



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, South Africa E-mail: enews@ifcc.org

International Federation of Clinical Chemistry and Laboratory Medicine







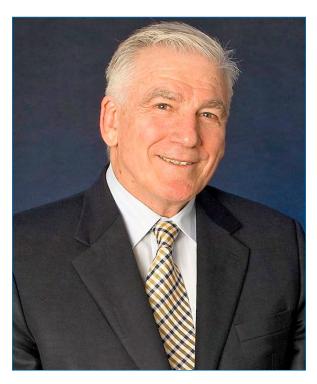
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Welcome message from the IFCC President

by Howard Morris

IFCC President



Prof. Howard Morris

It is a great pleasure to present my welcome message to all our national society and corporate member colleagues. It is your expertise and dedication to improve health outcomes for patients and communities that are the greatest strengths of the IFCC. I very much look forward to working closely with you and together facing the opportunities and challenges for laboratory medicine over this next period. It is your expertise which gives me great confidence that we will continue to develop the quality and performance of laboratory medicine to meet the future needs of our patients and the healthcare system.

Laboratory medicine currently faces significant challenges some of which confront all the healthcare disciplines. However we face particular issues arising from the perception of laboratory medicine as merely a service provider rather than a driver for optimal healthcare. Clinical laboratories are being required to assume increased responsibilities for service provision and patient safety with ever decreasing budgets. Financial constraints also impact our corporate members, moderating their ability to collaborate in professional development and, at the same time, the academic basis of laboratory medicine is diminishing.

Professional leadership has never been more vital to provide strategies for improving the crucial role of laboratory medicine in patient care. Such leadership is provided by the IFCC, our regional federations and our national societies. We work in this field together and each of our organizations plays an essential role at the different levels of engagement. Clearly communication is critical and the interactions between the IFCC and the regional federations will now be markedly enhanced with the inclusion of representatives of each of the regional federations on the IFCC Executive Board. The IFCC General Conference, this year being held in November, provides further opportunity between the national society representatives, regional federations and IFCC Officers to engage in discussions and debate on the key issues currently facing laboratory medicine.

As President I look forward to extending the work of the IFCC in a range of important areas.

Technologies relevant to clinical laboratory practice are rapidly emerging from academic and industry research laboratories and being adopted by highly specialized scientists within clinical laboratories. But their full benefits for patient care cannot be realized until they are translated to areas capable of high-throughput processing for medical tests and meeting performance criteria for accreditation purposes. The Emerging Technologies Division (ETD) is a new addition to the IFCC functional units and is responsible for identifying and assessing emerging technologies and translating the emerging and disruptive diagnostic and data analysis procedures from academic laboratories to clinical laboratories and from clinical laboratories to routine practice.

Improving clinical laboratory performance through standardization and traceability as it impacts on the rational use of clinical laboratory resources continues to be a major focus of the Scientific Division. This work will be

enhanced by the IFCC hosting the International Consortium for Harmonization of Clinical Laboratory Results (ICHCLR) which will improve the close working relationships between IFCC, ICHCLR and the Joint Committee for Traceability in Laboratory medicine (JCTLM) during the next triennium. A major challenge is to extend these activities to regions in which the current multi-national In-Vitro Diagnostic industry members are not necessarily the major providers of clinical laboratory instruments and reagents, such as in the Asia Pacific and Central and South American regions. Major achievements have been made in this field only with the close collaboration of the IFCC with relevant institutions in Europe (European Commission - Joint Research Centre) and the USA (National Institute of Science and Technology). During 2018 these collaborations will extend to China (National Institute for Food and Drug Control). We look forward to continuing this important work in collaboration with these important institutions.

IFCC educational and training activities capable of meeting the needs of both developing and developed communities across general laboratory medicine subjects, specialised services and clinical laboratory management have long been a high priority for IFCC. It is most gratifying that this work will be enhanced through the joint efforts of the Education and Management Division and Communications and Publications Division with the promotion of eLearning facilities and opportunities. These electronic resources will be available to clinical laboratory practitioners around the world with internet access.

As discussed above, laboratory medicine faces particular challenges and it is important that as a profession we improve our ability to present a coherent strategy to our clinical colleagues, to healthcare managers and those paying for medical tests such as insurers and governments. Closer interactions between international organisations representing the various disciplines of laboratory medicine will greatly assist common engagement by our profession with these stakeholders. Of particular interest in these collaborations will be value of medical tests in order to demonstrate to all stakeholders in healthcare that laboratory medicine can be a driver of optimal and financially sustainable healthcare delivery.

I look forward to working directly with many of you over the next triennium and particularly hope we can meet at the IFCC General Conference being held in Budapest in November. I welcome any suggestions to improve our organization and activities.

Soward from

Best wishes,

Prof. Howard Morris

IFCC President





IFCC eNews to be published ten times per year

Following discussions at the IFCC Executive Board, the Communications and Publications Division has decided to increase the number of newsletters annually to ten issues per year, from six annually.

This will affect the deadlines for publication—with now ten deadlines, instead of the previous six—but will increase the frequency of news items, especially with time-sensitive events.

Successful 14th International Congress of Paediatric Laboratory Medicine in Durban, South Africa – Record number of scholarships and merit awards, diverse global representation, novel scientific program, and charity for children

by Sharon M. Geaghan on behalf of the IFCC Task Force on Paediatric Laboratory Medicine



Aerial view of the Durban, South Africa coastline (courtesy of Grant Pitcher)

The IFCC's Task Force on Paediatric Laboratory Medicine organized its 14th successful Congress in Durban, South Africa, proffering new levels of scholarship grants and research awards, while continuing to attract global delegate representation, offer scientific novelty in programming, and provide charity for local children. One of the Task Force Committee's primary goals was to insure the Congress would be accessible, particularly for African colleagues. The Congress received 120 registered participants, and approximately a quarter (of 74 delegates) were African. The delegates represented a diversity of scientific communities around the globe: Algeria, Australia, Bolivia, Canada, France, Germany, Greece, India, Italy, Japan, Lithuania, Netherlands, Nigeria, Norway, Oman, Pakistan, Poland, Qatar, Russian Federation, Saudi Arabia, Singapore, South Africa, Switzerland, Thailand, Turkey, United Arab Emirates, United Kingdom, and the United States.



Choir: The Key of Hope children's choir performed at the Opening Ceremony for the Paediatric Congress in Durban

Scholarship grants were key to insuring accessibility, and we are grateful to the Society for the Study of Inborn Errors of Metabolism (SSIEM) for their generous support of 22 educational grants. SSIEM, founded in 1963, aims to foster the study of inherited metabolic disorders. It has over 1400 members and is truly international, with representation from more than 75 countries. A registered charity in the UK, the SSIEM publishes The Journal of Inherited Metabolic Disorders (see ssiem.org). The Society also monitors training in pediatric metabolic medicine on behalf of the European Academy of Paediatrics. Dr. Timothy Lang was instrumental in securing the travel grants, € 500 each, which were allocated to support individuals with interest in inherited metabolic disease. After publicity and recruitment of candidates through calls for applications by the Task Force, the Organizing Committee was able to offer every applicant a grant this year.



IFCC Task Force for Pediatric Laboratory Medicine
L-R (front): Tim Lang, Vijay Grey, Tze Ping Loh,
Magdalena Turzyniecka, Sharon Geaghan, Klaus Kohse;
L-R (back): Martin Hersberg, Tahir Pillay

A larger number of monetary research prizes was a notable feature of this year's Congress, which included Best Poster prize for Corey Markus and team (Singapore, Australia) for "Derivation of data-driven, outcome-based critical values"; and second-place finalist Poster prize for Martin Hersberger and team

(Switzerland) for "Development of a LC-MS/MS Method for the Quantification of 16 Steroids in Plasma from Children".

Merit awards were also presented for five additional outstanding posters (in alphabetical order): Sibtain Ahmed (Pakistan) for "Establishment of Reference Intervals of Thyroid Stimulating Hormone in Neonates-An Experience from Pakistan", Randa Alratrout (Saudi Arabia) for "The Frequency of Inherited Metabolic & Endocrine Disorders in the Eastern and North-Western Jawf Provinces of Saudi Arabia: Four Years' Data from the Newborn Screening Department , Ministry of Health, Dammam", Marta Camilot (Italy) for "1st and 99th percentiles of aminoacids and acylcarnitines measured in dried blood spots collected at two and four weeks of life from prematures and/or low birth weight newborns for extended newborn screening"; Busadee Pratumvit (Thailand) for "Close Correlation between Arterial and Central Venous Lactate Concentrations of Children in Shock: A Cross-sectional Study"; and Natalia Simakova (Russian Federation) for "Reference intervals for reticulocyte parameters of infants during their first year after birth using Sysmex XN-1000 hematology analyzer".

Of 52 accepted abstracts, seven were offered oral presentation The Best Oral Presentation prize (for investigators over 40 years of age) was awarded to Chris Vorster (South Africa) for "Justification for and perceived barriers to the implementation of a newborn screening program for South Africa". The Best Oral Presentation prize (for young investigator, up to 40 years of age) was awarded to Sonja Bartlett (Canada) for "A basic metabolomics investigation of the effect of nanogold based treatment: Potential applications/consequences in inborn errors of metabolism." In total, monetary prizes were provided to nine winners at the Congress. Veteran judges noted an especially high quality of abstracts and posters for this Congress, combined with excellent oversight by Dr. Tze Ping Loh over the process and prizes.

Scientific programming focused on novel technologies and breaking news topics of paedatric interest, which included four distinguished plenary speakers in the following scientific realms: recent experience



SSIEM scholarship recipients gather for the Paediatric Congress

with the Ebola Virus in West Africa (Dr. Janusz Paweska), use of point of care to improve patient care (Dr. Sverre Sandberg), the microbiome in early life (Dr. Michael Surette) and the genetics of calcium metabolism disorders (Dr. Rajesh Thakker). Additionally, nine symposia featuring 32 speakers were offered in the general paediatric interest areas of newborn screening; endocrinology; panel discussion of critical values; reference intervals; next generation sequencing; nutrition and immunology; bone metabolism; select oral platform presentations; and general pediatric laboratory testing.

An initiative of this Congress's Organizing Committee was to identify an

opportunity for charitable sponsorship to a local community of children, in keeping with the paediatric mission of the Task Force. Accordingly, Drs. Tahir Pillay and Sharon Geaghan arranged the opening ceremony to be graced by the Key of Hope Choir, a group of young girls and boys whose voices and joyful energy welcomed attendees and made spirits soar. In return for this gift, the Task Force donated to this meritorious organization, which helps children that have been orphaned by or otherwise affected by HIV and AIDS in South Africa. Specifically, over 1200 children are visited in their home every week, over 200 children are sent to school every year, and more than 300 children's rights cases are advocated for annually by this organization. For others who may wish to make their visit to South Africa into a lasting relationship, and might be interested in supporting a Durban-based fountain of goodwill and hope, please visit its website: https://keyofhope.org/.

Financial support for the Congress, a satellite meeting presented in advance of the IFCC WorldLab on a triennial basis, was independently recruited by the TF-PLM Committee members. The efforts once again re-



SSIEM scholarship recipients network during the Paediatric Congress

sulted in excellent funding, and our gratitude extends to Platinum level sponsor, Alexion Pharmaceuticals; six Gold level sponsors (in alphabetical order): American Association of Clinical Chemistry (AACC), Roche Diagnostics, Canadian Society of Clinical Chemists (CSCC), Deutscheland Gesellschaft für Klinische Chemie und Laboratoriumsmedizin/German Society for Clinical Chemistry (DGKL), the Society for the Study of Inborn Errors of Metabolism (SSIEM), and the Swiss Society of Clinical Chemistry (SSCC); and Bronze level sponsor, Sarstedt. Additional sponsorships included the Royal College of Pathologists (RCP), South African Medical Research Council (SAMRC) and the Federation of South African Societies of Pathology (FSASP).

Committee members include Chair, Michael Metz (AU) and Vice-Chair Timothy Lang (UK); Immediate Past-Chair Vijay Grey (CA); Past Past Chair Klaus Kohse (DE); and (in alphabetical order): Sharon Geaghan (USA); Martin Hersberger (CH); Patti Jones (USA); Tze Ping Loh (SG); Magdalena Turzyniecka (ZA) and Tahir Pillay (ZA).

For the magnificent programme design (Dr. Magdalena Turzyniecka) and core leadership for the Durban Symposium, the trio of Drs. Michael Metz, Tahir Pillay and Magdalena Turzyniecka are heartily thanked.

The 14th Congress met the longstanding mission statement of the IFCC Task Force on Paediatric Laboratory Medicine: *improving the diagnosis and management of patients from birth to adolescence*. Looking ahead three years to 2020, the TF-PLM will continue its mission in Seoul, South Korea.

14TH INTERNATIONAL CONGRESS OF PAEDIATRIC LABORATORY MEDICINE: TESTIMONIALS RECEIVED FROM SEVERAL AWARDEES (excerpts)

To have a conference of this magnitude in my own country was already an inspiration to me...The lectures were topical, vast and interesting and the presenters made an extra effort to engage and discuss which was refreshing. The intimate setting allowed for networking & open discussion outside the plenaries. In a short space of time a lot of ground was covered and it was interesting to see how far other countries have progressed ...I am grateful for the SSIEM travel bursary which has allowed me the opportunity to broaden my horizon and look to the future especially for my country & its health amongst our most vulnerable population. (Ashandree Reddy-ZA)

The XIV International Congress of Paediatric Laboratory Medicine (ICPLM) was a great experience and I am truly grateful for the SSIEM travel scholarship that made it possible for me to attend the conference .I have gained insights to improve laboratory service especially in children in my hospital and my country. I returned from the conference with a great deal of inspiration, enthusiasm and ideas to apply with pediatric laboratory service and expand my knowledge to laboratory professional personnel in the country. Thank you very much to give this great opportunity. (Best regards, Busadee Pratumvinit, MD-THAILAND)

Thank you again for this incredible opportunity to attend an international conference in paediatric laboratory medicine, specifically focused on inborn errors of metabolism, for which I have a particular passion. ...I thoroughly enjoyed all of the sessions at the ICPLM conference, as well as the opportunity to catch up with distant colleagues and to meet and interrogate the great minds in this field. The smaller numbers attending the conference meant that these individuals were more accessible to those of us that are junior and who would normally not have an opportunity to come close to them, let alone to sit at lunch with them! The conference was superbly organized, with all sessions running smoothly and to time. I thank you again for a most valuable experience. (Kind regards, Justine Cole-ZA)

...The congress had a lively opening ceremony where the Key of Hope children's choir entertained us with enthusiastic renditions of popular local songs. The children's smiling faces set the tone for the academic programme leaving delegates also smiling and satisfied with the intellectual content of the congress ... There was a small group of attendees which allowed registrars and other trainees greater opportunity to network more meaningfully with all categories of laboratory staff including consultants and experts in their fields. I wish to thank the organizers for a highly enjoyable programme, for reducing the registration fee for African delegates and SSIEM for granting me a travel grant despite being an older delegate. (Jocelyn Naicker-ZA)

I was the fortunate recipient of a travel scholarship from SSIEM...I would also like to take the opportunity to thank the Organising Committee for recruiting these world class speakers for the Congress...I was welcomed to an emotional opening ceremony, with an uplifting performance from the children's choir, Key of Hope. Key of Hope provides long term mentoring, allowing children to thrive as citizen's and potential leaders, to combat the future challenges Africa faces. We were then provided with stark evidence of the

tragic reality of life in Africa and risks healthcare workers face (both local and foreign), with Prof. Janusz Paweska opening plenary lecture discussing the ecological and epidemiological aspects of the recent Ebola outbreak in west Africa from 2013 to 2015...the work done by Prof. Janusz Paweska team gives hope to rapid and effective control of future viral outbreaks....I would like to thank the SSIEM

for funding 22 travel scholarships, the largest number of scholarships awarded in the history of the ICPLM, of which I was fortunate enough to be granted one. I have retuned back Australia having made many wonderful new friends and fostering new collaborative partnerships into the future. (Corey Markus-AU)

How can you explain traceability in laboratory medicine to your clinician users?

by Graham Beastall

on behalf of the Joint Committee for Traceability in Laboratory Medicine



How can you explain traceability in laboratory medicine to your clinician users?

A recent article by Graham Jones in his local hospital journal provides one approach to answer this question.

Clinicians who use laboratory medicine services take it for granted that the laboratory provides 'the right result'. They believe that the result they get back from their laboratory is both accurate and capable of comparison with results obtained from other laboratories or retrieved from the medical/scientific literature. It comes as a shock to most clinicians to learn that for many results they receive there is significant between-method variability. In some cases, the variability may be such that clinical outcomes and even patient safety may be compromised if they compare the results that they get from their local laboratory with literature or clinical practice guideline results that were obtained using a different method.

Traceability in laboratory medicine (TLM) is the key to reducing between-method variability. IFCC is a founder member of the Joint Committee for Traceability in Laboratory Medicine (JCTLM), which "supports world-wide comparability, reliability and equivalence of measurement results in laboratory medicine, for the purpose of improving health care and facilitating national and international trade in *in vitro* diagnostic devices".

The website www.jctlm.org provides freely available resources to help laboratory medicine specialists to understand TLM and to train others to appreciate its importance. These resources take the form of webinars, PowerPoint presentations, symposia at scientific meetings and publications.

As part of the support provided to its users the clinical laboratory has a responsibility to alert clinicians to between-method variability and the pitfalls that could arise. At the same time clinicians can be reassured that there is a global effort to reduce the problem to make results more comparable. The article by Graham Jones from St Vincent's Hospital in Sydney, Australia provides an excellent template for communication with clinician users. Entitled 'Chemical Pathology – Getting the Right Answer' the article is written in non-technical language using examples that may be understood by clinicians and other healthcare professionals. Key references are included.

The article is published in the St Vincent's Clinic, Proceedings (Sydney) Volume 25, 1 December 2017. It may be downloaded here. The article may be reproduced or modified for local use as long as an acknowledgement is provided to the original publication. The article provides you with an opportunity to educate and support your clinical users.

Poster awards at IFCC WorldLab 2017 Durban



by Tahir Pillay IFCC eNews Editor Congress Co-president, WorldLab 2017

The South African Association for Clinical Biochemistry and Laboratory Medicine (SAACB), under the presidency of Prof. Tahir Pillay, donated monetary prizes for the poster awards for Worldlab2017. For the first time in an IFCC Conference, poster presenters were

asked to submit PDF copies of posters to be included in the IFCC Worldlab 2017 Durban conference "app", if they wished to be entered into the poster draw. This allowed judges to evaluate the posters at their leisure and award prizes for the poster adjudicated, in their opinion, to be the three best. The judges were Dr Patrick Twomey from Ireland and Dr Bill Simpson from Scotland. The judges selected the following posters from registered presenters:

FIRST PRIZE (ZAR 10 000)

1) Evaluating Riboflavin Deficiency in the First Case of Riboflavin Transporter Deficiency in Sub-Saharan Africa. Rusch J.A.; Chaya S.; Riordan G.; Wilmshurst J.; Van der Watt G. (South Africa)



Evaluating Riboflavin Deficiency in the First Case of Riboflavin Transporter Deficiency in Sub-Saharan Africa



Rusch JA1,2,3; Chaya S1,2; Riordan G1,2; Wilmshurst J1,2; Van der Watt G 1,2,3 ¹University of Cape Town ²Red Cross War Memorial Children's Hospital ³National Health Laboratory Services

RUNNERS UP (ZAR 5000)

2) Unveiling the mechanism of Interfering Effects of chemotherapy on Blast Flagging in Sysmex XN automatic reflex test. Lee H., Bang K.D., Song I.S., Lee D.S. (South Korea)



Unveiling the mechanism of Interfering Effects of chemotherapy on Blast Flagging in Sysmex XN automatic reflex test



H. Lee², K. D. Bang¹ I. S. Song³, D. S. Lee¹

¹Department of Laboratory Medicine, Seoul National University Hospital ²Department of Laboratory Medicine, Seoul National University Hospital/³Department of Life Science, University of Seoul

³Department of Life Science, University of Seoul

3) The Role of Procalcitonin in Neonatal Sepsis at The Nairobi Hospital. Abdulhafedh I., Mwachari C., Mugo J., Kariuki P., Atul P. (Kenya)



The Role of Procalcitonin in Neonatal Sepsis at The Nairobi Hospital

Abdulhafedh I¹, Mwachari C², Mugo J¹, Kariuki P¹, Atul P¹ 1. The Nairobi Hospital, Kenya 2. Kenya Medical Research Institute (KEMRI), Kenya

Accreditation of medical laboratories – success for the 50% cap



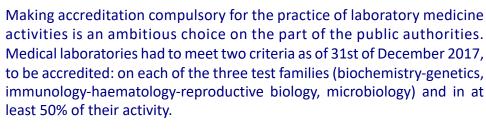
by Bernard Gouget
Counselor for Public Health FHF
President Human Healthcare Section Committee-COFRAC;
SFBC-International Relations Committee

Alain Suiro

Vice President, Human Healthcare Section Committee-COFRAC **Hélène Mehay**

Director, Human Healthcare Division-Cofrac

The 31st of December 2017 was an important day for laboratory medicine in France: the first deadline set for Medical Laboratories (LBM) as part of the legislative obligation to accredit their activity, 864 of 869 (99.3%) medical laboratories, including 305 hospitals are currently accredited; a winning bet that illustrates mobilization and which rewards the collective effort of the entire profession of laboratory medicine, institutions and COFRAC for the implementation of a reform essential to the quality of care.



Introduced by Order No. 2010-49 of January 13, 2010 on laboratory medicine, the accreditation obligation affects all public and private medical laboratories in France. It seeks to guarantee their competence and the quality of services provided. This accreditation provides an additional guarantee to patients on the value of the examinations performed and fits directly into the main thrusts of the national health strategy. The change in the schedule allowing medical laboratories until 31 December 2017 to be accredited has proven to be a well-calibrated measure. It made it possible to plan evaluations in an optimized manner, given the resources available to evaluators and to have sufficient time to comply before the deadline.



Bernard Gouget

The Regional Health Agencies have been informed that the accreditation process has not been completed for 5 medical laboratories that have been the subject of a first negative decision and for which the control of the discrepancies identified during their initial assessment must be verified. A single private practice laboratory gave notification of refusal of accreditation. Out of 305 hospital medical laboratories, 3 medical laboratories are still awaiting a decision for restructuring reasons or exceptional situations.

The next step, by 1 November 2020, is to obtain accreditation for all medical laboratory activities. Furthermore, the Human Health Section of COFRAC has already implemented a concerted strategy to improve the performance of its actions by optimizing processes and wishes to strengthen the support of professionals in this essential new phase to guarantee the success of the reform (www.cofrac.fr).

NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES



French Society of Clinical Biology (SFBC)

Advances in cancer biology: SFBC National Congress, Paris

by Katell Peoc'h, Delphine Collin-Chavagnac, Sylvain Lehmann SFBC-Scientific Committee

Bernard Gouget

SFBC-COC member



On 16-17 October 2017, the French Society of Clinical Biology (SFBC) under the leadership of Prof. Marc Delpech, President SFBC, and in collaboration of the SFBC-Congress Organizing Committee (Michel Vaubourdolle, SFBC-EFLM representative, Bernard Gouget, chair IFCC-NC) organized the two-day SFBC National Congress 2017 at the Cité Universitaire Internationale de Paris to discuss "Innovative approaches in cancer biology".

Today, there are three million people living with cancer or after cancer in France. Cancers are also the leading cause of avoidable deaths. Based on current knowledge, it is estimated that nearly one of two cancer deaths could be avoided.

The last decade has seen remarkable advances in cancer research. However, despite significant breakthroughs in the understanding, prevention and treatment of cancer, this disease continues to affect millions of people worldwide and has a significant impact on health policies.

Innovation in diagnosis and follow up are an incredibly dynamic field of clinical biology. It has merged all disciplines into the same dynamic with a common

goal: to enhance the life expectancy and the well-being of patients.

At the opening session, we were delighted to welcome Prof. Michael Neumaier, EFLM-President-elect, who presented a quite exciting conference regarding liquid biopsies. Prof. Norbert IFRAH, Institut National du Cancer (INCa), underlined that the research of biology systems is a priority for the INCa. The research focussed on cancer biology helps to increase the basic knowledge of oncogenesis, and of the development and progression of cancer.



Dr. Katell Peoc'h, SFBC-Scientific Committee

INCa has an instrumental role on a European and international scale. Through all its different programmes, the INCa intends to develop and roll out targeted therapies and personalized medicine strengthening the links between care and research, and transversely,

emphasizes support and access to innovation for the treatment of malignant diseases.

The SFBC established partnerships with INCa to confront scientific strategies and find synergies among organizations. The primary aim of the medical community is to cure more patients, by promoting early diagnosis and guaranteeing access for all to quality medicine and innovations.

Prof. Ph Gillery, IFCC-SD chair, highlighted the IFCC activities to address the challenges and the opportunities to accelerate future progress against cancer by promoting innovative diagnosis and an ever-increasing understanding of the genes and molecular pathways that are disrupted.

At this symposium, Catherine Alix Panabières and Jean-Marc Lacorte had the opportunity to discuss the place of circulating tumor cell detection versus tumoral DNA detection.

Pierre-Jean Lamy presented the new biochemical tumoral markers and Jacqueline Lehmann-Che, the somatic genetic analysis of tumors in the era of personalized medicine.

We were also able to deepen our knowledge and become aware of the challenges existing around the emerging fields of exosomes and microparticles, presented by Francoise Dignat-Georges, and microbiota, detailed by Mathias Chamaillard, in the pathogenesis of cancer and its diagnosis.

During the second day, the SFBC-WGs presented their recent findings in the field of tumour markers, digital PCR applications in cancer (Frédéric Fina), circulating tumoral DNA and cells studies.

Frederic Thomas, who recently created the Center for Ecological and Evolutionary Cancer Research in Montpellier, gave us a quite innovative and integrative conference on the ecology of cancer in respect to evolutionary biology. He insisted on the evolutionary relationships between malignant cells and the host and explained how oncogenic processes act as selective forces.

Young scientists were invited to present the current status of their research, and Prof. Jean-Louis Beaudeux, as Dean of the Faculty of Pharmacy Paris Descartes challenged them on their topics.

Thanks to all the speakers who, through the quality of their presentations and choice of topics, inspired the interest of the participants.

We were also pleased to be associated with this event with several IVD partners and the Medicen Paris Region global competitiveness cluster.

The Next National Congress is planned to take place at the Cite Universitaire de Paris, in March 2019.

For more information, visit the following website: https://www.sfbc-asso.fr/.



News from Mexico (CMCLC)

2nd Regional Symposium of DIABESITY: Diagnostic and clinical aspects

by Julio C. Lara-Riegos, Julio C. Torres-Romero and Rosa Sierra-Amor eNews WG Member

A symposium on diabesity: clinical and diagnostic aspects was organized by Yucatán Chapter of the Mexican Association of Clinical Laboratory Sciences (Colegio Mexicano de Ciencias de Laboratorio Clínico, CMCLC) in Mérida, Yucatán, México from 17-18 November 2017.

The CMCLC convened the symposium, chaired by Esteban Rojas-Velázquez, MSc. President Yucatán Chapter that was held at the Faculty of Chemistry of the Autonomous University of Yucatan. There were 140 participants, from different health care centres and

clinical laboratories from Yucatán State. A welcome opening message was given by Jezabel Vite- Casanova, MS. CMCLC president. This event had IFCC and COLABIOCLI auspices.

The symposium objective was to create a space for dissemination and exchange of knowledge including clinical current recommendations for the prevention, the diagnosis, and treatment strategies for patients dealing with diabetes and obesity.

The event was organized based on the declaration of epidemiological alert reported in Mexico for the first time last November for metabolic entities, mainly Diabetes type 2, and in the frame of world diabetes day.

There was a total of 17 conferences covering a broad range of hot topics from **Genetics**, where José Peralta Romero, MD, Hospital Siglo XXI, IMSS described clinical, genetic, biochemical and molecular aspects of obesity, type 2 diabetes and metabolic syndrome in the Mexican population.

Julio Lara-Riegos, PhD from Faculty of Chemistry, Autonomous University of Yucatan described the genetic risk in Mayan population for metabolic disease including diabesity.

Guadalupe Garcia Escalante, PhD and Lorena Ruiz Garcia, MSc., both from the "Dr. Hideyo Noguchi"

Regional Research Center of the Autonomous University of Yucatan, explained the importance of the variations in genes associated with obesity and DT2-associated polymorphisms in families of a Yucatecan population.

In the context of **metabolic alterations**, Alma Estrella Fernandez, MD from the General Regional Hospital Number 12, IMSS defined a biochemical portrait of metabolic syndrome.

Edwin Martinez Leo, MSc Autonomous University of Yucatan presented his study of mitochondrial dysfunction and the therapeutic opportunity in diabesity.

Julio Lara-Riegos, PhD explained the importance of the Small and dense LDL particles (sdLDL) as a marker of atherogenic risk in DT2.

Ana I. Burguete García, PhD from the National Institute of Public Health of Mexico examined the relationship between Microbiota, Obesity and Cardio-Metabolic Risk.

Four presentations emphasized the theme of **multi-factorial causation of obesity**, where Victor Arana-Argaéz PhD Faculty of Chemistry, Autonomous University of Yucatan explored the historical evidence of the immunological aspects of obesity.



Yucatan Chapter CMCLC Executive Board Members, speakers and young scientists at the 2nd Symposium on Diabesity, Merida, Yuc., Mexico





Hugo Azcorra, PhD and Sudip Datta Banik PhD CIN-VESTAV-Mérida stressed the importance of the approach to obesity from a human ecology perspective and the negative impacts between diet, exercise and disease in children of Mérida, Yucatán.

Jorge Carlos Guillermo Herrera MD, Autonomous University of Yucatan introduced the "Globesity", geopolitical challenges in the economic-sanitary systems in terms of obesity.

In the area of **control and diagnosis**, Freddy González Basulto, MD, Municipal Center for Nutritional and Diabetes Care – Merida City, introduced the "7 steps" which are proposed as essentials for education in control of diabetes.

Antonio Cervera-Cetina, MD, from Merida Clinical, discussed what the best test for the diagnosis of diabetes is.

Closely related to diabetes diagnosis, Eduardo Rojano Rodríguez, MSc and David Fernando Martinez, MSc, made presentations which emphasized the theme of the HbA1c as the principal test for diagnosis of diabetes, from the standardization to the methodological and analytical fundamentals in the quantitative determination.

At the end of the symposium, Bact. Diana Pérez-Vázquez explained the importance of application of the Six Sigma model in the improvement of analytical quality in the determination of glucose.



News from Pakistan

Meeting report:
Guest lecture on Diagnosis of Lysosomal Storage Diseases

by Lena Jafri *IFCC National Representative*

On 15 December 2017, the Aga Khan University in Collaboration with Pakistan Society of Chemical Pathology (PSCP) organized a CME lecture at the Aga Khan University Hospital, Karachi, Pakistan. The invited speaker was Dr. Julaina Abd Jalil from the Institute for Medical Research (IMR), Malaysia, who spoke on 'Diagnosis of Lysosomal Storage Diseases (LSDs) in IMR Malaysia'. In order to update their knowledge several Chemical Pathologists from different institutes of Pakistan attended the session. It was well attended by PSCP members, residents, technologists and consultant Chemical Pathologists of Pakistan.

Dr. Julaina started by giving an overview of LSDs and their classification. She explained that every LSD results from a problem with the lysosomal process by which enzymes rid cells of substrate and when a lysosomal enzyme (or another protein that directs it) is deficient or malfunctioning the substrate accumulates interfering with normal cellular activity.



Participants attending the guest lecture by Dr. Julaina Abd Jalil



Group picture of Dr. Julaina Abd Jalil with PSCP members

She then offered an insight into the available first tier and second tier laboratory tests for screening and diagnosing various LSDs. She emphasized that before considering specific analyses (enzymatic and/or molecular), preliminary screening tests for LSDs should be performed. Additionally, she discussed the importance of high resolution electrophoresis for MPS patients and thin layer chromatography for patients with oligosaccharidoses.

Dr. Julaina continued her talk by discussing the clinical utility and technical challenges of multiplex assay of enzymes using tandem mass spectrometry. She discussed the

available enzyme assays for various LSDs in IMR Malaysia and shared the data of positive cases reported by them to date.

It was an enlightening talk for all PSCP members present at the meeting as laboratories in Pakistan do not have the expertise in LSD screening and diagnosis to date. Dr. Julaina's talk initiated extensive discussion on challenges faced in testing for LSDs and provided an opportunity for all present to interact and discuss LSDs related issues with an expertise in this area.



Greetings from the new EFLM President

by Michael Neumaier EFLM President



Prof. Michael Neumaier

Dear Colleagues,

On behalf of the Executive Board and the office of EFLM, I take the opportunity to wish you all a successful year 2018. We have very much appreciated your input and encouragement in the projects that EFLM has pursued over the last couple of years. It is certainly remarkable, how EFLM has developed in the few years of its existence so far, and the signs are that it will continue to advance in the future.

I particularly mention this, as EFLM - with 40 Full Member National Societies the largest Regional Federation in IFCC - represents a challenging mix of concepts and strategies towards laboratory medicine be it in health care, in education and science. While we can perceive this heterogeneity as interesting and stimulating, it appears important to develop sustainable ideas of how we want our profession to be seen in these times of rapid technological changes, inter-connectedness, digitization and digitalization that are taking hold everywhere in medicine. Like

other medical disciplines, we can readily identify that an improved networking, professional harmonization and exchange as well as an efficient recruitment of young academics will be the major recipes for successful activities in order to master these challenges. Speaking of such, I like to draw your attention to the 2nd EFLM Strategic Conference entitled "The End of Laboratory Medicine as we know it? Handling disruption of Laboratory Medicine in Digital Health" to be held on 18 and 19 June 2018 in Mannheim, Germany. As Mannheim can be reached from Frankfurt airport by train within 35 minutes, you may consider attending the Strategic Conference and participating in the discussions. The program is finalized and will be available on the webpage shortly.

Finally, I wish to thank, on behalf of the Executive Board our fellow colleagues – currently more than 170 officers working in honorary capacities, who are enthusiastically engaged in the various task and working groups within the EFLM committees. Particular thanks go to the chairs who are doing a tremendous job, and it is encouraging to see an increasing interest of young members in participating in topics addressing various important laboratory medicine topics, often with the explicit support of their national societies. Also, members of the EB who have visited national meetings, regularly come back with the strong impression of an increasing interest in EFLM affairs. I therefore want to specifically encourage you to consider joining a EFLM group, where you find an issue that you might be interested in contributing to and supporting EFLM. Remember that you can ask your National Society to recommend you as a corresponding member to any Working Group (but only one corresponding member from each country)

Let me close with again by wishing you a successful year 2018 and a continued favourable development of EFLM to all of us.

Michael Neumaier EFLM President





EFLM Executive Board 2018-2019

Wishing the new EFLM board the best success for the incoming years



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The EFLM Board (2016-2017) at the annual meeting, together with the C-Chairs and with the newly elected members in Milan (IT), to exchange reports, ideas and plans (December 8-9, 2017).

Around the clock: M. Panteghini, G. Wieringa, M.S. Graziani, R Lichtinghagen, G. Sypniewska, W Huisman, M. Neumaier; H. Storm, J.T. Guimarães, A.M. Simundic, T. Zima, G. Lippi, S. Sandberg



Updates to the EFLM publication list

by Maria Stella Graziani

Chair of the EFLM Communication Committee

The EFLM Working Group on Biological Variation and the Task and Finish Group for the Biological Variation Database continue their fundamental efforts to make available to the international scientific community reliable data on Biological Variation (BV).

The Biological Variation Data Critical Appraisal Checklist: A Standard for Evaluating Studies on Biological Variation

Aarsand AK, Raas T, Fernandez-Calle P, Ricos C, Díaz-Garzón J, Jonker N, Perich C, González-Lao E, Carobene A, Minchinela J, Coŝkun A, Simón M, Álvarez V, Bartlett WA, Fernández-Fernández P, Boned B, Braga F, Corte Z, Aslan B, Sandberg S. on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine Working Group on Biological Variation and Task and Finish Group for the Biological Variation Database

Clin Chem. 2017 doi: 10.1373/clinchem.2017.281808.

BV data are essential in many aspects of Laboratory Medicine and are used for setting analytical performance specifications. Since concerns have been raised about the quality of BV estimates, the EFLM functional units on the topic decided to work to

address the issue. The aim of this paper is three-fold: to describe the Biological Variation Data Critical Appraisal Checklist (BIVAC), which verifies whether publications have included all essential elements that may impact the veracity of associated BV estimates; to use the BIVAC to critically appraise existing BV publications on enzymes, lipids, kidney, and diabetes-related measurands, and finally to apply metaanalysis to deliver a global within-subject BV estimate for some measurands. The conclusions of the paper are that application of BIVAC to BV publications identified deficiencies in study details and delivery, that impact the reliability of BV estimates. BV data from BIVAC-compliant studies can be combined to deliver robust global estimates for suitable clinical application. As an example, reliable BV data on ALT produced through a metaanalysis of many studies is presented. Results for other measurands will be made available soon in a new BV database linked to the EFLM website.

The list of the EFLM publications is available online on www.eflm.eu, under EFLM Publications, where the available papers can be downloaded.

News from the IFCC Website



eJIFCC Vol 28 n°4

eJIFCC Vol 28, n°4 is now available. The issue is the last under the Chairmanship of Prof. Gábor Kovács (HU).

The IFCC thanks Prof. Kovacs for the many accomplishments and for having brought the eJIFCC to a higher level. Congratulations and thank you, Prof Kovács!

eJIFCC Vol 28, n°4 is guest edited by Dr. Flavio F. Alcantara (BR), Chair of the IFCC Task Force on Chronic Kidney Disease (TF-CKD), and by Dr. Vanja Radišić Biljak (CR), member of the TF. The issue focuses on the laboratory diagnosis of chronic kidney diseases. The IFCC TF-CKD sheds light on several aspects of the field, from basic research to daily clinical practices, uniting many IFCC member countries working in different aspects of the laboratory in chronic kidney care.

Read more



News from Uruguay

The XI Uruguayan Congress of Clinical Biochemistry

by Stella Raymondo IFCC National Representative **Ana Piana**

eNews WG Member

The XI Uruguayan Congress of Clinical Biochemistry took place from 17-20 September 2017, at the Convention Center, Punta del Este, Maldonado, Uruguay.

The following IFCC visiting lecturers attended the meeting:

- Dr. Jean- Claude Forest (Canada)
- Dr. Tomris Ozben (Turkey)
- Dr. Sergio Bernardini (Italy)

Three courses were developed intra-congress:

- → "Comprehensive blood bank management system"
- "Mass spectrometry at clinical diagnosis"
- The study of hematological diseases"

There was also a pre-congress course:

The auspices of American Association for Clinical Chemistry (AACC).

A total of 500 participants registered. 109 speakers from Europe and America presented their topics.

The attendees came from 25 countries: Latin America: Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Spain, Guatemala, Mexico, Panama, Paraguay, Peru, Dominican Republic, Uruguay, Venezuela; Europe: Germany, Switzerland, England, Turkey, Czech Republic, Italy, and Norway and, last but not least, from North America: Canada and USA.

Fourteen symposia, nineteen round tables, and thirty-four conferences, were conducted. Meetings of IFCC and COLABIOCLI working groups were also held. It was a cordial meeting of colleagues in a friendly atmosphere.





Participants at the XI Uruguayan Congress of Clinical Biochemistry

IFCC PROFESSIONAL SCIENTIFIC EXCHANGE PROGRAMME (PSEP)





My experience in Padua, Italy

by Ledina Mino Albania

I was honored to receive the IFCC scholarship for a Professional Management Exchange Program (PMEP) and was able to spend one month (4 November -2 December 2017) in the University Hospital of Padua, Italy, in the Department of Laboratory Medicine, directed by Professor Mario Plebani.

The aim of my visit was to learn from their experience in laboratory management, management of the quality system in the laboratory and accreditation.

The Department of Laboratory Medicine in Padua is a big multidisciplinary laboratory that runs over 8 million tests per year and is accredited according to



L-R: Lorenzo Baccarin, Ledina Mino (PSEP), Flaviano Favaro

ISO 15189 standard. During my stay at the laboratory, I was under the supervision and guidance of Dr. Laura Sciacovelli, who was appointed Quality Manager of the Laboratory. She showed me the general organization of their laboratory, the workflows in each department, and I was able to visit most of them: preanalytics, clinical chemistry, electrophoresis, hematology, coagulation, immunology, molecular biology, emergency department etc. I spent

2-3 days in each department, studying their specific organization and workflow, the way they reported irregularities, the quality indicators they used, how they reported them and how they evaluated their outcome and performance based on the quality indicators specific to each department.

I was shown how they used different software and program interfaces in the lab, not only LIS with its specific rules for validation, but also other programs that helped a lot in laboratory management, such as the quality management program where quality indicators, irregularities and nonconformities were documented and analyzed statistically. This software allowed the management of laboratory pipettes, their control, calibration, and was currently being developed to include also management of the laboratory fridges and freezers in terms of temperature control and calibration. Another program was the one used in the preanalytics department which allowed tracing of samples being transported, their temperature and duration of transportation, and of curriers and laboratory staff that dealt with them.

During my stay I was able to see how they calibrated and controlled pipettes and how they documented the whole process. I was also shown the whole storing system (warehouse, fridges, freezers) and the different systems they used for temperature control and different levels of traceability for thermometers calibration.

Another very important topic that I had the opportunity to discuss and learn a lot about was quality control. I was able to understand how they participated in national and international external quality control programmes that included the major part of the tests run in the laboratory. I understood how they

evaluated and discussed the results of this schemes, and how they used the results to understand method performance compared to other laboratories, making EQAS schemes a continuous source of improvement. I learned some new concepts about the best way to perform internal quality controls according to their experience, by establishing the laboratory's own means and standard deviations, thus narrowing the limits of acceptable performance provided by the manufacturers and achieving better performance. I learned how to monitor alignment between identical and different instruments running the same tests and how to verify the traceability of a method as declared by the manufacturer.

During this period I also attended two conferences: "Food allergies and intolerances" and "New diagnostic strategies in autoimmune diseases", as well as a very important congress in Milan: "Measurement Uncertainty in medical laboratories: friend or foe?" organized by the Italian Centre for Metrological Traceability in Laboratory Medicine (CIRME), which completed perfectly this experience.

The time I spent in the Padua laboratory has definitely improved my approach towards quality management in laboratory medicine. I have learned new concepts and deepened and elaborated other topics that I was already aware of. After this experience, I am confident that I can give a valuable contribution in developing the field of Laboratory Quality Management in Albania.

Acknowledgements:

I am profoundly thankful to IFCC and Prof. Maurizio Ferrari for the opportunity they gave me through this scholarship. I want to thank especially the Director of



L-R: Dr. Giorgia Antonelli, Prof. Mario Plebani, Dr. Ledina Mino, Dr. Laura Sciacovelli and Dr. Andrea Padoan

the Padua Laboratory, Professor Mario Plebani, for hosting me in his excellent laboratory, enabling me to bring back home a wonderful experience to share with my colleagues, and also Dr. Laura Sciacovelli who despite her many commitments was always available, guiding me through this experience and through the path of laboratory quality management.

Thanks to all the doctors, biologists and laboratory technicians in Padua's Laboratory, who were so kind and willing to explain to me everything in relation to quality management: Dr. Daniela Bernardini, Dr. Elisa Piva, Dr. Daniela Basso, Dr. Diego Faggian, Ada Aita, Roberta Venturini, Sara Altinier, Flaviano Favaro, Ettore, Lorenzo, Adriano, Anita, Sabrina.

Special thanks go to Professor Anyla Bulo, the head of Albanian Society of Laboratory Medicine and Head of Tirana's University Hospital Laboratory for her everlasting support: none of this would have been possible without her support and recommendations.

News from the IFCC Website: Barcelona Congress website - Now Open!



We are happy to announce that the EuroMedLab Congress website is now open, with all the information needed to plan your attendance. Visit www.euromedlab2019barcelona.org to retrieve all the information you require. Mark your calendars with the dates: 19-23 May 2019 in beautiful Barcelona!

Read more

IFCC's Calendar of Congresses, Conferences & Events

Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses

and Regional Federations Congresses				
	Jul 2 - 4, 2018		1st IFCC, EFLM, AFCB Conference "Laboratory Medicine: Meeting the needs of Mediterranean Nations"	Rome, IT
	May 19 - 23, 2019	BARCELONA EUROMEDLAB 2019	IFCC - EFLM EuroMedLab 2019	Barcelona, ES
	May 24 - 28, 2020	SEOUL 2020	XXIV IFCC WorldLab - Seoul 2020	Seoul, KR
	May 16 - 20, 2021		XXIV IFCC - EFLM EUROMEDLAB - MUNICH 2021	Munich, DE
	May 21 - 25, 2023		XXV IFCC - EFLM WORLDLAB - EUROMEDLAB - ROME 2023	Rome, IT

Calendar of events with IFCC auspices					
Feb 8 - 9, 2018	International Congress on Quality in Laboratory Medicine	Helsinki, Fl			
Feb 28 - Mar 2, 2018	3rd Turkish in vitro Diagnostic (IVD) Symposium	Izmir, TR			
Mar 5 - 9, 2018	3rd Winter School of Cell Analysis in Immunology	Saint Etienne, FR			
Mar 15 - 17, 2018	College of Chemical Pathologists of Sri Lanka Annual Academic Sessions 2018	Colombo, LK			

Apr 18 - 21, 2018	The 10th International Palestinan Conference of Laboratory Medicine and the 15th Arab Conference of Clinical Biology	Ramallah, PS
May 9 - 12, 2018	2nd Congress of Romanian Association of Laboratory Medicine	Bucharest, RO
May 23 - 25, 2018	14th EFLM Symposium for Balkan Region	Belgrade, SRB
May 23 - 25, 2018	21st Serbian Congress of Medical Biochemistry and Laboratory Medicine with international participations	Belgrade, SRB
Jun 6 - 8, 2018	Focus 2018 - Annual Meeting of ACB	Manchester, UK
Jun 12 - 15, 2018	XXXVI Nordic Congress of Clinical Chemistry	Helsinki, Fl
Jun 18 - 19, 2018	2nd EFLM Strategic Conference "The end of Laboratory Medicine as we know it? Handling disruption of Laboratory Medicine in digital health"	Mannheim, DE
Jun 21 - 22, 2018	7th International Symposium on Critical Care Testing and Blood Gases	Antibes, FR
Jun 30 - Jul 3, 2018	International Society for Enzymology Conference	Naxos, GR
Jul 13 - 14, 2018	Turning Science Into Caring (TSIC)	Shanghai, CN
Sep 26 - 29, 2018	15th Annual Meeting of the German Society for Clinical Chemistry and Laboratory Medicine - The foundation for diagnosis and therapy	Mannheim, DE
Sep 30 - Oct 3, 2018	Santorini Conference "Systems medicine and personalised health & therapy" - "The odyssey from hope to practice".	Thira Santorini, GR
Oct 3 - 5, 2018	26th BCLF Meeting and 6th National Congress of MSMBLM	Skopje, MK

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Editor

Tahir Pillay, MB ChB, PhD, FRCPath (Lon), FCPath (SA) Department of Chemical Pathology University of Pretoria, South Africa E-mail: enews@ifcc.org

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