tourniquet for more than 1 to 2 minutes is a significant cause of haemoconcentration, which may also spuriously increase the concentration of several analytes. Sample mixing is another source of variability. As mentioned, venous blood specimens are typically collected in primary blood tubes containing additives, which can be either anticoagulants such as heparin and citrate when the biological matrix to test is plasma or procoagulants such as thrombin when the biological matrix to test is serum. We have recently showed that an insufficient sample mixing may be a cause of inappropriate anticoagulation of the specimen, whereas an excessive shaking may be a source of blood cell injury. To overcome these problems, samples should be mixed by 4 to 6 time gentle inversion, following the precise indications provided by the different manufacturers of blood tubes.

The establishment of a specific order of draw during sample collection is a heritage of old and mostly anecdotal studies. Briefly, at the end of the 1970s, two independent groups observed that an incorrect order of draw was cause of spurious hyperkalaemia and hypocalcaemia, that are two surrogate markers of in vitro EDTA cross contamination among tubes. This led to development of universal recommendation that a specific sequence of tubes should be followed during venipuncture. Recent evidence mostly based on current and more advanced generation of blood tubes, suggest that the use of such a specific sequence is no longer justified, however.

It must be remembered that some international and national guidelines about a quality venipuncture do exist. More specifically, both the Clinical Laboratory Standards Institute and the World Health Organization have released phlebotomy guidelines, which should be regarded as the gold standard for this practice. Therefore, it seems rather obvious that all the problems in phlebotomy practice emerge from the inaccurate or non applications of such recommendations.

The working group of the European Federation of Laboratory Medicine on preanalytical variability has recently completed a survey, which was specifically aimed to collect data about national guidelines, education and training on phlebotomy across Europe. The conclusions of the study are extremely interesting.

First, only seven out of the 28 Countries declare to have issued national phlebotomy guidelines, whereas only five have implemented other guidelines such

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as those of the CLSI or WHO. It is noteworthy that the compliance with phlebotomy guidance was very poor, irrespective of the phlebotomy being under laboratory jurisdiction or not. Then, a broad range of heterogeneity was found in the healthcare workers with blood collection responsibility. According to the different European Countries, blood may be collected by physicians, nurses, lab technicians and even administrative personnel. An extreme variability was also found in the levels of experience and education of phlebotomists, ranging from specialists with particular training to administrative personnel with no education. Interestingly, specific training available as a continuous educational resource for phlebotomists was only available in one a third of the European countries. Specific training for phlebotomist was not a part of the core curriculum required to become qualified in this practice in as many as 32% of countries. And, in those countries where this was available, it did not exceed 5 hours, which is a rather limited amount of time to become expert in this medical practice.

Based on the results of this European survey, four main issues emerge. First, there is a compelling need to further evaluate the quality of current practices, compliance with available recommendations and to identify the most critical activities during phlebotomy. Then, it seems also necessary that the phlebotomy guidelines, preferably that issued by the CLSI, is broadly adapted by those European countries which have not developed local guidelines. The national EFLM societies should also take more responsibility of basic training program and continuous education of healthcare phlebotomy staff. Finally, as for other Countries such as the US, the implementation of competence certification for phlebotomist seems a convincing strategy to substantially improve the quality of phlebotomy in those Countries where the figure of the phlebotomist is not officially recognized.

Quality Management System in Health Care Services

Manfred Kindler
Vice-President of the German Hospital Communication Centre (KKC), Correspondent, Radio Microscope
Chair WG-IANT WG / CPF / IFCC

Source: Belén Landi. El Microscopio, IFCC online radio programme (*www.infobioquimica.org*)
Requested by: Dr. Maria del Carmen Pasquel. Correspondent, Radio Microscope, Chair WG-IANT WG / CPF / IFCC

Since 2005 all registered German hospitals are required by law to publish a **structured quality report** every two years.These specifications are to ensure that all registered hospitals will regularly publish comparable details on the quality-relevant aspects of their services.

The structured quality reports are published on the Internet by different organizations on behalf of the health insurance companies. These allow the patient and the referring doctor to **compare the services** of different hospitals.

In 2005 the European Standard Body CEN issued the **Technical Specification TS 15224** as a guideline for the health care industry on the interpretation for the implementation of a quality management system.

In December 2012 this Technical Specification was replaced by **a stand-alone standard** to be used as a basis for the certification in health care. EN 15224 is specifically tailored to the needs of healthcare providers.

Since February 2014 all German hospitals have to include a chapter into the structured quality reports about the implementation of **risk and incident management**. Therefore EN 15224 supports the development in the areas of quality and risk management and patient safety.

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EN 15224 is applicable to **health care organizations**, regardless of structure, organization, owner, size or type of health care services provided: primary health care, pre-hospital and hospital care, doctor's offices, nursing homes, hospices, preventive health care, inpatient and outpatient care facilities, mental health services, dental services, physiotherapy, occupational health services and pharmacies and **also organizations in social care**.

The patient is the key customer in health care. Also the citizens in the affiliated area should be taken into consideration as potential customers.

The new QM standard takes into account the **special challenges** of the healthcare industry. Many establishments in the industry aim for quality management in accordance with ISO 9001. The new standard DIN EN 15224 applies these general requirements to the realities in healthcare and places emphasis on the quality of care.Moreover, the **"translation**" of the requirements placed by ISO 9001:2008, which often is difficult for health care organizations, is no longer necessary. Annex B contains a practical guide to the implementation of this standard in health care organizations.

This standard has helped to create a basis for providing access to services with a **comparable quality** in the health care sector in all the member countries of the European Union and enable exchange across national borders

The providers have a good chance to achieve **rapid certification** for the organization of all processes in everyday use. The accreditation of the certification bodies is just in progress.

EN 15224 is based on the **structure of ISO 9001**, so the switch is considered simple. The eight principles of ISO 9000:2005 are: integrated customer focus, leadership, process approach, system approach to management, continual improvement, factual approach to decision making and mutually beneficial supplier relationships.

In addition, the standard can still be easily combined with **other management standards**, for example the environmental protection standard ISO 14001 or the occupational health and safety standard BS OHSAS 18001

In order to promote high-quality health care, the focus is on clinical processes and their risk management according to the **state-of-the-art knowledge and technology**. Therefore the requirements in this standard incorporate those from ISO 9001:2008 with additional interpretations and specifications for health care. Requirements have been addedto and clarified according to the specific health care context.

Clinical processes include all care within the complete continuum of care related to that health issue: pre-hospital, emergency care, hospital care, primary care and rehabilitation.

A clinical risk is understood to be any risk that may have adverse effects on at least one of the **eleven quality characteristics**

The quality characteristics have been defined as follows: adequate and correct care, availability, effectiveness, efficiency, equality, evidence-based (scientific) care, care that is focused on the patient (to include physical and mental inviolacy), patient integration, patient safety, timeliness, and accessibility.

Each of provider's processes needs to be focused on all of these eleven quality characteristics. **Nonconformity** in health care is a nonfulfillment of a requirement directly or indirectly related to any of the quality characteristics in health care .It includes also non-compliance to legislation. Near misses, incidents and adverse events should be treated as nonconformities.

This standard is an important certification component for the Integrated Management System (IMS) in health care institutions, which will include:

- quality management
- risk and incident management
- pain management
- hygiene management
- health and safety management
- conflict and integration management
- environmental management

European Federation of Clinical Chemistry and Laboratory Medicine
EFLM represents IFCC in Europe

EFLM's policy for Young European Scientists

by Maria Stella Graziani
Chair of the EFLM Communications Committee

EFLM has established specific procedures to increase the role and the visibility of Young Specialists in Laboratory Medicine:

A lively role within the Working Groups.

- To encourage the active participation of young scientists to the life of the Federation, EFLM established that European Scientists aged less than 35 can apply for a position in one of its Working Groups (WG). Currently, EFLM has 15 WGs operating under the wings of 5 Committees; up to now, 12 Young Scientists have been enrolled in these WGs. They are much committed and enthusiastic and give an important contribution to the work of the WGs. Young Scientists Members are selected by the WG Chair, among those candidates submitted by the National Societies as a result of a call for nomination process.

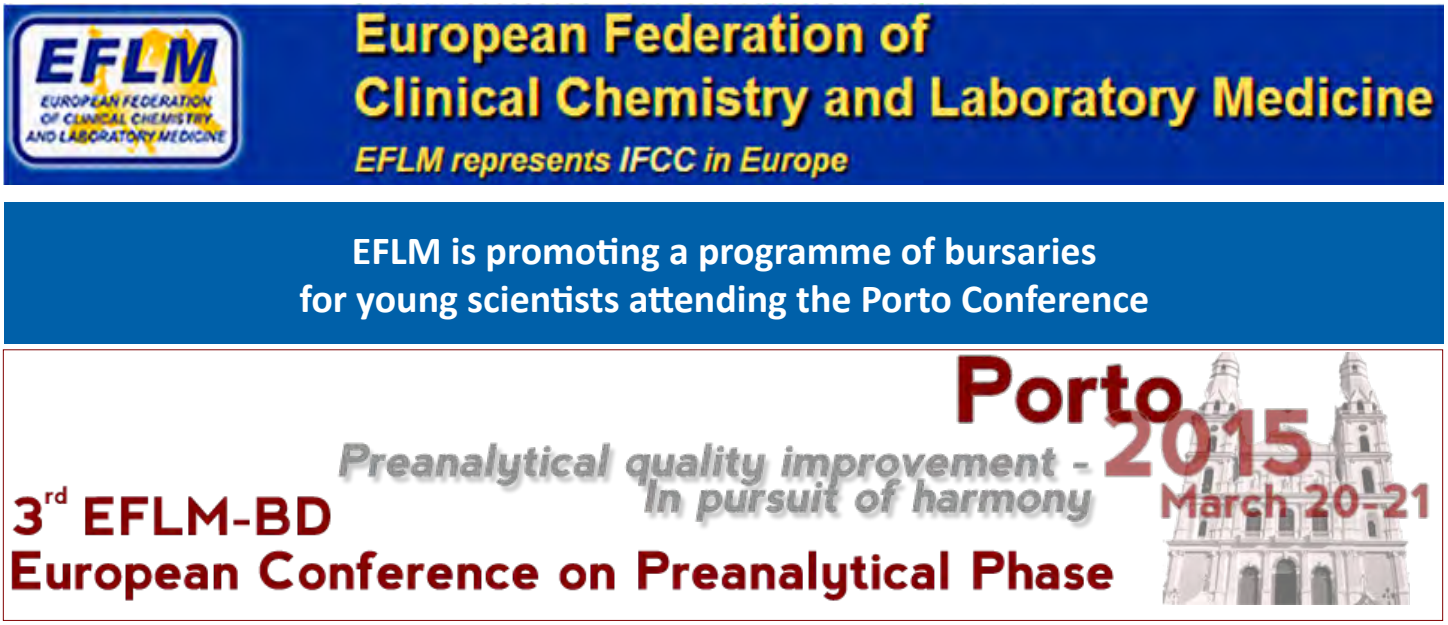
This is the list of the Young Scientists working at the moment in different WGs.

WG: Congresses and Postgraduate Education (WG-CPE)	**Andjelo**	**BELETIC**	Serbia
WG: Accreditation and ISO/CEN standards (WG-A/ISO)	**Guilaine**	**BOURSIER**	France
WG: Biological Variation (WG-BV)	**Federica**	**BRAGA**	Italy
WG: Postanalytical Phase (WG-POST)	**Andrew**	**BUCKTON**	UK
WG: Preanalytical Phase (WG-PRE)	**Michael**	**CORNES**	UK
WG: Personalized Laboratory Medicine (WG-PLM)	**Chiara**	**DI RESTA**	Italy
WG: Cardiac Markers (WG-CM)	**Christopher**	**DUFF**	UK
WG: Recognition of Professional Qualifications (WG-RPQ)	**Mathieu**	**KUENTZ**	France
WG: Guidelines (WG-G)	**Shivani**	**MISRA**	UK
WG: Test Evaluation (WG-TE)	**Phillip**	**MONAGHAN**	UK
WG: Patient Focused Laboratory Medicine (WG-PFLM)	**Joanna Pollak**	**SIODMIAK**	Poland
WG: Promotion (WG-P)	**Francesca**	**TOSATO**	Italy

Article continued on next page

Recently, a Young Scientist Member, Francesca Tosato from Italy, was appointed as Chair of the WG Promotion (Communication Committee) with effect from January 2015. This is an example of the EFLM consideration for Young members: to support young deserving scientists and assigning them important roles.

- A bursary programme. EFLM has established a bursary programme to encourage participation of Young Scientists to the EFLM congresses and conferences. Scientists aged less than 40 willing to attend one of the EFLM events (EuroMedLab Congresses, EFLM-UEMS Congresses, EFLM-BD European Conferences on Preanalytical Phase, EFLM Postgraduate Courses in Clinical Chemistry and Laboratory Medicine), can apply for a bursary, provided they have a poster accepted and are member of one of the EFLM National Societies. The bursary covers the Congress registration fee, travel and accommodation. Thus EFLM intends to promote the exchange of ideas and communication among Young Scientists from different European Countries.



The bursary will cover the cost of the travel, 2-night accommodation and a daily meal allowance up to a maximum of Euro 750.

In addition to this, a free conference registration will be granted.

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

- Young participants (≤40y at the date of the conference);
- Having a poster abstract accepted.

Applications must be accompanied with:

1. Short CV;
2. Copy of the ID or passport;
3. List of publications;
4. Document proving the membership to the National Society;
5. Notification of poster acceptance
   (You will be notified about the abstract acceptance by 15 January 2015).

Please send your applications to:
silvia.cattaneo@efcclm.eu
by no later than **January 25, 2015**.

Applicants will be notified of the awarding of bursaries by February 5, 2015.

To learn more about the Conference, please visit:
www.preanalytical-phase.org

European Federation of Clinical Chemistry and Laboratory Medicine
EFLM represents IFCC in Europe

A new EFLM working group on "Harmonization of the total testing process"

by Elvar Theodorsson
Chair of the EFLM Science Committee

Clinical laboratory science has accomplished extraordinary developments during recent decades through research laboratories, companies and international organizations. However, the full potential of these developments has yet not been fully realized in practical patient care. It is the purpose of the new EFLM working group on "Harmonization of the total testing process" to address some of the outstanding issues. The concrete scope of the working group is to put together the existing experience at national level and to spread them at the European level, e.g. through the following goals for the coming two years:

- Act as a collector of the harmonization initiatives arising from other WGs or Task groups of EFLM and from national member societies active in the field and disseminate them to all the EFLM member societies attempting to monitor their application and effects. Survey and promote the use of harmonised nomenclature for measurands and promote the use of amount of substance units in the European countries.
- Promote the implementation of common reference intervals for the measurands where this approach is feasible

The group will be headed by Prof. Ferruccio Ceriotti, Standardization Laboratory, San Raffaele Hospital Milan, Italy. We have already received promising applications for further membership of the group.

Actual challenges

There is a common belief that the basic concepts in the field of the measurement sciences (Metrology) have been harmonized. The document "International vocabulary of metrology — Basic and general concepts and associated terms (VIM 3)" should in theory solve the outstanding issues. However, the principles established in the VIM are not as widely adopted in e.g. English speaking countries as in other parts of the world. It e.g. still remains difficult to differentiate between colloquial and "scientific" English in the field of metrology. Examples are e.g. the use of the concept of "accuracy" when meaning "trueness", "analyte" when meaning "measurand" and accuracy to describe the combination of random and systematic error.

Harmonized nomenclature and coding systems are unfortunately not universally used in Europe making it difficult to communicate verbally, in text and using information systems. The extensive nomenclature work performed under the auspices of IUPAC-IFCC during recent years in Europe creating the C-NPU nomenclature system *http://media.iupac.org/publications/labinfo/English/Litterature_uk.asp* based on sound theoretical and practical nomenclature principles have unfortunately not being applied in practice and risk being superseded by SNOMED and similar nomenclature system based on list of terms and codes grounded in administrative, primarily economical needs.

We need to eliminate bias between measurement systems and methods in order to fully apply common reference intervals for measurands. This may constitute a dream of a situation in a distant future, but there are already practical regional examples in Europe of successful projects in this area *(http://pweb.furst.no/norip/*).

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The use of amount of substance units in Europe is a process long overdue. A successful general implementation of this principle all over Europe would be a great success.

Other important initiatives in this field

The Joint Committee for Traceability in Laboratory Medicine (JCTLM) was established in 2002 in response to the implementation of the European Community Directive 98/79/EC on in vitro medical devices. However, although being far from easy we are likely to see a bountiful harvest of the work done by JCTLM, especially as producers of reagents and systems and organizers of proficiency testing programs increasingly adopt the facilities JCTLM brings together.

The American Association of Clinical Chemistry (AACC) in 2010 initiated the International Consortium for Harmonization of Clinical Laboratory Results (ICHCLR) organizing a global effort to harmonize test results. Amongst the activities of the consortium is the publication of a toolbox of technical procedures for use when developing a process to achieve harmonization for a measurand. The toolbox sets out lofty and important goals for the harmonization of calibrators, reagents and measurement systems. The ICHCLR has recently broadened its scope to also include pre- and postanalytical factors.

The EFLM working group on Harmonization of the total testing process under the leadership of Prof. Ferruccio Ceriotti intends to make its contribution to optimal patient care by facilitating the implementation of the best available principles in metrology and laboratory medicine in Europe.

European Federation of Clinical Chemistry and Laboratory Medicine

EFLM represents IFCC in Europe

The 4th Joint EFLM-UEMS Conference

SAVE THE DATE

4th Joint EFLM-UEMS Conference

the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) and
the Union of European Medical Specialists (UEMS)
are happy to announce that the 4th Joint EFLM-UEMS Conference
will be hosted by the Polish Society for Laboratory Diagnostics in

Warsaw - 21-24 September 2016

SOCIEDAD ESPAÑOLA DE BIOQUÍMICA CLÍNICA Y PATOLOGÍA MOLECULAR

News from the Spanish Society of Clinical Biochemistry and Molecular Pathology (SEQC)

Report on VIII National Congress of Clinical Laboratory

Around 2,000 professionals came together between 15-17 October at the Conference and Exhibition Centre of Seville to participate in the **VIII National Congress of the Clinical Laboratory**, which was organised jointly between the **Spanish Society of Biochemistry and Molecular Pathology (SEQC)**, the **Spanish Association of Medical Biopathology (AEBM)** and the **Spanish Association of Analyst Pharmacists (AEFA)**.

Members of the SEQC Board

According to **Dr. Cristóbal Avivar**, President of the organising committee for the congress, it is the most important event in the sector in Spain and acts as an already classic annual forum for laboratory professionals, with an attractive program, which includes a wide number of scientific activities.

In this regard, **Dr. Concepción Alonso**, President of the scientific committee, highlighted the important number of activities of great interest that the committee is involved with: ten symposiums, two conferences, four pre-congress courses and other scientific activities (lunch with an expert, meetings with tutors and residents, 6 workshops, etc.).

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Similarly, almost 1,100 communications were received.

For its part, the inaugural conference was opened by the Professor E. Scott, from the *Anderson Cancer Center* of the University of Texas, who provided information on key elements concerning the role of free DNA from tumour cells in the management of patients with cancer.

Furthermore, during the conference, a first, second and third prize was awarded and up to 7 awards for the best communications which were chosen by means of a blinded process as far as authors and work centres were concerned and following a rigorous assessment methodology.

There were 951 accepted posters put on exhibition for the duration of the

Important number of activities

- Ten symposiums
- Two conferences
- Four pre-congress courses
- Lunch with an expert
- Meetings with tutors and residents
- Six workshops
- And other scientific activities...

Article continued on next page

congress on touch screens. In this scientific forum, amongst the topics of interest covered, were the different strategies to contain the cost without reducing the efficiency and quality or the creation of hierarchical networks for laboratories that optimise resources and, in particular, the portfolio of services, working as centres of reference between them.

In this regard, according to what was presented, new technology, transport systems and IT can all contribute to it. Important advances and the great development that is being produced in the *Point of care* technology (that enables tests to be undertaken at the patient's bedside) and in serological tests by means of monotest systems that are key for the maintenance of these networks.

Similarly, due to the importance that it has nowadays, the economic evaluation of diagnostic tests was analysed, given that the sustainability of the health system is one of the major challenges that health services have to overcome.

In addition, new concepts and applications were presented throughout the congress for the diagnosis of allergic diseases, which 20% of the general population suffer from, or the work of the clinical laboratory services in the management of emerging parasitic diseases, which continue to be an important health problem, both in developed and developing countries.

This congress was held as a result of the effort and ability of the three scientific associations to maintain this common forum, which began eight years ago with the President at the time of the SEQC, Dr. José Luis Castaño.

New concepts and applications were presented throughout the congress for the diagnosis of allergic diseases

This congress is a further example of how laboratory professionals have been able to re-adapt to all of the changes experienced, being the first to adapt to IT and automated industrial technology, continuing with the management and administration and currently being important professionals for the re-engineering of processes. They likewise maintain a constant training and adaptation to the means and knowledge of the different effective resources available

EMLA
Ethiopian Medical Laboratory Association
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News from the EMLA

by Gizachew Taddesse Akalu
Executive Director, EMLA

EMLA Conducted Laboratory Safety and Biosecurity Training

A Four Day training course entitled '**Laboratory Safety and Biosecurity'** was conducted from 15-18 July 2014 at Dire International Hotel, Adama. The training was organized by EMLA in collaboration with EPHI. In this training 40 Trainees (medical laboratory professionals from all regions, including emerging regions; and federal hospitals, including national blood bank) participated. The training was conducted based on the national need.

The 19th Annual Conference and Medical Education (ACME)

'Medical Laboratory Accreditation' A Pillar for High Quality Laboratory Services and Credible Patient Care

Ethiopian Medical Laboratory Association (EMLA) General Assembly Meeting 2–3 August, 2014

The General Assembly held its 19th annual conference and medical education (ACME) since its establishment in 1964. The conference was attended by representatives from several institutions including the federal democratic republic ministry of health of Ethiopia, EPHI, FMHACA, ENAO and partner organizations.

Manufacturers and distributors of In-Vitro Diagnostic Medical Devices (Mindray and Afro German Est. PLC, BD, ASMI Industries, Medicor Africa PLC) also attended as well as those representatives from sister associations, regional health bureaus, and academic institutions. The annual conference took place at Ghion Hotel, Addis Ababa, Ethiopia.

This year's conference approved several important items of business and future directions of the association. These include the launch of the Ethiopian Journal of Laboratory Medicine (EJLM), discussion of the first draft of health laboratory policy document amongst all other activity and audit reports during the event.

The scientific program covered a wide range of topics (49 research items) pertaining to Haematology, Medical Microbiology, Virology, Immunology, Public Health Epidemiology, Clinical Chemistry/Biochemistry, Molecular Biology, Health Laboratory Management and Quality Assurance, Mycobacteriology, Bacteriology, and Mycology.

Following the opening ceremony by Dr. Amha Kebede, (Director General, EPHI), there were sessions of panel discussion on four selected thematic areas:

- National System Strengthening and Accreditation Support on Medical/Clinical Laboratories, by Mr. Gonfa Ayana, Regional Laboratory Capacity Building Directorate Director, EPHI
- National Medical/Clinical Laboratory Accreditation Practices, Challenges and lessons learned, by Mr. Araya Fesseha, Director General ENAO
- In-vitro Diagnostics and Medical Devices Regulatory Practices, Standards and the way forward, by Ms Bezawork Berhane, IVD Registration Expert, FMHACA,
- The Future of Laboratory Medicine, by Dr. Gemeda Abebe, President, EMLA

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The second day of the conference started with a state of the art lecture of Continuing Medical Education on a selected topic of Quality Laboratory Management System with emphasis on **'Quality Starts with Me'** in line with ISO 15189. "Particular Requirements to Medical/Clinical Laboratories" by **Dr. Aparna Jha Ahuja**, M.B.B.S. MD (Medical Biochemistry) PG Course (Hospital Management), head of Medical Affairs in Becton Dickinson, EMA PAS, and Certified auditor with ISO 15189 (NABL). Dr. Aparna is also an international fellow of the College of Pathology (CAP). Following her presentation, the Development and Launching of the Ethiopian Journal of Laboratory Medicine (EJLM) was addressed by Mr. Bineyam Taye (BSc, MPH, PhD Candidate, AAU). There was a presentation on 'Health Laboratory Policy' development and process from its inception Dr. Aster Tsegaye, (PhD, AAU).

The general assembly elected Dr. Gemeda Abebe Ayana as President and Dr. Belay Tessema and Mr. Dawit Moges on vacant EB positions. The general assembly also endorsed the association's 2013 activity report and audit report without reservation.

Again, it was a busy and another productive year for the EMLA!

EMLA signs MOU with ASLM 27 August 2014

ASLM and EMLA agree to collaboratively address their shared strategy of strengthening healthcare outcomes in Africa, including activities related to laboratory medicine, diagnostics and systems, based on the following goals:

i. **Strengthening African laboratory workforce development** to achieve Millennium Development Goals for health through targeted training programmes;

ii. **Improving regulatory harmonization** for diagnostics within regions by conducting evaluations of new technology to produce high quality data for national and regional regulatory review;

iii. **Improving laboratory accreditation** to transform the quality of diagnostic services through the expansion and implementation of the World Health Organization Regional Office for Africa (WHO-AFRO) Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA) programme;

iv. **Establishing a south-south fellowship programme** to provide training opportunities, promote skills transfer and collaboration, and other educational opportunities for promising young laboratory scientists;

v. **Establishing an international network of proficiency testing (PT)** providers to support SLIPTA and other quality improvement and accreditation programmes;

vi. **Fostering the establishment of a network of national public health reference laboratories** by playing a key role in training, assuring quality and developing laboratory capacity throughout the healthcare system in their respective regions. Linking these laboratories in a regional network is critical for increasing research capacity, quality management systems, disease detection and surveillance, and sustainability of health programmes.

We will also explore other future areas of partnership.

EMLA Conducted Quality Laboratory Management System Training

A Five day training course entitled **'Quality Laboratory management System'** was conducted from 18–22 September 2014 at EPHI/CDC training hall. The training was organized by The Ethiopian Medical Laboratory Association (EMLA) in collaboration with the Ethiopian Public Health Institute (EPHI). In this training 30 Trainees (medical laboratory professionals, quality officers, and laboratory managers) working in different directorate laboratories of EPHI participated. This training will help enhance the national laboratory accreditation initiatives at a referral level.

EMLA Conducted Consultative Workshop to Enrich The First Version of Health Laboratory Policy Document

A Two day consultative workshop was conducted with the aim of enriching the first draft of 'Health Laboratory Policy' Document from 19-20 September 2014 at Embilta Hotel, Addis Ababa. In this consultative workshop, 34 senior **experts** from regional reference laboratories, Universities, regulatory agency, procurement agency, EPHI, CDC-E and federal hospitals participated.

News from the Croatian Society of Medical Biochemistry and Laboratory Medicine (CSMBLM)

by Jasenka Wagner
Chair of the CSMBLM Committee for information and public relation

The elections of the Croatian society of medical biochemistry and laboratory medicine (CSMBLM) took place on 27 September 2014. On that day, the annual general meeting was held in Zagreb. During the annual meeting, annual activity reports and annual financial reports were accepted and leadership for the next four years was elected. Earlier this year, during July and August, new delegates from five branches as well as new presidents and secretaries of the branches were elected.

Thanks to many new projects, working groups and activities started during their past mandate, the team of Prof. Ana-Maria Šimundić was once again recognized as the leading force in our society; so the old/new CSMBLM president is Prof. Ana-Maria Šimundić, the vice president is Prof. Daria Pašalić,the secretary is Manuela Miletić Lovrić, the treasurer is Adriana Unić, the president of the Supervisory board is Nedjeljka Ruljančić and the president of the Court of honor is Prof. Slavica Dodig.

Other members of the Main board, presidents of the branches, are as follows: Ivana Ćelap (Zagreb region), Sanja Mandić (Slavonija and Baranja), Irena Kocijan (Northwestern Croatia), Ivana Bilić (Dalmatia), Patricija Banković Radovanović (Istarsko-primorsko-goranska branch).

Congratulations to the newly elected management! We wish them lots of success in their future work!

Members of the CSMBLM Main board *(from left to right):*
Standing - Sanja Mandić, Irena Kocijan, Ivana Bilić, Ivana Ćelap;
Sitting - Manuela Miletić-Lovrić, Ana-Maria Šimundić, Daria Pašalić, Adriana Unić.

NEWS FROM THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA

XIX National Congress of Medical Biochemistry and Laboratory Medicine

by Snežana Jovičić
Society of Medical Biochemists of Serbia
Liaison Member of the IFCC eNewsletter Working Group

Guests and lecturers of the XIX Congress of Medical Biochemists of Serbia at the Opening Ceremony

The National Congress of the Society of Medical Biochemists of Serbia (SMBS) is a biannual meeting, organized this year on 9-13 September 2014 and it included the 10th EFLM Symposium for Balkan Region(11-12 September) (September 11–12). The Congress was organized for the 19th time by the Society of Medical Biochemists of Serbia, Faculty of Pharmacy University of Belgrade, and Center for Medical Biochemistry Clinical Center of Serbia, and under the auspices of the International Federation of Clinical Chemistry (IFCC), European Federation of Clinical Chemistry and Laboratory Medicine (EFLM), and Balkan Clinical Laboratory Federation (BCLF), as well as the Ministry of Education, Science and Technological Development and Ministry of Health of the Republic of Serbia. During the Opening Ceremony, Dr. Bernard Gouget addressed the participants on behalf of the IFCC and Professor Grazyna Sypniewska on behalf of Professor Mauro Panteghini, EFLM President. The opening ceremony continued with the presentation of the SMBS' Foundation "Magistra Milica Marković" and the presentation of the Belgrade Pharmacy Students Association.

Five Congress sessions were held, dedicated to the most recent findings and the application of models of management of medical-biochemical laboratories focussed on the patient, improving patient outcomes through the use of biomarkers and clinically effective strategy utilization of laboratory tests. The opening lecture announced this programme in the best possible way, when Dr. Zbigniew Gaciong (Department of Internal Medicine, Hypertension and Vascular Diseases, Medical University of Warsaw, Poland) reviewed the concept of personalized health care and modern laboratory technologies upon which it is based. The first session dealt with genetic and non-genetic risk factors and biomarkers of atherosclerosis. Professor Darko Černe (Department of Clinical Biochemistry, Faculty of Pharmacy, University of Ljubljana, Slovenia)

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opened the session with his talk about cathepsin S and its association with a more atherogenic LDL subclass profile, suggesting a new mechanism of cathepsin S mediated atherogenesis. The following lectures presented novel aspects of atherosclerosis development and biomarkers through results of the research group of the Department of Medical Biochemistry of the Faculty of Pharmacy, University of Belgrade. Assistant professor Jelena Vekić talked about the significance of low-density and high-density lipoprotein subfraction determination in the assessment of cardiovascular disease risk for the timely prevention of development and adverse outcome of the disease. The results of the study of longitudinal changes in lipid profile parameters, oxidative stress status and markers of inflammation through normal pregnancy, presented by assistant professor Aleksandra Stefanović, indicated that pregnancy is characterized by intense inflammatory process and impaired lipid metabolism. The clinical significance of gene expression analysis in human blood, through the results of the study that examined the influence of physical activity on SOD isoenzymes gene expression levels in athlete lymphocytes was presented by assistant professor Ana Ninić. The session was closed with the economic evaluation of new biomarkers, the cost-effectiveness analysis, constructed to identify laboratory procedures or diagnostic markers of the greatest health care benefit with the resources available, presented by associate professor Nataša Bogavac-Stanojević. The congress continued with the second session dedicated to molecular basis and practical considerations of biomarkers of cardiovascular disease. Professor Zorana Vasiljević (Faculty of Medicine, University of Belgrade) reviewed the significance of cardiac markers in cardiovascular disease guidelines and algorithms, emphasizing the indispensable place of cardiac troponin, D-dimer and BNP and proBNP. The review of the evaluation process of new biomarkers from research to routine clinical practice through the example of some new circulating biomarkers of cardiovascular diseases – GDF-15, ST2 and galectin-3, was presented by Professor Grazyna Sypniewska (Department of Laboratory Medicine, Collegium Medicum, Nicolaus Copernicus University, Bydgoszcz, Poland). Finally, Dr. Sanja Stanković (Center for Medical Biochemistry, Clinical Center of Serbia, Belgrade, Serbia) closed the session with the talk about the current challenges and future research in the field of genetics and epigenetics of heart failure.

The subsequent session was dedicated to the organization of medical-biochemical laboratories. The current issues in this field were considered first through the lecture about and the pitfalls of manufacturer declarations, presented by Dr. Nora Nikola (University Department of Chemistry, Medical School University Hospital Sestre Milosrdnice, Zagreb, Croatia). The problem of prevention of occupational bloodborne infections in healthcare workers and post-exposure prophylaxis was discussed in the lecture of Dr. Zorica Šumarac (Centre for Medical

The lecturers and participants from the first session "Novel aspects of atherosclerosis development and biomarkers"

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Biochemistry, Clinical Center of Serbia, Belgrade, Serbia). Dr. Mirjana Djerić (Clinical Cente of Vojvodina, Centre for Laboratory Medicine, Medical Faculty Novi Sad, Serbia) reminded us about the importance of communication between clinicians and the laboratory and the team work as the basis for success. Finally, Dr. Velibor Canić from the Serbian Chamber of Biochemists emphasized the importance of the Chamber in organizing laboratory service. The fourth session covered the role of biomarkers in the sepsis diagnosis algorithm. The opening lecturer, Professor Matej Podbregar (Clinical Department for Internal Intensive Care Medicine, University Medical Centre, Ljubljana, and Medical Faculty, University of Ljubljana, Slovenia) presented the basis of the clinical approach to sepsis and septic shock. The talk about the role of procalcitonin and APACHE II score in early prediction of severity in acute abdominal conditions

The students awarded for the best poster presentation

followed, presented by professor Nenad Ivančević (Center for Emergency Surgery, Clinical Center of Serbia, and Medical Faculty, University of Belgrade, Serbia). The session was closed with the evaluation of diagnostic and prognostic value of biomarkers in the management of abdominal sepsis, by Dr. Tatjana Vodnik (Centrefor Medical Biochemistry, Clinical Centre of Serbia, Belgrade, Serbia). The finaland fifth session, of the XIX National SMBS Congress was dedicated to the management of requests for laboratory investigation of thyroid function. Professor Miloš Žarković (School of Medicine, University of Belgrade, and Clinic of Endocrinology, Clinical Center of Serbia, Belgrade, Serbia) opened the session with guidelines and algorithms of thyroid function investigation, with the emphasis on conditions when TSH determination is not enough and circulating thyroid hormones need to be measured. The issues connected with the ways, means and benefits of standardization and harmonization of endocrine assays were elaborated by Professor Pierre Carayon (Aix-Marseille University, France), and the talk about the importance of appropriate utilization of thyroid function tests in medical-biochemistry laboratory, concerning the overall test utilization control process, was presented by Professor Svetlana Ignjatović (Department of Medical Biochemistry, Faculty of Pharmacy, University of Belgrade, and Centre for Medical Biochemistry, Clinical Centreof Serbia, Belgrade, Serbia). The session was closed by Dr. Neda Milinković (Center for Medical Biochemistry, Clinical Centre of Serbia, and Department of Medical Biochemistry, Faculty of Pharmacy, University of Belgrade, Serbia) with the results of her indirect determination of reference values for the parameters of thyroid status.

During the XIX National Congress of SMBS, a special section was dedicated to student scientific research in the field of medical biochemistry and pharmaceutical science. The participants were students of medical biochemistry and pharmacy at the Faculty of Pharmacy, University of Belgrade, with their guests, medical biochemistry students from Faculties of Pharmacy from Zagreb and Ljubljana. The programme included nine oral presentation of student projects and eleven poster presentations, which competed for the best poster award – the participation at the upcoming EuroMedLab 2015 in Paris. The authors of the prize poster were Marijana Jevtić and Tanja Gligorov.

With over 250 participants from Serbia and the Balkans and 17 international lecturers, this year's Symposium and Congress fulfilled the high expectations set traditionally by the SBSS. We are grateful for the dedicated work of the Symposium President – Professor Nada Majkić-Singh, the President of the SMBS Congress Scientific Committee; Professor Svetlana Ignjatović and the President of the Organizing Committee – Dr. Zorica Šumarac, President of the SMBS, as well as to all other members of the Organizing Committee. After leaving this successful event behind us, with many thanks to all the lecturers, we are looking forward to the next years events dedicated to the celebration of the 60th anniversary of the SMBS.

NEWS FROM URUGUAY

Fundación Wiener lab.

Serving biochemistry for the health of mankind

Two courses were given this year, organized by the Uruguayan Association of Biochemistry (ABU), in collaboration with the Wiener Foundation.

These were:

1. "Biological Fluids", Faculty of Chemistry, Piriz Mc Coll lounge, Montevideo, Uruguay, 11-12 July, 2014
   The teachers were: Dr. Luis Palaoro and Dr. Adriana Rocher.
2. "Superficial and Opportunistic Mycosis" at the Uruguayan Association of Biochemistry headquarters, Ejido 1589, Montevideo, Uruguay. 26-27 September 2014.
   The teachers were: Dr. Clara López and Lucía Bulacio from Argentina. There were 40 participants in total.

CALILAB 2014 - VIII Congress

Upcoming 2015 COLABIOCLI - XXII Latin American Congress

by María del Carmen Pasque
President of the Organizing Committee COLABIOCLI 2015
Chair, WG-IANT/ CPD / IFCC

CALILAB 2014, VIII Argentine Congress of Quality in Clinical Laboratory, was held in Mar del Plata - Argentina. The programme was mainly focussed on the communication of expert experiences. Dr. María del Carmen Pasquel, President of the Organizing Committee of the XXII Congress 2015 COLABIOCLI, was invited to participate by the congress President, Dr. Roberto Garcia in coordination with Dr. Carlos Navarro - President of COLABIOCLI. Together with experts in the Clinical Chemistry field, she chaired several meetings as a contribution of the Argentina Biochemistry Foundation.

In her first CALILAB meeting, held at the Marriott Hotel, Dr. María del Carmen Pasquel met Dr. Guillermo Bilder - Vice President of the Organizing Committee, who conveyed his experience in the organization of the eighth Congress of Quality in Clinical Laboratory.

From left to right: Dr. Guillermo Blendi, Dr. María del Carmen Pasquel, Mr. Carlos Rodríguez

Article continued on next page

Another valuable contribution to the knowledge of organization of major scientific events was the meeting with the Manager of Foundation Biochemistry Argentina - Carlos Rodriguez, who pledged to continue working with the Ecuadorian professionals.Another valuable contribution to the knowledge of organization of major scientific events was the meeting with the Manager of Foundation Biochemistry Argentina - Carlos Rodriguez, who pledged to continue working with the Ecuadorian professionals.

Another important meeting was held with the President of Biochemistry Federation of the province of Buenos Aires - Dr. Luis A. Garcia, who is also Director of the FABA INFORMS Journal and the Editorial Secretary. Dr. Ana María Pertierra, who supports the chair of the IFCC CPD Working Group IANT (Ibero-American Nomenclature and Translations) presented the “Rincón Iberoamerican - RIA" magazine "in vitro diagnostics" division.

One of the most important and enjoyable meetings was held with Dr. Juan Miguel Castagnino – Oral Communications Coordinator at CALILAB Congress and Editor of ACTA LATIN CLINICAL BIOCHEMISTRY, official media of COLABIOCLI. He will also support Dr. Maria del Carmen Pasquel in her role as the Chair of the WG IANT.

Meetings with distinguished Argentine professionals working in prestigious universities and hospitals were also organized to define and support the scientific agenda of Congress COLABIOCLI 2015.

From left to right: Dr. Ana María Pertierra, Dr. Luis A. García and Dr. María del Carmen Pasquel

From left to right: Dr. Myriam Fernández EC, Dr. María del Carmen Pasquel EC, Dr. Daniel Mazziotta AR, Dr. Patricia Plaza EC, Dr. Roberto García AR, Dr. Miguel Castagnino AR, Sr. Carlos Rodríguez AR

Delegation of Ecuadorian and Argentine professionals who will exhibit at 2015 COLABIOCLI

TURKISH BIOCHEMICAL SOCIETY (TBS)

Laboratory Management Symposium Malatya, Turkey

by Nazmi Ozer, *President and*
Dogan Yucel, *Vicepresident,*
Turkish Biochemical Society

After successfully completion of the IFCC Worldlab 2014 Congress in Istanbul, Turkish Biochemical Society (TBS) organized a new scientific activity, **"Laboratory Management Symposium: Quality - Standardization Accreditation"** in Malatya, a central eastern Province of Turkey. The symposium was held in Inonu University Congress and Culture Centre on 16-18 October 2014 More than 200 laboratory specialists and academicians discussed the major problems of laboratory medicine.

Why laboratory management and why Malatya?

Laboratory medicine is a very dynamic discipline and laboratory specialists should keep pace with this dynamism. Over the past 15-20 years, besides our analytical tasks challenged by new scientific and technological developments, the laboratorians have been faced with laboratory management as an important and required professional development area. Lundberg's **"brain-to-brain turnaround time loop"** concept in 1972 encompasses all the 9 steps of the total testing process: test requesting, sample collection, patient and sample identification, sample transportation, sample preparation, analysis, reporting, interpretation and action.

For the newly **"patient focussed"** laboratory service concept, laboratory specialists should control all these steps. Current worldwide challenges to these concepts such as **commercialization, centralization and consolidation of laboratory services and facilities** have utmost importance in Turkey as well. However, these challenges can be overcome by good laboratory management practice. It is obvious that laboratory specialists need to develop themselves in the laboratory management area and translate "brain-to-brain" and "patient-focussed" concepts into effective health care. Therefore, previously TBS meetings have tried to give a wide place to laboratory management in the national congresses, symposia or workshops. However, the major topics and the problems of laboratory management were integrated for the first time in this symposium. Moreover, former scientific activities on laboratory management organized by TBS were mostly performed in the metropoles of Turkey such as Istanbul, Izmir and Ankara. Beginning in 2010, TBS organized its national congresses and other scientific activities in relatively smaller cities such as Eskisehir, Adana, Konya and Kahramanmaras.

These activities and the enthusiasmof regional colleagues showed that there was a dire needfor such scientific activities. On the other hand, TBS aimed to stimulate local specialists and academicians of Eastern Anatolia and attract them into laboratory management for good laboratory practice. In Malatya, for the first time such a symposiumwas organized in which almost every problem of laboratory specialists in routine practice was discussed.

The symposium program

The concrete indicators of quality are standardization and accreditation, as in the title of the symposium; hence, the integrated triple, Quality-Standardization-Accreditation in the title was used. We are happy that symposium program was comprehensive and attracted great interest not only from biochemists, but also from colleagues of other laboratory disciplines, especially microbiologists.

The symposium started with a short course on the **"Efficient Use of Information Technologies in Laboratory Specialty"**, which is complementary to the symposium scientific programme.

Article continued on next page

In the first sessions of the symposium, accreditation actions of the Ministry of Health and Turkish Accreditation Agency (TURKAK), a self-governing accreditation body in Turkey, were presented, and performance premiums for laboratory specialists in state and university hospitals were discussed. Throughout the symposium, five plenary lectures were given by outstanding scientists **on "Laboratory's role in clinical decisions"**, **"Laboratory data algorithms based on society and patients"**, **"Rational test requesting in medical laboratory"**, **"Effects of ISO 15189 on clinical laboratories"** and **"Accreditation in medical laboratory training"**. Other major topics of laboratory medicine included were ***Problems in accreditation process, Interferences, Measurement uncertainty, Traceability and standardisation-harmonisation, Calibration errors and calibration verification, Pre- and post-analytical errors, Critical values, Total quality management, Quality indicators, Method validation and verification, Hospital and laboratory information management systems, Biological variation and applications, Reference ranges and decision limits, Quality management in molecular diagnosis, Waste management in clinical laboratory, Quality management in research laboratories, Laboratory safety***, *and* ***Point-of-care testing***

The symposium was concluded with 41 poster and 8 oral presentations. Highly rated feedback from the attendees increased our desire and enthusiasm to plan further scientific activities on laboratory management.

We would like to thank the Rector of Inonu University and all colleagues from the region for their great support for the symposium. TBS is now preparing itself for the 26th National Biochemistry Congress which will be held in October 2016.

The symposium venue and some of the attendees from Malatya

International Federation of Clinical Chemistry and Laboratory Medicine

e-NewsLetter

ifcc International Federation of Clinical Chemistry and Laboratory Medicine

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

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
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N° 1	Jan 22nd	N° 2	Mar 26th	N° 3	May 21th
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6. Send your advertising material by email to: ifccnewsletter@ifcc.org

If you have any questions please get in touch with us, sending an email to ifcc@ifcc.org

IFCC PROFESSIONAL EXCHANGE PROGRAMMES - TWO EXPERIENCES

Professional Management Exchange Programme (PMEP) at the Tygerberg Hospital NHLS, Stellenbosch University, South Africa


by Soriyan Oyetunji
Department of Clinical Pathology of the College of Medicine, University of Lagos

Introduction

I want to start by thanking the IFCC President, Dr. Graham Beastall and all the members of the IFCC panel that reviewed my application for the IFCC PMEP and Prof. Rajiv Erasmus who accepted me into the Department of Chemical Pathology, Tygerberg Hospital, Stellenbosch University, Cape Town, South Africa for the Three months Laboratory Quality Management System Training Program under the sponsorship of the IFCC PMEP.

My home institution in Nigeria is the Department of Clinical Pathology of the College of Medicine, University of Lagos and Lagos University Teaching Hospital. The Lagos University Teaching Hospital (LUTH), Idi-Araba, Lagos, is an 800-bed hospital located in the South Western region of Nigeria. It provides diagnostic and therapeutic referral services for medical and surgical patients of all ages. The non-imaging diagnostic services of the LUTH are organised into four departments, namely – Anatomic Pathology, Clinical Pathology, Haematology and Medical Microbiology & Parasitology. In addition to its laboratory services, the Clinical Pathology Department also provides outpatient clinical services for disorders such as Obesity, Diabetes Mellitus, Dyslipidaemias etc by running an Obesity and Metabolic Clinic on Mondays. The Department also receives inpatients consultations for metabolic disorders and performs dynamic function testing.

I left Lagos Nigeria via Murtala Mohammed International airport on Sunday 13th April 2014 and arrived in Cape Town, Monday 14th April 2014. I was checked into Auriol's Tour Guest house, Avondale, Parow, Cape Town prearranged by the International office of the Stellenbosch University, Tygerberg Campus. I reported later the same day at the International office. My training program began on Tuesday 15th April 2014 as planned. Prof. Annelise Zemlin (who was acting

Head of department then as the substantive Head of Department Prof. Rajiv Erasmus was away on research leave in Sweden) received me and introduced me to the Tygerberg Hospital Laboratory Managers, Technical and Administrative staff as well as the Medical staff (Consultant Chemical Pathologists and the Registrars) in the department. I was also introduced to Quality Assurance and Safety Coordinators.

Objectives of the Program

The main objective of my three months Laboratory Quality Management System Training Program at Tygerberg Hospital was to gain exposure and competence in all aspects of Laboratory Quality Management System, Quality Assurance and Quality Control towards using the skills and knowledge so acquired to drive the process of implementation of the same in my Lagos University Teaching Hospital Clinical Chemistry Labora-

Article continued on next page

tory. The ultimate long term goal is acquisition of ISO 15189 accreditation in my Teaching Hospital Clinical Chemistry Laboratory in Lagos, Nigeria in the nearest future.

I undertook this program with Dr. Idris Mohammed from Kano State, Nigeria who was also sponsored for the PMEP by the IFCC.

We had several resourceful and interactive lectures on all aspects of Laboratory Quality Management System over the three month period. We learnt from people that were experts in their fields and know their jobs very well. I also participated in training sessions relating to Health and Safety, Budget Preparation, Procurement, Inventory management, Quality Assurance, Waste Disposal, Laboratory Information System. During the LOMS training, I acquainted myself with the Tygerberg Hospital Chemical Pathology Laboratory Path of workflow Processes and Procedures and the Laboratory Quality documents

Research Project

As part of the requirement for this course I undertook two research projects titled:

i. Pre-Analytical Quality Indicators: A one-month examination of request forms of selected blood Chemistry analytes of adult patients at Tygerberg Hospital

ii. Pre-Analytical Quality Indicators: A one-month examination of request forms of selected blood Chemistry analytes of adult patients from peripheral hospitals, outside clinics and laboratories referred to the Tygerberg Hospital Chemistry Laboratory

I got ethical approval for the research projects from the Research and Ethics Committee of the Tygerberg Hospital and I have finished data mining. I am presently analysing the data after which I would be writing up the projects. I expect at least two publications in reputable journals from these projects and the IFCC will be acknowledged in these publications.

Laboratory/Clinical interface activities at Tygerberg Hospital

During our stay in Tygerberg Hospital we attended and interacted with Consultant Physicians during their weekly ward round and review sessions specifically the Renal and Endocrinology Units. We attended multiple and diverse clinical activities.

Benefits of this IFCC PMEP sponsorship for my LQMS training at Tygerberg Hospital

1. Capacity development for quality management system practice in the Chemical Pathology Department in my Teaching Hospital towards achieving ISO 15189 Accreditation
2. Opportunities for collaboration in the areas of external quality assurance and accreditation with the host institution.
3. I am involved with several LQMS seminars, workshops and training sessions within and outside my Teaching Hospital in Lagos, Nigeria which will serve as a step-down training on what I have learned so far in South Africa to my fellow Pathologist and resident doctors towards uplifting the standard of Laboratory practice in Nigeria
4. I am involved in organizing an African network together with Professor Rajiv Erasmus and Prof. Annelise Zemlin on Pre-Analytical Quality Indicators. The aim is to encourage research in this area given that most errors in the Laboratory occur in this Phase of Laboratory testing.

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 to positively influence my practice in Nigeria. My sincere thanks also goes to Professor Rajiv Erasmus and all the members of his department for making our stay in their laboratory both resourceful and full of pleasant memories. Special thanks also to Prof. Annelise Zemlin and Dr. Mariza Hoffmann who both contributed immensely towards this career defining moment of my life.

Thank you

IFCC-Professional Scientific Exchange Programme (PSEP) at the Molecular Biology and Cytogenetic Laboratory, San Raffaele Hospital, Milan, Italy


by Isaac Lewechi Uke
University of Ibadan, Nigeria

Institution/Department:

Department of Chemical Pathology, College of Medicine, University of Ibadan, Ibadan, Nigeria.

Host Institution/Laboratory:

Molecular Biology and Cytogenetic Laboratory, San Raffaele Hospital (OSR), Milan, Italy.

Aim:

To acquire sufficient practical skills to undertake all the molecular biology/cytogenetic components of my PhD research work.

Professional Exchange Programme Specific Objectives:

1. Theoretical and practical training on molecular biology techniques specific for the project execution (i.e. DNA extraction, multiplex Polymerase Chain Reaction, electrophoresis on agarose gels)
2. Training on additional molecular biology techniques using 3730 Automatic Sequencer for detection of fluorescent amplified fragments.
3. Theoretical training in cytogenetics, for conventional, karyotype analysis on peripheral blood samples.

Laboratory Experience

After introduction and familiarization with the staff of the laboratory on the first day, I started my training. I spent three weeks learning and performing DNA extraction using both manual and automated methods. I benefitted most from the manual phenol-chloroform and ethanol precipitation method. This is because I had to learn the preparation of all the reagents required from first principles. Therefore I had ample insight to ask questions on the usefulness or purpose of every single chemical agent or substance included in any reagent thus giving me a firm grasp of the principle and practice of DNA extraction as a biological macromolecule from any source.

I also learnt DNA extraction using automated extractor and could compare both the manual and the automated methods with regards to their advantages and disadvantages. I successfully performed DNA extraction twice using the phenol-chloroform and ethanol precipitation method at the end of this learning session.

I spent the next three weeks observing and learning the PCR (single and multiplex), at the end of which I successfully performed both single and multiplex PCRs using exact protocols required for my PhD research.

I also spent three weeks in the Cytogenetic laboratory. I followed the process from the specimen reception through the culture of cells, processing of cells at metaphase, slides preparation and staining through to microscopic identification of individual chromosome pairs to karyotyping. This training gave me a practical appreciation of chromosomal aneuploidies within the detection limit of conventional cytogenetics.

Article continued on next page

I spent two weeks learning QF–PCR (Quantitative Fluorescent – PCR) and sequencing. The QF–PCR can be used as a robust and reliable alternative to determine sex chromosome anueploidies.

Brief Description of my PhD Topic

My PhD research title is 'Azoospermia factor (AZF) in infertile Nigerian Men with Idiopathic Dyspermia'. It will involve the analyses of semen, male reproductive hormones in serum, genomic DNA extraction from peripheral blood lymphocytes and molecular deletion analyses of small interstitial deletions in Yq11 using (a) Multiplex PCR procedure and (b) Electrophoresis on agarose gel. Sex chromosome number imbalance associated with male infertility will be excluded by Quantitative Fluorescent- Polymerase Chain reaction (QF-PCR).

My Personal Evaluation of the Host Laboratory and Relevance of the Training to my PhD

The laboratory is well equipped with state - of - the arts scientific equipment and has several certifications for genetic testing. The staff of the Laboratory were very competent as well as very warm and kind people. All these provided a conducive environment for learning and the conduct of research.

The teaching was suited to my needs, flexible and well supervised, allowing me to ask many questions for proper understanding. The structure of the program enabled me to learn by building each new step on the previous/initial steps. The training has equipped me with sufficient technical skills required for my PhD work and therefore met all the specific objectives.

Extracurricular

Besides my training in the Laboratory, I spent ample time, mostly the weekends exploring the beauty and historic sites of Milan; I also appreciated the socio-cultural values of an environment different from that of my country and my African setting. This aspect further enriched my entire learning experience making it very fulfilling and memorable.

Acknowledgments

I want to acknowledge the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) for the establishment of the Scientific Exchange Programme, which gives scientist or professionals from less developed countries and institutions opportunities to acquire skills and training which are not readily available in their environment. I want to thank the IFCC President and the IFCC Selection panel for giving me the opportunity of getting this training by the award of the fellowship/grant to support my three months training in Italy. I also want to thank Professor Maurizio Ferrari for generously granting me the privilege to undergo this training in his laboratory as Director of the Clinical Molecular Biology and Cytogenetic Laboratory, San Raffaele Hospital (OSR) Milan, Italy. I want to thank Dr. Paola Carrera, my direct trainer and supervisor and the entire staff of the Clinical Molecular Biology and Cytogenetic Laboratory who in the course of my three months training had to teach me or put me through a technique or method. Finally I want to thank Dr. Mabel Charles-Davies my direct PhD supervisor in University of Ibadan through whose contacts and training in Prof. Ferrari's Lab I got introduced for training in the same laboratory and Prof. E. O. Agbedana, my Head of Department in University of Ibadan, who gave me approval and recommendations to proceed for the training.

IFCC HISTORY: Be part of our profession worldwide

Peter Wilding

Dear Member Societies,

In my role as IFCC Historian over the past 12 months I have been attempting to collect brief documentation from ALL of the member Societies that make up IFCC. The documentation is minimal and simply consists of a very brief history of the founding and achievements of individual member societies. The aim is to record this important information, in the archives of IFCC so that we do not lose the sight of the genesis of our profession worldwide.

With the help of the IFCC Secretariat I have sent out several requests to ALL National Societies requesting that they send in a 2-3 page "History" using a simple format that has been attached to our letters.

I am extremely grateful to the National Societies (see list below) that have responded with excellent stories about their origins and achievements and those other societies that have responded and indicated that they are preparing a report for us.

If your country or regional society is NOT on the list please send us the information or urge someone in your society to respond. I am eager to complete this task by June of 2015 and then to present the information in book form to the membership. **PLEASE DO NOT BE LEFT OUT.**

HISTORIES RECEIVED BY IFCC HISTORIAN TO DATE

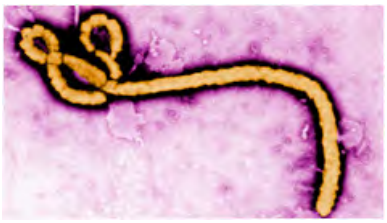
- Argentina
- Australasia
- Bolivia
- Bulgaria
- Canada
- Croatia
- Czech Republic
- Egypt
- France
- Hungary
- Iceland
- India
- Italy
- Japan
- Korea
- Netherlands
- Pakistan
- Philippines
- Romania & Romania Affiliate
- Serbia
- Turkey
- Ukraine
- Vietnam
- APFCB - Asian Pacific Fed Clinical Biochemistry
- COLABIOCLI - Latin-American Conf. of Clinical Biochemistry

With best wishes,
Peter Wilding

2014.11.18 Call for Abstracts - 4th Congress of AFCC MedLab

AFCC invites colleagues from Africa and from all over the world to present their experiences, research and projects at the 4th AFCC Congress to be held from 28 to 30 April 2015 in Harare (ZW). Deadline for submitting abstracts: 28 February 2015.
Read More

2014.10.17 Ebola Presentation



The IFCC website hosts Professor Jacob Mufunda's presentation on the plan for National Preparedness on 'What We Must Have In Place To Deal With Ebola In Zimbabwe and Africa". The presentation was given at the College of Health Sciences - University of Zimbabwe and focused on the need for all African countries to put in place an Ebola Preparedness Plan, consisting of 1) Coordination; 2) Surveillance; 3) Social Mobilisation; 4) Case Management; and 5) Logistics. *Read More*

2014.10.24 eJIFCC 2014, Vol 25 n°3

Peer review and ethics in publication are the main focus of the current edition of the eJIFCC. Guest Editors, Prof. Adeli (CA) and Dr. Vervaart (AU), and colleagues summarize the pros and cons of peer review, explain the process of peer review, and give tips to successfully complete this process. Issues such as plagiarism and image manipulation, open access publishing, and the need for appropriate writing experience are also discussed in the current edition. An article on Kallikrein-related peptidases in prostate cancer and a book review complete the issue. *Read More*

2014 Labs4Life Photo Contest Winners

LABS ARE VITAL™

Pathologists and laboratory professionals play a critical role in health care across the globe.In celebration of International Pathology Day, Labs Are Vital asked members of the laboratory medicine profession to showcase where in the world they work in our 2014 Labs4Life PhotoContest. Pathologists and laboratory professionals around the world submitted their photos,and the laboratory medicine community voted for the most creative photo from each of three regions, shown above. The three first place winners will receive $1000 toward a scientificmeeting of their choice. Thank you to all who submitted a photo!

Labs4Life at Kadikoy
Submitted by: ***Abdullah Abdul Waheed***
Region: ***Eurasia***

Pathologist Offspring
Submitted by: ***Zlatko Marusic***
Region: ***Europe and Africa***

Christus St. Michael
Submitted by: ***Jessica Johnson***
Region: ***Americas***

Click on this link to see all the photos submitted on the Labs Are Vital website.

IFCC's Calendar of Congresses, Conferences & Events

Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses

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 Clinica*	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 - Dec 10-13	*ACBICON 2014 - 41st National Conference of the Association of Clinical Biochemists of India*	Jodhpur, IN
2014 - Dec 11	*COLLOQUE BIOLOGIE: la biologie médicale: "2016 au coeur de la réforme" Fac de Pharmacie Paris V (FR)*	Paris, FR
2015 - Jan 15-16	*Course on "Evaluation of Medical Laboratory Performance (Case-based)"*	Izmir, TR
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"*	Barcelona, SP
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 - May 14-15	*11th EFLM Symposium for Balkan Region*	Belgrade, SRB
2015 - Oct 7-9	*23rd Meeting of the Balkan Laboratory Federation*	Sarajevo, BA
2015 - Oct 7-10	*XIII Congreso Nacional Bioquímico (CUBRA)*	Catamarca, AR
2017 - Oct 20-22	*XIVth International Congress of Pediatric Laboratory Medicine*	Durban, ZA

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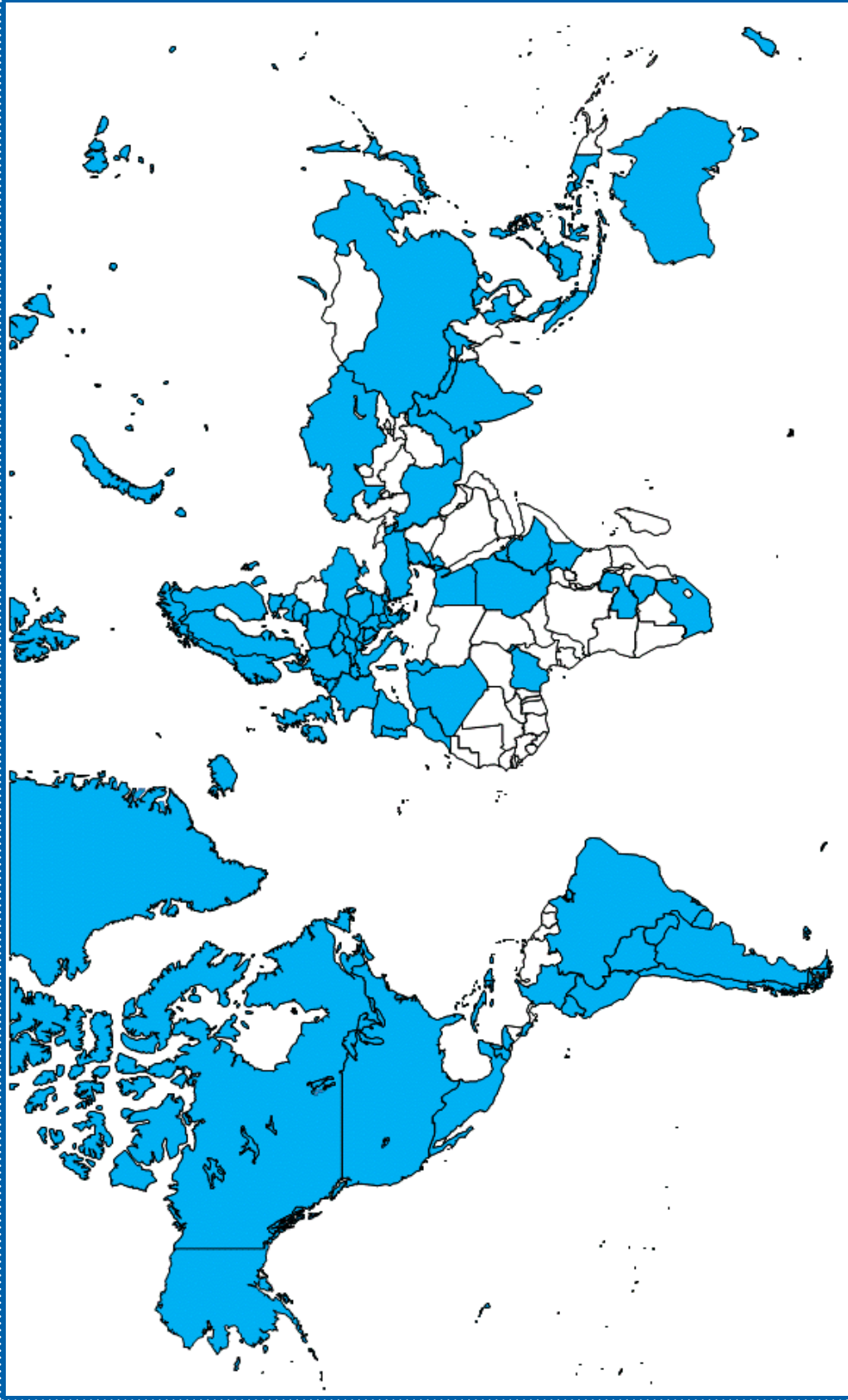
Ukraine (UA)
United Kingdom (UK)
United States (US)
Uruguay (UY)
Vietnam (VN)
Zambia (ZM)
Zimbabwe (ZW)

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)



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)

Publisher

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Circulation

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Deadlines for Submissions to the e-NewsLetter

The Communications and Publications Division (CPD) of the IFCC publishes six editions of the e-NewsLetter per year.

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:

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