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IFCC’S CALENDAR OF CONGRESSES, CONFERENCES & EVENTS
The term Personalized medicine, widely used and sometimes abused in the health care environment and media, defines different notions, and hence may lead to misinterpretation. An individual patient medical exam is rightly considered personalized medicine. However in the present context, it goes beyond this. Recent technological developments in molecular technology, spurred by the development of the Human Genome Project, offer health professionals the possibility of including a genetic component into the diagnostic process, and thus improve the prevention and treatment of certain diseases. This is the most frequent general definition of personalized medicine. However it also refers to the tailored care of an individual patient by predicting the response to a drug, and to the identification of subpopulations that are particularly at risk for an individual disease. Dr. Leroy Hood [1] in 2008, more generally defined Personalized medicine (P4™ Medicine) as:

- Personalized: taking into account a person's genetic or protein profile;
- Preventative: anticipating health problems and focusing on wellness, not disease;
- Predictive: directing appropriate treatment, and avoiding drug reactions;
- Participatory: empowering patients to take more responsibility for their health and care.

Research and clinical laboratories have been essential to the development of this new paradigm, and seldom have their contribution been underlined. The First International Congress on Personalized Health Care (ICPHC), held in Montreal in June 2016, covered P4 Medicine features in a three-day programme through plenary lectures and concurrent sessions given by world-known speakers and having sessions opened to the public. Strikingly, Laboratory Medicine was constantly in the background, as multiple genetic and companion diagnostic testing were mentioned.

In a lecture entitled “The added value of clinical laboratories in personalized medicine: The evidence.” I had the opportunity to show how monitoring of mercaptopurine treatment tolerance in patients with Crohn’s Disease avoided life-threatening hepatotoxic episodes, and how the association between the steady state Busulfan concentration was associated with event-free survival in haematopoietic stem cell transplantation in paediatric patients. The above two examples clearly illustrate the important contribution of clinical laboratories to personalized medicine and overall quality of health care delivery.

Clinical laboratory testing represents less than 5% of the hospital general budget, yet laboratory budgets are often the first targets for cutbacks due to poor visibility within healthcare institutions. The First ICPHC was an initial step in increasing Laboratory Medicine’s visibility outside of our immediate field. Further initiatives have to be pursued by laboratory professionals worldwide to ensure a more clear understanding of the critical role of laboratory medicine in healthcare delivery and health outcomes.

In recent years distance learning has become a key initiative of the IFCC and is a strategic priority for the Executive Board. The Education and Management Division (EMD) Committee on Distance Learning (C-DL) and the Communications and Publications Division (CPD) Committee on the Internet and e-Learning (C-IeL) were established to work together on the development of the IFCC eAcademy, which aims to make high quality educational modules available to its membership and will provide a resource for individuals in their training and CPD requirements as well as for those involved in the planning and organisation of educational programmes.

The eAcademy is a Learning Management System using a curriculum based approach to catalogue and access educational material and contains educational modules available to its membership. 

The IFCC Communications and Publications Division (CPD) is pleased to announce the release of the IFCC app on both iOS and Android platforms. The app is free to download from iTunes or Google Play and is the latest communication tool for use by all IFCC officers, member society members, and other lab medicine professionals. 

The app is available for both Apple and android phones or tablets and provides:

- Direct access to the IFCC website
- The latest news from IFCC
- IFCC calendar of upcoming conferences and other events
- Access to the eAcademy eLearning modules
- Ability to browse the latest issues of the eNewsletter and eJournal, even when you are offline.

Everything in one place, accessible with a single click.

Search for the app in the Apple AppStore or Google Play using “ifcc” today!

You can also click the links below:
- Apple Store (iOS)
- Google Play (android)

The IFCC eAcademy

by Peter Vervaart  
Chair, IFCC Committee on the Internet and e-Learning

Janet Smith  
Chair, IFCC Committee on Distance Learning

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linked presentations, webinars and other educational material managed through the Umbraco content management system. There are 3 phases in its development, the first was launched in Paris in 2015. The second released in Madrid in 2016 and the third phase currently under development.

Two approaches are being used to acquire novel high quality material for the eAcademy. The first is to identify interesting presentations at IFCC and National Society scientific meetings and courses for recording and inclusion in the eAcademy. Appropriate presentations are identified from the published programmes for upcoming events and we need the support and help of National Societies to work with us to arrange the recordings.

The second approach, to which we are devoting most of our effort and resources, is to commission international experts to prepare single or series of short modules on specific topics for incorporation into the eAcademy. Using the Present.me software, PowerPoint slides can be coupled with author voice-over and even video to produce these modules. Each module includes keywords, searchable on the website and learning objectives. When the third phase in the eAcademy, currently under development, is launched, a series of questions, designed to assess how well the learning objectives have been met, will be incorporated into each module.

Several of these modules have already been published in the eAcademy, including a presentation on laboratory accreditation, prepared by IFCC Past President Dr. Graham Beastall on behalf of IFCC and ILAC and two modules which will form a series on aspects of the laboratory assessment of thyroid function, authored and presented by Dr. Carol Spencer. Others currently being prepared include a series of presentations on evidence-based laboratory medicine and one on immunoassay as well as more on a range of single analytes. In selecting topics for inclusion in the eAcademy we have taken note of those highlighted by National Societies as being priorities for distance learning requirements, as well as the need for material on basic clinical laboratory and management practice for those in training.

Much high quality distance learning material is produced by other professional bodies and we are providing links to these from the eAcademy. We are particularly grateful to EFLM and the AACC for allowing us access to material on their websites. All material published on the eAcademy or recommended by our committees is reviewed beforehand by members of the C-DL. It is through the generous financial support of Siemens that we are able to finance this approach.

We have also just begun a project, under the direction of C-leL member Eduardo Freggiaro, to translate much of the eAcademy material into Spanish utilizing a subtitling online collaborative platform called Amara. Using Amara means that a large number of people work simultaneously in the translation of videos from English to Spanish. Each of those people are called collaborators. So, a small contribution in translating the video coupled with the contributions of other partners can achieve the enormous task of translating all the educational content. As such the IFCC is currently seeking volunteer translators to take part in the project and thus convert the educational material within the eAcademy from English to Spanish (and potentially other languages in the future).

To coordinate collaborative work IFCC uses a platform called Amara. If you speak English and Spanish (whatever is your mother or second language) you can help. All contributions are important. There are no small tasks in a collaborative project. Just go online: http://amara.org/es/teams/ifcc/.

We invite you to visit the IFCC website and access the eAcademy from there. Comments on ease of use and suggestions for future presentations are most welcome. Also, if you would be willing to prepare educational modules for inclusion in the eAcademy, or to help with the translation project, your contribution would be much appreciated.

Contact should be made through Silva Colli-Lanzi, in the IFCC Office: colli-lanzi@ifcc.org.
INTRODUCTION

This is the fourth article on ‘Shaping the Future of Laboratory Medicine’ to be published in IFCC e-News during 2016. Feedback from the articles in the previous three issues of e-News has indicated that readers find them thought provoking and a stimulus for discussion at the local level.

This article gives seven examples of recent good practice submitted by colleagues from around the world. These examples illustrate how laboratory medicine specialists are showing leadership in adapting to the changing world of laboratory medicine.

There will be many more examples of good practice. Readers are encouraged to send their examples to Graham Beastall (gbeastall@googlemail.com). Contributions should be brief and give a summary of the good practice together with a hyperlink or reference for further information. These examples will be collated and published via the IFCC website. Over time a library of examples of good practice will emerge.

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1. UK NATIONAL MINIMAL RETESTING INTERVALS

Tim Lang (UK)

There is currently a drive in pathology to harmonise processes and remove unnecessary tests/waste, thereby saving money and optimising patient care. The UK National Minimal retesting intervals (MRI) project prepared recommendations for use in clinical biochemistry based on current evidence and expert consensus opinion. MRIs are the minimum time before a test should be repeated, based on the properties of the test and the clinical situation in which it is used. By using MRIs laboratories can identify unnecessary repeat testing, prevent them, highlight potential savings and thereby contribute to the sustainability of their service against the escalating demands on it. For details visit: http://www.acb.org.uk/docs/default-source/committees/scientific/guidelines/acb/acb-mri-recommendations-a4-computer.pdf?sfvrsn=2.

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2. RATIONAL ORDERING OF A SERUM PROTEIN ELECTROPHORESIS (SPE)

Maria C Cárdenas, David Pérez, Edgar Zapico (Spain)

The first priority in the selection of a test should always be the outcome for the patient. Few studies have been reported on the sensitivity and specificity of SPE in the diagnosis and monitoring of diseases apart from monoclonal gammopathies (MG), so this has to be the only application of SPE. The Plasma Proteins Commission of the Spanish Society of Clinical Chemistry (SEQC) has published recommendations that state that SPE should not be performed in children or pregnant women without suspicion of MG,
and acute non-hematologic patient. Repetition is not recommended in the following 12 months if there is no suspicion of MG. Clinical biochemists should participate in the development of local guidelines and design SPE reports that enhance its correct application. Contact mariacruz.cardenas@salud.madrid.org for further details.

3. BRAZILIAN LABORATORY INDICATORS PROGRAM

Wilson Shcolnik (Brazil)
Accreditation and Quality Director - Brazilian Society of Clinical Pathology-Laboratory Medicine (SBPC/ML)

The Brazilian Laboratory Indicators Program (LIP) was introduced in 2006, and represents a partnership between ControlLab and the SBPC/ML. Its objectives are to provide a basis for continuous improvement of laboratory processes, and to increase quality, productivity, effectiveness and patient safety [1]. There are about 150 participants and now is harmonizing its indicators with the defined by the IFCC’s Working Group on “Laboratory errors and patient safety” (WG-LEPS). In 2016, the National Supplementary Health Agency, an entity of the Ministry of Health regulating the healthcare private system, is starting to define laboratory performance indicators, associating good performance to differentiated remuneration of the laboratorial services contracted.


4. SCOTTISH CLINICAL BIOCHEMISTRY MANAGED DIAGNOSTIC NETWORK (SCBMDN)

The SCBMDN brings together professionals from across Scotland to work in a coordinated manner to ensure the provision of high quality, efficient and equitable clinical biochemistry diagnostic services. It was established to work across Health Board boundaries; acting as a conduit between the service and Scottish Government / central projects. By facilitating and fostering cooperation between stakeholders, the SCBMDN aims to enable sharing of best practice, innovation and improvement. It sets out to achieve harmonisation where possible and provide a forum for the introduction and evaluation of new and developing concepts. www.mcn.scot.nhs.uk/scbmdn8/.

5. STRATEGIC PLANNING IN MALAWI

Elias Chipofya and Victor Makwinja

The Malawi Association of Medical Laboratory Scientists (MAMLS) has recently been re-invigorated and is working to show leadership in the development of quality in laboratory medicine in the East African country. To develop a strategic plan for laboratory medicine MAMLS convened a meeting of all stakeholders, including the Ministry of Health, educational institutes, research centres and senior scientists. With external facilitation from IFCC an ambitious strategic plan was adopted, which is now in the process of being implemented. Through this approach it has proved possible to get the key stakeholders in the country to have the same focus for the development of laboratory medicine.

6. RATIONALISATION OF NATIONAL SOCIETIES (FOUR COUNTRIES)

The formation of most national societies of laboratory medicine date back to a time when healthcare and laboratory medicine were different from today. In order to bring together professionals to speak with a single national voice for laboratory medicine mergers have taken place in three countries creating the following new societies as IFCC Members:

- Société Algerienne de Biologie Clinique (SABC)
- Royal Belgian Society of Laboratory Medicine (RBSLM)
- Romanian Association of Laboratory Medicine (RALM)

In the UK scientists from immunology and microbiology were welcomed into the IFCC Full Member Society, which changed its name to The Association of Clinical Biochemistry and Laboratory Medicine to reflect the new broader membership. (www.acb.org.uk).

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7. PROFESSIONAL COLLABORATION AT A GLOBAL LEVEL

It is not just at national level that organizations need to collaborate to develop a common position. IFCC has long been involved at a global level with organisations, including scientific and clinical societies and standards organisations (www.ifcc.org for details). Recently, however, collaboration has extended to other international clinical laboratory organisations in programmes that are promoting the importance of laboratory medicine to healthcare:

‘Labs are Vital’ is a partnership between IFCC; the World Association of Societies of Pathology and Laboratory Medicine (WASPaLM); the International Federation of Biomedical Laboratory Science (IFBLS); and the American Society for Clinical Pathology (ASCP) www.labsarevital.com.

IFCC has collaborated with WASPaLM and the American Association for Clinical Chemistry (AACC) in a project entitled ‘Leveraging the real value of laboratory medicine’. This will be the topic of the ‘Shaping the Future’ article in the next issue of e-News.

News from the IFCC Website

IFCC eAcademy translation project
—Proyecto de traducción

IFCC launches its translation collaborative project meant to facilitate access to eAcademy knowledge resources to a greater number of professionals and asks for collaborators. You are kindly asked to collaborate to the translation project and involve other laboratory professionals among your society members or within your professional institution. To join the project or for any information, please send an email to: ifcc@ifcc.org.

For more information, click here

News from the IFCC Website

DISFRUTEN EL CONTENIDO DE LA EDICIÓN DE JUNIO DE DIAGNÓSTICO IN VITRO. Luego de la editorial dedicada al Dr. Cabutti y el Dr. Mazziotta, lea la entrevista con el Dr. Lippi sobre los errores preanalíticos en flebotomía. Completan la presente edición algunas noticias, una carta al editor y 3 artículos de investigación.
The Foundation for Emerging Nations (FEN) has approved its first projects.

These comprise:

➡️ Laboratory-based surveillance training for communicable disease – Malawi
➡️ Establishment of ‘Lab Surfing’ social networking for Young Scientists to enable self-organised exchange visits – Global
➡️ ‘Adopt a Professional’: a collaboration with the Società Italiana di Biochimica Clinica e Biologia Molecolare Clinica (SIBioC) to facilitate the training of scientists from emerging nations in laboratory medicine

Details of these projects may be found in the July 2016 issue of the FEN Newsletter, which may be downloaded from here.

The FEN also announces that the closing date for applications for the next round of funding is 30 September 2016. Details of the application process are available from www.ifccfoundation.org.

The work of FEN going forwards is dependent on financial support. This may be in the form of donations, sponsorship, legacies or collaborations with societies or companies.

Any individual or organization interested in supporting the FEN should contact the Chair of the Board of Directors (Graham Beastall) at chair@ifccfoundation.org.

What is the best strategy to achieve compliance with QMS and QC requirements in the clinical laboratory?

by Egon Amann
Chair, IFCC Committee on Analytical Quality (C-AQ)
and by Sedef Yenice
Chair, IFCC Committee on Clinical Laboratory Management (C-CLM)

This was the title of an interactive workshop which took place at the IFCC General Conference held in Madrid on Sunday, 20 March 2016. The workshop was jointly conducted by Egon Amann, Chair of C-AQ and Sedef Yenice, Chair of C-CLM (the “moderators”).

The goal of this interactive workshop (IW) was to enhance participant understanding of strategies for dealing with important aspects of QC (Quality Control) before running patient tests and of key steps in establishing an effective QMS (Quality Management System). As an envisioned outcome, participants should be enabled to more
effectively address the problems in the processes of implementing continuous quality improvement efforts in the clinical laboratory.

THE WORKSHOP

The IW employed a “bottom-up” approach such that actual and “real” laboratory issues concerning QM, IQC, and EQA questions including aspects of regulatory requirements could be addressed by the participants.

The IW was conducted three times in a row. Each workshop lasted for 45 minutes. After a short impulse lecture was given by the moderators, spontaneous groups were formed. A questionnaire was handed out to the groups to structure their debate and to collect, in a standardized fashion, their experiences with QMS- and QC-requirements in their countries clinical laboratories. After the groups’ discussions, each group leader presented their outcomes shortly to all workshop participants.

The “most burning” top three issues were listed on flip charts by the group leaders and was subsequently collated by the moderators. In combination with the filled-in questionnaires, a comprehensive analysis (the “Post Implementation Review”) was compiled after the workshop by the moderators.

At the end of the workshop, moderators asked the participants for comments on what aspects of the workshop were most useful and how future workshops might be improved. These were captured as well and are part of the Post Implementation Review document.

WORKSHOP STATISTICS

A total of 14 respondents out of total 23 IW participants submitted data for the questionnaire (response rate was 60.9 percent).

Workshop participants who responded to the questionnaire attended from: Argentina, Belgium, Germany, Guatemala, India, Indonesia, Iran, Malaysia, Nigeria, Russia, South Africa, United Kingdom, USA, and Uruguay.

The top three respondent work areas were in Biochemistry/Clinical Chemistry (45 percent), General Laboratory (27 percent), and Immunology or Pathology or Quality Management (9 percent).

The top three respondent staff positions were: Department Head (30 percent), Pathologist or Non-Physician Lab Director (20 percent), and Physician Lab Director or Professor/Instructor or Lab Technician (10 percent).

WORKSHOP RESULTS

Identified Areas of Strength

<table>
<thead>
<tr>
<th>Areas of Strength for Respondents</th>
<th>Percent (%)</th>
</tr>
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<tbody>
<tr>
<td>Accreditation achieved (mostly according to ISO 15189)</td>
<td>93</td>
</tr>
<tr>
<td>Overall grade on QMS is very good (Figure 1)</td>
<td>43</td>
</tr>
<tr>
<td>The stage of implementations related to QMS is Phase 4</td>
<td>55</td>
</tr>
<tr>
<td>The top strategic objective for the laboratory in quality management- to improve patient safety is extremely important</td>
<td>69</td>
</tr>
<tr>
<td>Overall grade on QC is excellent (Figure 2)</td>
<td>42</td>
</tr>
</tbody>
</table>

*Article continued on next page*
The areas that showed potential for improvement with the highest average percent positive responses:

- Accreditation not achieved: 7%
In order to illustrate identified areas for improvement, the following table shows answers (grouped according to QMS elements) provided to the question: “What aspects of your laboratory’s work (if any) should be improved as a result of effective QMS and QC?” in the questionnaire that are grouped in line with the quality system elements are as follows:

### Top challenges in achieving the strategic objective for QM:

- the lack of training support and guidance (strongly agree) 25
- the lack of executive support and commitment (agree) 42

### The main challenges in implementing QC:

- the lack of training support and guidance for IQC and the lack of budget to finance EQC materials (strongly agree) 10
- the lack of training support and guidance for EQC (agree) 30

### Facilities and Safety

<table>
<thead>
<tr>
<th>Organization</th>
<th>Inadequate Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of leadership, lack of time</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Inadequate Space</th>
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<tbody>
<tr>
<td>Short of staff, staff limitation to adequately document details of lab operation, eg.reagent lots. etc., commitment of staff, lack of qualified personnel, education and training/competency assessment, lack of motivation, Quality Culture: not involved in QM processes</td>
<td></td>
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<table>
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<tr>
<th>Equipment</th>
<th>Inadequate Space</th>
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<tr>
<td>Inadequate resources</td>
<td></td>
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<table>
<thead>
<tr>
<th>Purchasing and Inventory</th>
<th>Inadequate Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>High costs, lack of financial support for EQA, IQC</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Process Management</th>
<th>Inadequate Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-analytical errors, making errors on handling specimens, training to prevent failure to follow SOP, analytical - verification of methods, verification of reference materials, operational procedures, establishment of processes in pre-analytical, analytical and post-analytical phases</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information Management</th>
<th>Inadequate Space</th>
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<tbody>
<tr>
<td>Inefficient LIS</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Inadequate Space</th>
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</thead>
<tbody>
<tr>
<td>Regulatory problems, inconsistency in performing the QMS, lack of communication, data presentation of QC performance with alerts or warnings showing failed and not performed, ISO 15189 too much focusing on technical details and very little on medical part, no QC run in histo- and cytopathology</td>
<td></td>
</tr>
</tbody>
</table>

### WORKSHOP SUMMARY

Most participants evaluated the IW as useful. Participants praised the fact that they had the chance to discuss laboratory-related quality topics and issues in a “round table discussion format”. Also, suggestions for future improvements for this kind of IW were obtained and put into the post-implementation report.

Although the IW was low in total participant numbers, significant lessons of laboratory’s need in the participating countries revealed quite different aspects and suggestions.
These lessons were compiled in the 16-page document: *Post Implementation Review on the Interactive Workshop: What is the best strategy to achieve compliance with QMS- and QC-requirements in the clinical laboratory?*

The report is available upon request from the authors:

Prof. Sedef Yenice: sedefyenice@gmail.com
Prof. Egon Amann: egon.amann@hshl.de

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**Increasing Clinical Effectiveness Award 2016/17**

*by Graham Beastall*

*IFCC Past-President*

**INCREASING CLINICAL EFFECTIVENESS**

**Shifting Our Focus Beyond the Laboratory**

IFCC is again pleased to collaborate with the Clinical Laboratory Management Association (CLMA) and other supporters to bring an international dimension to the Increasing Clinical Effectiveness (ICE) programme and award. ICE has been launched to encourage laboratory medicine specialists to collaborate with clinical colleagues to demonstrate that optimal use of the laboratory can have a measurable positive impact on patient outcomes.

ICE is open to any laboratory medicine specialist. He/she is invited to submit an abstract that describes testing-related interventions and the quantifiable positive impact for patients that they produced. Abstracts will be assessed and the winners of the ICE award in 2016/17 will be invited to present their work as part of an IFCC symposium at the IFCC: EFLM EuroMedLab congress in Athens on Tuesday 13 June 2017.

The window for submitting abstracts to the current ICE award is now open.

It will close on **30 September 2016**.

Further information about ICE may be accessed from www.ICE-lab.org, where details can be found of the project, together with instructions on submitting an abstract and on-line training sessions to help choose and deliver the best project for an abstract submission.

A library of the winning and accepted abstracts from the 2015/16 ICE award may be found at: http://www.clma.org/p/cm/ld/fid=491.
The IFCC Visiting Lecturer Programme (VLP) is a programme to support international exchange of lecturers. The VLP aims to contribute to the creation of educational networks that would bring together activities in different IFCC regions.

Click on the links below to read the interesting reports on three recent VLP initiatives:

**Cuba:** March 2016 Visit to La Habana (Cuba) of Carl Burtis and Robert Rej by Manuel Morejón, MSc. CSCP National Representative

**Romania:** May 2016, Visit to Cluj Napoca (Romania) of Janet Smith by Prof. dr. Ioana Brudaşcă, RALM President and Janet Smith, IFCC representative

**Zimbabwe:** June 2016 VLP Visit to Harare (Zimbabwe) of Prof. Howard Morris: “The World of Laboratory Medicine Focuses on Africa for 2017”

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**IFCC-Task Force Young Scientists (TF-YS)**

session on “scientific writing”

by Itai Chitungo
IFCC TF-YS

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Participants at IFCC Task Force Young Scientists Session

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Article continued on next page
On the June 17, 2016, an IFCC-ZACB-TFYS educational and networking event was successfully held in Harare at the Rainbow Towers Hotel. The theme of the event was ‘Scientific Writing’. The event drew a diverse attendance from students in various disciplines, and professionals in both public and private sectors.

The students comprised undergraduates in medicine (4), pharmacy (5), laboratory sciences (4) and nutritional science (6) and postgraduate students in chemical pathology (8) and medical microbiology (2). In attendance was also Prof Howard Morris (The IFCC-VLP for ZACB 2016). Prof. Hilda Matarira (ZACB President and AFCC Secretary) chaired the event.

To read the full report and have information on the next activities planned, please visit: http://www.ifcc.org/task-force-young-scientists-web-pages/ystf_recentactivities/.

NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES

News from Pakistan Society of Chemical Pathology (PSCP)

CME Seminar on World Rare Disease Day
Karachi, 29 February 2016

‘Challenges in Evaluation of Inherited Metabolic Diseases (IMD)’ a CME seminar was jointly organized by arranged by the Department of Pathology and Laboratory Medicine, Aga Khan University Hospital (AKUH) and Pakistan Society of Chemical Pathology (PSCP) at AKUH Karachi Pakistan. The field of diagnosis for inherited disorders has undergone major worldwide revolutions in the past year. However, this area had been neglected in Pakistan due to lack of expertise both in terms of human resources as well as equipment needed to perform the analysis. However, since 2013, when the Section of Chemical Pathology, Department of Pathology and Laboratory Medicine, AKUH introduced diagnostic testing for IMD; many cases of inherited metabolic defects have been identified at the center highlighting the fact that the cases have not been diagnosed previously due to non-availability of services.

The cumulative incidence of IMD is about 1 in 5 000 live births worldwide. “However, the incidences of such diseases are probably much higher in our population because of high rate of intermarriage,” said Dr. Aysha Habib Khan, Head, Chemical Pathology Lab, AKUH while speaking at this event. She informed that the delay in diagnosis can lead to severe mental deterioration and even death. “Prompt detection therefore requires vigilance and the early, pre-symptomatic measurement of biochemical markers. Recent advances in the diagnosis and treatment of IMD have substantially improved the prognosis for many of these conditions. She highlighted the challenges to the progress of the IMD field in Pakistan such as huge disparities in our ethnic populations, the high prevalence of malnutrition and infections, the co-existence of very different models of public health services, the unstable socio-economic and political conditions and the difficulties in integrating the various stakeholders. There is a need to develop activities for provision of health services, education and research as an integrated package, the increase in training of human resources, the expansion of access to diagnostic tests and the use of the neonatal screening framework to expand the provision of services. In a country with no IMD centers, there is a major need for groups to work in collaboration, complementing each other’s capabilities, providing training of human resources and developing joint projects. The integration of these groups into a large transnational network of reference centers would be a major task for the coming years.

by Aysha Habib Khan
Aga Khan University, Pakistan

Article continued on next page
Dr. Noreen Sherazi, chemical pathologist at AKU shared the first local data of IMDs diagnosed with locally available expertise at AKU for organic acidurias & aminoacidopathies in high-risk Pakistani paediatric populations. Eighty-eight cases (4.7%) were diagnosed from 1866 specimens analyzed over a two year period. Common organic acidurias in our populations are methylmalonic aciduria, MHBD, HMG CoA ligase deficiency and propionic acidemia. In amino acidopathies: MSUD, CBS deficiency and urea cycle disorders were the commonest entities.

“In the initial evaluations paediatricians play a critical role in the recognition of children who may have an inborn error of metabolism. It is important that timely referrals are made to metabolic physicians who are ultimately responsible for the long-term management of patients with inherited metabolic disorders. For better long-term prognosis of inherited metabolic disorders both acute and long-term treatment is crucial. This can only be achieved with a close liaison among paediatricians, chemical pathologist, dietician and metabolic specialist.” said Dr. Bushra Afroze, Consultant Paediatrician & Clinical Geneticist at AKUH, who specializes in treating IMD.

Dr. Lena Jafri, Chemical Pathologist at AKUH, emphasized the close liaison between chemical pathologists and treating physicians and stressed the need to provide related history of the patient to the clinical laboratory that helps in appropriate processing of the specimen and analysis and hence report interpretation and correct diagnosis by the Chemical Pathologist. She highlighted the need to consider IMD as a potential cause of any severe illness and to have a systemic approach to diagnosis and management.

This event was also listed on: http://www.rarediseaseday.org/events/world.
On 25–27 May 2016, Society of Medical Biochemists of Serbia (SMBS) and Faculty of Pharmacy of the University of Belgrade organized the 20th Congress of Medical Biochemistry and Laboratory Medicine with international participation. The congress was organized under the auspices of IFCC, EFLM, Balkan Clinical Laboratory Federation (BCLF), Ministry of Education, Science, and Technological Development, and Ministry of Health of Republic of Serbia. It had five sessions dedicated to the current findings in different areas of clinical chemistry and laboratory medicine, and their application in patient care.

During the opening ceremony, after the review of the past congresses through photo presentations, the traditional reward of the “Magistra Milica Marković” Foundation, intended for laboratories that advanced the most in the past two years between the two congresses, was awarded to the laboratory of the Community Health Centre “Palilula” from Belgrade. The reward was Alifax Test 1 BCL fully automated analyzer for determination of erythrocyte sedimentation rate, donated by the company Promedia. Also, on the occasion of the jubilee of the 20th Congress, SMBS delivered Diplomas and Acknowledgments to individuals and organizations that contributed significantly to the work of the SMBS and to the development of medical biochemistry in Serbia.

The working part of the 20th Congress officially started with the opening plenary lecture entitled “Quality assurance in clinical chemistry: a touch of statistics and a lot of common sense” held by the distinguished professor Elvar Theodorsson, from the Linköping University, Sweden. The first session was dedicated to the discovery of new biomarkers in laboratory medicine. Toxicological, pharmacokinetic, and biochemical aspects of the application of drugs were the topics of the second session. The third session was dedicated to contemporary methodological approaches in laboratory medicine – application of HPLC-MS/MS techniques, PCR methodology and pharmacogenetics testing. The fourth session elaborated the role of oxidative stress in contemporary diseases. The closing, fifth session was dedicated to molecular biomarkers of diagnosis and monitoring of therapeutic response in immune diseases – multiple sclerosis, liver fibrosis and celiac disease.

As part of the 20th Congress, the 12th EFLM Symposium for Balkan Region was organized by the SMBS and EFLM on 26–27 May. This year’s Symposium was entitled “Harmonization of the total process: Influence of the extra-laboratory phases”. The Symposium was opened with the plenary lecture of the distinguished professor Mario Plebani, the leading expert in this field, entitled “Extra-analytical phases quality management – new achievement”. During the four part programme lecturers, who were mostly members of related EFLM and IFCC working groups presented different aspects of important issues in extra-laboratory phases. The topics were, among others rational ordering of laboratory parameters, harmonization and external quality assessment of preanalytical phase, quality indicators, management of critical-risk results as a tool for improvement of clinician decisions, solutions in monitoring performance in pre-pre and post-post analytical phases, clinical awareness about pre- and postanalytical phase.

The congress programme also included two industrial workshops and poster sessions, with notable participation of students of medical biochemistry at the Faculty of Pharmacy, University of Belgrade, with their research results.
The 20th Congress and 12th EFLM Symposium for Balkan region were marked with significant attendance of medical biochemists and laboratory specialists mostly from Serbia and also from Bosnia-Herzegovina, Montenegro, Croatia, Macedonia and Turkey. With the closing of these events, SMBS has announced the 13th EFLM Symposium for Balkan Region for September 2017, which will be dedicated to laboratory medicine management and leadership skills for effective laboratory management.
The Société Tunisienne de Biologie Clinique (STBC) celebrated its 35th birthday at the XXX Journées Nationales de Biologie Clinique (Thirtieth Clinical Biology Conference, JNBC) in Hammamet between 12-14 May 2016.

More than 800 participants gathered in the presence of 11 countries of the Arab Federation of Clinical Biology (Dr. Mohammed Hassan KAMIL, AFCB President). FIFBCML Executive Board members (Dr. Marc-Antoine Zablith, Président) of the Syndicat des Biologistes (FR) (Dr. François Blanchecotte, President), and of the Fédération EuroMediterranéenne des Laboratoires (Jean Benoit, FeMLab President, Dr. Bari Cherif, General Secretary and Jean Begué) were also present.

The three and a half decades of continuous activity of the STBC have provided support to Tunisian laboratory medicine specialists in their daily professional practice. This long-term commitment led to a mature operation that allowed the STBC to undertake ambitious projects, especially to meet the challenges of restructuring laboratory medicine in Tunisia. Therefore, the STBC is investing strongly in developing continuing education and in the quality assurance and accreditation processes according to standard ISO 15189.

STBC is always available to national organizations to defend scientific expertise, specificity of practice and the interests of the profession within the medical profession and Tunisian healthcare facilities. It therefore plans to set up continuing professional development based on the French experience. STBC is also active internationally with IFCC, AFBC, AFCC, and FIFBCML.

Laboratory medicine, benefitting from increasingly precise knowledge of cellular and molecular structures, encompasses both scientific and social issues.

It stands out as a dynamic discipline that provides a great deal of hope in addressing the major health scourges. The XXX JNBC brought together international and Tunisian speakers. They began with the 3rd Arab course in molecular biology (PCR-RFLP) and two workshops: critical reading of scientific articles and a lesson on high-throughput DNA sequencing and its applications in clinical biology. The subjects included the role of laboratories in the performance of hemodialysis centers.

Prof. Christophe BURUCOA inaugurated the conferences with a discussion of microbiota. The other subjects related to heparins and biosimilars (Prof. Mehdi DRIDI), endocrine disruption (Prof. Jacques AUGER), foetal DNA in maternal circulation (Prof. Annie LEVY), computerization of medical biology laboratories and standard ISO 15189 (Alain COEUR).
The other sessions brought us up-to-date on: molecular biology in diagnosis and follow-up of haematological malignancies, chronic inflammatory bowel disease (IBD), toxoplasmosis, autoimmunity, LC/MS and its applications in clinical biology and infection with multidrug-resistant bacteria (MDROs).

Thanks again to the many industrial partners who held satellite workshops on the sidelines of the exhibition on early detection of colon cancer and prenatal screening for trisomy 21 and preeclampsia.

E-posters have attracted many young people to discuss their work and provided an opportunity for some of them to receive a prize.

Today, by celebrating its thirtieth birthday, the STBC showed that it is capable of a great deal of energy and determination to bring the Tunisian and foreign medical biologist communities together and that Tunisia is more than ever a land of welcome, openness and tolerance that offers foreigners a strong tradition of hospitality and openness.

The Spanish Society of Clinical Biochemistry and Molecular Pathology (SEQC) together with the Spanish Society of Hematology and Hemotherapy (SEHH) participates in the organization of the 2016 International Symposium held annually by the European Organization for External Quality Assurance Providers in Laboratory Medicine (EQALM).

The EQALM Symposium will be held in Barcelona from 13-14 October 2016.

The Congress venue will be the Expo Hotel in Barcelona near the main Sants station, very well connected to the city centre.

The Symposium is entitled “The Road to perfect EQAS” and includes the following topics:

- Traceability in laboratory medicine
- How to improve EQAS schemes
- Commutability of control materials
- Presentations of selected submitted abstracts
- The Adam Uldall lecture

More information can be found on the website: www.eqalm.org.
The Finnish Society of Clinical Chemistry celebrated its 70th anniversary in April 2016. The festivities were held in the jugend-style design hotel GLO Hotel Art in Helsinki, Finland in conjunction with the biannual national meeting.

The Finnish Society of Clinical Chemistry (FSCC) was founded in 1946 and was the first national society in Europe to incorporate the words “Clinical Chemistry” in its name. The purpose of FSCC is to act as a link between physicians and chemists with an interest in clinical chemistry and to promote the theoretical and practical development of clinical chemistry in Finland.

The two-day celebratory meeting covered some of the hottest current topics in the industry, including an introduction to service design by the Finnish company Hellon and a one-day LEAN workshop, where participants could experience the power of LEAN hands-on by passing tennis balls to each other.

The meeting also included a visit to the Helsinki University Hospital Laboratory HUSLAB’s brand new laboratory building that hosts the longest automation track in Europe as well as cutting-edge facilities specifically designed to meet the needs of modern lab technology.

The festivities culminated in a celebratory dinner, with former FSCC presidents invited as honoured guests. Almost one hundred society members enjoyed good food, excellent company and entertainment provided by stand-up comedian Mikko Vaismaa. The night ended with live music provided by the talented musicians of Flipper orchestra.

The FSCC actively continues to promote clinical chemistry in Finland. The next big event organized by the FSCC is the 36th Nordic Congress for Clinical Chemistry, which will be held in Helsinki between 12-15 June 2018. We look forward to meeting you there!
On 7 June 2016 elections were held at ABU (Uruguayan Association of Biochemistry) headquarters. The new board will develop their activities during the two year term 2016-2018. The Uruguayan biochemists welcomed the new authorities and the Board of Directors is the following:

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
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<tbody>
<tr>
<td>President</td>
<td>B.C. Fabiana Luzardo</td>
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<td>Vice president:</td>
<td>Q.F. B.C. Fernando Antúnez</td>
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<tr>
<td>Secretary</td>
<td>B.C. María Eugenia Morell</td>
</tr>
<tr>
<td>Pro secretary</td>
<td>B.C. Mariana Testuri</td>
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<tr>
<td>Treasurer</td>
<td>B.C. Natalia Amor</td>
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<tr>
<td>Pro treasurer</td>
<td>Q.F. B.C. Laura Yametti</td>
</tr>
<tr>
<td>Secretary and IFCC representative in Uruguay</td>
<td>Dra. QF BC. Stella Raymondo</td>
</tr>
<tr>
<td>Members</td>
<td>Dra. Q.F. B.C. Cristina Servetto</td>
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<td></td>
<td>B.C. Beatriz Varela</td>
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<td></td>
<td>Dra. Q.F. B.C. Ana Lena</td>
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<td></td>
<td>B.C. Jimena Blanco</td>
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EFLM at the 14th APFCB Congress in Taipei, Taiwan

EFLM is pleased to announce that on occasion of the APFCB Congress in Taipei, EFLM was asked to organize a Symposium. For those attending the Congress, do not miss the EFLM Symposium on Harmonization scheduled for 28 November 2016 from 14h00-15h30.

**EFLM Symposium “HARMONIZATION OF LABORATORY TESTING IN EUROPE”**

- Harmonization of total testing process: the EFLM strategy
  *Ferrucio Ceriotti, Italy*

- The leading role of EFLM in harmonizing the pre-analytical phase of laboratory testing
  *Ana-Maria Simundic, Croatia*

- Implementation of metrological traceability in agreement with EU IVD directive to improve comparability of laboratory results
  *Mauro Panteghini, Italy*

- EFLM activities in harmonizing the post-analytical phase and to improve proper use of laboratory tests
  *Eva Ajzner, Hungary*
The “CCLM Award for the Most Cited Paper Recently Published” will be presented to Dr. Gregory Tsongalis for the paper - “Routine use of the Ion Torrent AmpliSeq™ Cancer Hotspot Panel for identification of clinically actionable somatic mutations” by Gregory Tsongalis, Jason Peterson, Francine de Abreu, Christopher Tunkey, Torrey Gallagher, Linda Strausbaugh, Wendy Wells and Christopher Amos (Clin Chem Lab Med 2014; 52:707-14).

By the end of June 2016, this original article received 31 total citations with an average citation of 9.57.

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By the end of June 2016, this original article received 31 total citations with an average citation of 9.57.
Recently, the EFLM Executive Board created a Task and Finish Group (TFG) in the frame of the Committee of Education and Training (C-ET) with the aim to finalise the EFLM project on Continuous Professional Development (CPD) and crediting system.

The TFG gathered a group of experts in Laboratory Medicine from different European countries; Hanns-Jörg Baum, Uta Ceglarek (Germany), Katarzyna Bergmann, Grazyna Sypniewska (Poland), MariaStella Graziani (Italy), Alexander Haliassos, Konstantin Markis (Greece), Lina Khorovskaya (Russia), Gustav Kovac (Slovak Rep), Gabor Kovacs (Hungary), Nada Majkic-Singh (Serbia), Tomris Ozbun, Ferhan Sagin (Turkey), Jose Queralto (Spain), Elvar Theodorsson (Sweden), Ian Watson (UK), and Elizabeta Topic (Croatia) as chair.

Why the TFG on CPD is needed?
We all are facing the increased mobility of professionals and patients amongst European countries. The mobility raises concerns related to the competence of Specialists in Laboratory Medicine moving from one Country to another. There is no legal framework recognising the periodic validation and requirements to participate in CPD programmes and no current standard approach to CPD in Laboratory Medicine in Europe to harmonize competence for the patient’s benefit.

The aim of EFLM as the overarching professional organisation in Clinical Chemistry and Laboratory Medicine is to promote standardisation and implementation of common rules for CPD. Working for a common crediting system among the EFLM European National Societies will lead hopefully to the harmonisation of the professional development of Specialists in Europe. The proposed EFLM CPD crediting system should include medical and non-medical laboratory professionals.

In 2011 the C-ET organised a survey on the topic. The results were included in a paper published in Biochemica Medica 2013;23:332–41 “Continuing professional development crediting system for specialists in laboratory medicine within 28 EFLM national societies”. The majority of EFLM member societies have CPD programmes, regularly evaluated and accompanied by crediting systems; however, the programmes differed in CDP contents, accessibility for non-medical scientists and impact on relicensing eligibility. A second survey was launched in 2015 and contained only one question “Would your Country be interested to accept the EFLM CPD crediting system?” The vast majority of Countries (78%) was in favour.

Mission and tasks of the EFLM TFG on CPD crediting system
The term of reference of the TFG is: To produce a document on accreditation of CPD events in Clinical Chemistry and Laboratory Medicine and develop the CPD crediting system for medical and non-medical Specialists in Laboratory Medicine.

The members of TFG will work together on assembling two documents:
1. Accreditation of CPD events: this is aimed at developing guidelines to establish the quality of an event to be accredited as CPD event and the credits to be allocated to the events as well. Any event that conforms to the EUROMED Code would be eligible.
2. Certification of individuals: while the certification of individuals will be under the responsibility of the National CPD body, the list of the educational activities as included in the McMurray et al paper: “The European register of Clinical Chemistry and Laboratory Medicine: guide to the Register, Version 3-2010”. CCLM 2010;48:999-1008 could serve as an ideal basis.

Hopefully, both documents will be distributed as drafts to the EFLM National Societies by the end of this year, for their comments and suggestions.
The EFLM WG-Preanalytical phase has been established in 2012 with many important scopes:

- promoting the importance of the quality of the preanalytical phase of laboratory medicine
- defining the best practices
- providing recommendations for some critical activities in the preanalytical phase
- designing and validating questionnaires for assessing the current practices related to some pre-analytical variables
- conducting surveys using validated questionnaires to assess the current pre-analytical practices
- organizing educational events on preanalytical phase issues

Many of these challenging targets have been recently achieved (1). The educational activity of the WG has culminated with the organization of the 3rd EFLM-BD European Conference on Preanalytical Phase in Porto, in 2015. More than 750 attenders participated in the meeting, thus echoing the success of the two previous editions in Parma (Italy) and Zagreb (Croatia). Alongside, the scientific activity of the WG has entailed the publication of some important documents (Fig 1).

The fasting status has been long recognized as an essential requirement for obtaining laboratory information actually matched with the “true” biological status of the patient. Many laboratory facilities around the globe, especially some private labs, have modified their practices by establishing blood collection in non-fasting state, justified by the evidence that blood collection capacity is underused after the morning. Nevertheless, the validity of this approach for all the tests that can be performed in clinical laboratories has been seriously challenged, and has prompted the WG to release a framework for harmonization of definitions for fasting requirements for conventional laboratory testing across Europe (2).

The milestones of this definition include that (i) blood for all tests should be drawn from 7 to 9 a.m., (ii) fasting time should be 12 h, (iii) alcohol should be avoided for 24 h before blood sampling and (iv) cigarettes, tea and coffee are not allowed before the blood sampling.

Owing to the foremost importance of obtaining quality specimens for testing and to the evidence that many policymakers, hospital administrators and even laboratory managers underestimate the importance of preanalytical quality and phlebotomy process, the WG has recently released a guidance document providing comprehensive indications for local validation of blood collection tubes. The document is aimed at minimizing the risk that blood tubes imposed by large tenders may have a negative impact on the quality of testing (3). The document contains a set of essential requisites, technical criteria and other critical issues for supporting laboratory professionals in organizing blood collection tubes tenders and validating new devices before routine implementation.

A third document deals with the critical issue of patient identification and tube labelling (4). The 2016 National Patient Safety Goals (NPSG) issued by the Joint Commission have once more reiterated the vital concept of identifying patients correctly before performing any kind of health care intervention (NPSG.01.01.01), thus including venipuncture.

With the aim of harmonizing practices across Europe, the WG has thus released reinforced recommendations for appropriate patient identification and tube labelling procedures, so reducing the risk of preanalytical errors and improving patient safety. Notably, major focus has been placed on the evidence that labelling blood tubes after venipuncture may be a major source of identification errors. Therefore, unlike what is currently suggested by the...
Clinical and Laboratory Standard Institute (CLSI) H3-A6 guideline, the WG suggests that a prospective risk analysis of phlebotomy processes should be locally performed, and that tube labelling should be carried out prior to venipuncture, immediately after patient has been properly identified.

References
The EFLM WG Distance Education and e-Learning (Education & Training Committee) chaired by Daniel Rajdl is happy to inform you about the future EFLM webinars:

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker Location</th>
<th>Topic</th>
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<tbody>
<tr>
<td>2016, 4 October</td>
<td>Eva Ajzner (Nyíregyháza, Hungary)</td>
<td>Critical values</td>
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<tr>
<td>2016, 22 November</td>
<td>Alan Maisel (California USA)</td>
<td>Heart failure</td>
</tr>
<tr>
<td>2016, 13 December</td>
<td>Anna Merino (Barcelona, Spain)</td>
<td>Case reports in Haematology</td>
</tr>
<tr>
<td>2017, 9 May</td>
<td>Aasne K. Aarsand (Bergen, Norway)</td>
<td>Biological variation</td>
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</tbody>
</table>

All the webinars will start at 18h00 (CET); during the seminar it will be possible to ask questions to the speaker and obtain answers in real time.

Updates of this activity, registration for the webinars and recordings can be found at: http://www.eflm.eu/index.php/e-learning.html.

In response to the invitation to apply for the EFLM bursary programme addressed to Young Scientists attending the 4th EFLM-UEMS Congress in Warsaw next September, 26 applications were received in line with the following criteria for admission:

- Application from an EFLM National Society Members
- Young participants (≤35y at the date of the congress)
- Having a poster abstract accepted as First Author

Applications were evaluated by a panel composed of EFLM Officers appointed by the Executive Board specifically for this task.

The following 5 applicants have been selected to receive the EFLM support consisting of a bursary of Eur 1000 covering registration, travel and 3-nights accommodation. In addition, EFLM bursary recipients will receive a free on-line subscription to the EFLM official journal “CCLM”, kindly offered by Walter deGruyter.

- Elena ALOISIO, Italy
- Stefan DE KEUKELEIRE, Belgium
- Jorge DIAZ-GARZON, Spain
- Tuukka HELIN, Finland
- Anna WOLSKA, Poland

The next EFLM bursary programme will be launched at the beginning of 2017 offering 10 bursaries to attend the EuroMedLab Congress in Athens, 11-15 June 2017!

Join the EFLM circulation list from www.eflm.eu to keep updated with EFLM activities!
2016 AD Pricelist for the IFCC eNews

The IFCC eNews is delivered to more than 15,000 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 eNews 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 eNews 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:

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<th>ADVERT SIZE</th>
<th>SINGLE EDITION PRICE</th>
<th>*ANNUAL PRICE (6 editions)</th>
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<tbody>
<tr>
<td>Half Page Horizontal/Column</td>
<td>€ 250</td>
<td>€ 1,250.00</td>
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<tr>
<td>Full page (215.9 x 279.4)</td>
<td>€ 400</td>
<td>€ 2,000.00</td>
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3. Supply the advert as a jpg or PDF file in high resolution
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   - N° 2 Mar 24th
   - N° 3 May 19th
   - N° 4 Jul 14th
   - N° 5 Sep 22nd
   - N° 6 Dec 1st
6. Send your advertising material by email to: enews@ifcc.org

If you have any questions please get in touch with us, sending an email to ifcc@ifcc.org
A limited number of IFCC Travel Scholarships was available to attend the IFCC General Conference, that was held in Madrid, Spain, from 19 to 21 March 2016.

Read the reports that the recipients wrote about their experiences, what the most appreciated items were and how attendance at the General Conference will impact upon the focus and activities of their national societies.

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**News from the IFCC Website**

**eJIFCC Vol 27 n° 3**

A new issue of the eJIFCC is now available. eJIFCC Vol 27, no. 3 focuses on Cardiac Markers. Guest-editor is Allan S. Jaffe, M.D., Consultant and Chair of the Division of Clinical Core Laboratory Services at Mayo Clinic in Rochester, Minnesota, USA. Clinical validation has become an essential part of assay validation, in addition to a reasonable analytic validation of the accuracy of the assay. Analytical issues with natriuretic peptides and their use to guide therapy; high sensitivity cardiac troponin assays and how to implement them successfully, and soluble ST2 and galectin-3 are the subjects of this issue articles. An article on emerging and disruptive technologies complete the issue.

Read more

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**News from the IFCC Website**

**IFCC eAcademy: a new IFCC webinar available online**

**Vitamin D: Hype, Hope and Reality**

Increased awareness of the controversies regarding what is an optimal plasma concentration of 25(OH) vitamin D and increased awareness that observational studies with vitamin D are subject to several biases and confounding variables, are among the main objectives of the webinar Vitamin D: Hype, Hope and Reality by Prof. Chris Florkowski.

The webinar also focuses on which randomised controlled trials (RCTs) are required to establish a significant biological role for vitamin D in many conditions, for example in infectious diseases and on Vitamin D testing be targeted to high risk groups e.g. for rickets/osteomalacia, malabsorption or for investigation of disorders of calcium and phosphate metabolism.

Read more
IFCC's Calendar of Congresses, Conferences & Events

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<tr>
<th>Date</th>
<th>Event Name</th>
<th>Location</th>
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<tbody>
<tr>
<td>Nov 26 - 29, 2016</td>
<td>14th Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine Congress</td>
<td>Taipei, TW</td>
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<tr>
<td>Sep 17 - 20, 2017</td>
<td>XXIII COLABIOCLI Congress 2017</td>
<td>Punta del Este, UY</td>
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<tr>
<td>Oct 20 - 22, 2017</td>
<td>XIV International Congress of Pediatric Laboratory Medicine</td>
<td>Durban, ZA</td>
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<tr>
<td>Oct 22 - 25, 2017</td>
<td>XXIII IFCC WorldLab 2017</td>
<td>Durban, ZA</td>
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<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>May 19 - 23, 2019</td>
<td>IFCC-EFLM EuroMedLab 2019</td>
<td>Barcelona, ES</td>
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<tr>
<td>Aug 11 - 13, 2016</td>
<td>9th Palestinian Conference of Laboratory Medicine</td>
<td>Ramallah, Palestine</td>
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<tr>
<td>Aug 13 - 28, 2016</td>
<td><em>Quality Control in the Clinical Laboratory: a Perspective from Engineering to Applications</em></td>
<td>Copilco El Alto, MX</td>
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<tr>
<td>Aug 25 - 27, 2016</td>
<td>58th National Conference of the Hungarian Society of Laboratory Medicine</td>
<td>Szeged, HU</td>
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<tr>
<td>Sep 3 - 8, 2016</td>
<td>41st FEBS Congress/FEBS 2016</td>
<td>Kusadasi/Ephesus, TR</td>
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<td>Sept 13 - 15, 2016</td>
<td>AACB AIMS 2016 Combined Scientific Meeting</td>
<td>Brisbane, AU</td>
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<tr>
<td>Sept 16, 2016</td>
<td>AACB Chromatography Mass Spectrometry Satellite Meeting</td>
<td>Brisbane, AU</td>
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<tr>
<td>Sept 21 - 24, 2016</td>
<td><em>4th Joint EFLM-UEMS Congress: &quot;Laboratory Medicine at the Clinical Interface&quot;</em></td>
<td>Warsaw, PL</td>
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<tr>
<td>Sept 21 - 24, 2016</td>
<td>26th International CPOCT Symposium: the Benefits and Challenges of Point-of-Care Testing across the Clinical Spectrum</td>
<td>Copenhagen, DK</td>
</tr>
<tr>
<td>Sept 28 - 30, 2016</td>
<td>2nd German Congress on Laboratory Medicine DKLM 2016 and 13th Annual Congress of the German Society for Clinical Chemistry and Laboratory Medicine e.V.</td>
<td>Mannheim, DE</td>
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<tr>
<td>Sept 29, 2016</td>
<td>SBPC/ML&amp;IFCC Joint Symposium</td>
<td>Rio de Janeiro, BR</td>
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<tr>
<td>Sept 28 - Oct 1, 2016</td>
<td><em>5th Slovenian Congress of Clinical Chemistry and Laboratory Medicine</em></td>
<td>Portoroz, SI</td>
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<tr>
<td>Oct 4 - 6, 2016</td>
<td>2nd SIPMeL National Congress</td>
<td>Montesilvano, IT</td>
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<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>Oct 4 - 8, 2016</td>
<td>First Scientific and Professional Congress of Biochemistry 2016</td>
<td>Cordoba, AR</td>
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<tr>
<td>Oct 4 - 6, 2016</td>
<td>2nd SIPMeL National Congress</td>
<td>Montesilvano, IT</td>
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<tr>
<td>Oct 5 - 7, 2016</td>
<td>24th Balkan Clinical Laboratory Federation Meeting</td>
<td>Tirana, AL</td>
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<tr>
<td>Oct 12 - 14, 2016</td>
<td>2016 Conference of the Association of Clinical Chemists of Nigeria</td>
<td>Ikeja, Lagos, NG</td>
</tr>
<tr>
<td>Oct 18 - 20, 2016</td>
<td>48th National SIBioC Congress - Laboratory Medicine</td>
<td>Torino, IT</td>
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<td>Oct 19 - 21, 2016</td>
<td>X National Congress of Clinical Laboratory</td>
<td>Zaragoza, ES</td>
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<td>Oct 20 - 22, 2016</td>
<td>Joint Meeting of the “3rd Congress on Controversies in Thrombosis &amp; Hemostasis” together with the “8th Russian Conference on Clinical Hemostasiology and Hemorheology”</td>
<td>Moscow, RU</td>
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<tr>
<td>Oct 22, 2016</td>
<td>5th International Conference on Neonatal and Pediatric Laboratory Medicine</td>
<td>Cagliari, IT</td>
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<td>Oct 26 - 28, 2016</td>
<td>IFCC Flow Cytometry Workshop &quot;From Science to Clinic&quot;</td>
<td>St. Petersburg, RU</td>
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<tr>
<td>Oct 27, 2016</td>
<td>International Conference on Laboratory Medicine &quot;Towards performance specifications for the extra-analytical phases of laboratory testing&quot;</td>
<td>Padova, IT</td>
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<td>Nov 4 - 7, 2016</td>
<td>XVI Congreso Internacional del Colegio Nacional de Bacteriologa</td>
<td>Bogotà, CO</td>
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<td>Nov 9 - 11, 2016</td>
<td>EFLM Course: &quot;Developing medical tests that improve patient outcomes&quot;</td>
<td>Leiden, NL</td>
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<td>Nov 17 - 18, 2016</td>
<td>10th International Scientific Meeting of the Centre of Metrological Traceability in Laboratory Medicine (CIRME) &quot;Ten years after&quot;</td>
<td>Milan, IT</td>
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<td>Dec 2 - 3, 2016</td>
<td>Journée de Biologie Praticienne 50</td>
<td>Paris, FR</td>
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<tr>
<td>Feb 09 - 10, 2017</td>
<td>International Congress on Quality in Laboratory Medicine</td>
<td>Helsinki, FI</td>
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<tr>
<td>May 11 - 13, 2017</td>
<td>The VIII Baltic Transfusion Medicine Congress and the I Latvian Congress in Laboratory Medicine</td>
<td>Riga, LV</td>
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<tr>
<td>Jun 10 - 11, 2017</td>
<td>EuroMedLab Athens 2017 Satellite Meeting &quot;Management of Inborn Errors of Metabolism: from Diagnosis to Treatment&quot;</td>
<td>Athens, GR</td>
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Circulation
The eNews is distributed to all IFCC members registered on-line to receive it and to all IFCC sponsors.

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

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