



OUR MISSION IS TO BE THE LEADING ORGANIZATION IN THE FIELD OF CLINICAL CHEMISTRY AND LABORATORY MEDICINE WORLDWIDE

eNewsletter



Editor: Edgard Delvin Ph.D
CHU Sainte-Justine
Centre de Recherche
3175 Côte-Ste-Catherine
Montréal, Québec
H3T 1C5, Canada
e-mail: edgard.delvin@recherche-ste-justine.gc.ca

November – December 2009 issue

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Editorial

IFCC SCIENTIFIC DIVISION

REVIEW OF ACTIVITIES AND FUTURE DIRECTIONS

Contributed by Prof. Ian S.Young, Vice-Chair, on behalf of IFCC SD



The Scientific Division (SD) of the IFCC aims to advance the science of Laboratory Medicine by identifying technical innovations and diagnostic strategies of relevance to Clinical Chemistry and Laboratory Medicine and assisting the transfer of these to the profession. In particular, the SD promotes the standardization of laboratory tests and the comparability of patient results through the development of reference measurement systems, or

harmonization activities where this is not possible at present. The overall purpose of this activity is to benefit clinical care and improve patient outcomes. The SD also seeks to respond to the scientific and technical needs of IFCC Member Societies, IFCC Corporate Members and external agencies, and participates actively in the scientific programs of IFCC congresses and other scientific meetings. An additional role is to establish standards for scientific and technical aspects of good laboratory practice.

The SD initiates and manages projects with its own resources or through its Committees (C) and Working Groups (WG). Work is conducted in cooperation with other IFCC units and increasingly with relevant National and International Organisations. Each of the C/WGs functions has clear terms of reference together with an agreed schedule of activity. The SD assists in the development of project proposals, maintains oversight of the work carried out by C/WGs, undertakes an annual review of progress and reviews and approves any documents that result from the work. In addition, the SD organizes scientific symposia at international conferences to promote its work and publicise important outcomes from the work of Cs and WGs.

SD committees are theme orientated, carrying out a range of projects in an area of particular importance to the laboratory medicine community. Working Groups are

task orientated, focussing on a single goal or closely related set of goals that can usually be achieved in a limited timescale. The SD currently coordinates the activities of eight Cs and fourteen WGs (for more details, see [IFCC web site](#))

Proposals for new C/WGs often originate from within the SD, but it is also possible for a new group to be proposed to the SD by any member of an IFCC affiliated organisation. The best initial approach is to discuss an idea with the SD Chair or one of the Members of the SD Executive, and then to prepare a formal proposal that will be considered at the next SD meeting. Current C/WG activities cover much of Laboratory Medicine, and it is only possible to review some of the most important issues here. Further details can be obtained on the SD web pages.

Committees and Working Groups of the Scientific Division:

The Committee on Nomenclature, Properties and Units (C-NPU) maintains a generic database of properties and units which can be accessed via the IFCC website. This is important for the development and maintenance of laboratory information systems and contributes to a common global language for Laboratory Medicine. The task of linking the NPU database to the SNOMED-CT electronic health record project is now under way. This will provide a systematically organized computer collection covering all [medical terminology](#), which can be used to underpin electronic organization of healthcare information.

The Committee on Molecular Diagnostics (C-MD) has this year focused on how reference methods for sequencing genetic material might be developed, and will shortly publish a proposal in this area in Clinical Chemistry and Laboratory Medicine (November 2009 issue). In addition, a further call will be circulated before the end of the year for applications from laboratories interested in joining the network of IFCC Expert Molecular Diagnostics Centres. C-MD continues to liaise with other international laboratory organizations and with regulatory authorities with an interest in development of standards, guidelines and reference materials for molecular diagnostic testing.

The Committee on Plasma Proteins (C-PP) is currently carrying out work on the development of new reference materials for specific plasma proteins, i.e. beta-2 microglobulin and ceruloplasmin, together with an analytical and clinical protocol evaluating the measurement of serum free light chains.

The Committee on Standardisation of Markers of Cardiac Damage (C-SMCD) (a joint initiative between the IFCC and the American Association for Clinical Chemistry) has a broad remit to produce analytical and clinical recommendations pertaining to standardization and evaluation of available biomarker assays. B-type natriuretic peptides are the main analytes of focus at present.

The Committee on Reference Systems of Enzymes (C-RSE) has successfully developed reference procedures for several commonly measured enzymes in recent years, which have had significant impact in reducing between-laboratory variability. At present, alkaline phosphatase and pancreatic lipase are the main areas of ongoing work.

The Committee on Reference Intervals and Decision Limits (C-RIDL) is making use of reference systems developed by C-RSE to establish common reference intervals for a range of enzymes, including GGT, AST and ALT, and is also working on recommendations for the determination of decision limits where they are indicated in preference to or in addition to reference intervals.

The Committee on Traceability in Laboratory Medicine (C-TLM) continues to organize IFCC External Quality Assessment Schemes for reference laboratories, an essential activity for maintaining a number of reference systems.

While the tasks of all of the WGs are important, the work of three in particular will be highlighted here. The WG on Standardization of Thyroid Function Tests (WG-STFT) has been particularly active, with proposals for standardization of free thyroid hormones at advanced stage and attention turning to TSH. The Working Group on Standardization of Albumin Assay in Urine (WH-SUA) is embarking on a series of projects to investigate all aspects of urinary album excretion, metabolism and analysis, including the development of a reference method and reference materials. A new Working Group on Allowable Errors for Traceable Results (WG-AETR) has just been established, and will define clinically acceptable limits for the traceability of results for specific analytes, which can be used as acceptance criteria in the harmonisation of laboratory results between different measuring systems.

As can be seen, the work of the SD stretches across the full remit of Clinical Chemistry and seeks to address the issues of greatest importance to the profession, laboratory users and patients. Members of the SD are always happy to discuss

ongoing or future projects with interested parties, and suggestions as to other areas that the SD might address in the future are welcome.



Members of the SD Executive in the photo are as follows: Front row – left to right: Paola Bramati (IFCC Office); Jean-Claude Forest; Naotaka Hamasaki; Mauro Panteghini (Chair); Gary Myers (Secretary); Heinz Schimmel; Graham Beastall (IFCC President) Back row – left to right: George Brotea; Philippe Gillery; David Bunk; Ian Young (Vice-Chair); Lothar Siekman

News from Regional Federations and National Associations Inauguration of the African Federation of Clinical Chemistry

Contributed by Prof. Vanessa Steenkamp, President South African Association of Clinical Biochemistry

The formation of an African Federation of Clinical Chemistry has been a project that the IFCC had wanted to initiate for a number of years. In July 2008, members of the Executive Board of the IFCC were invited to attend the Annual Pathology meeting held at the Cape Sun in Cape Town, South Africa. A workshop was arranged with the aim being to determine in which way the IFCC could help and contribute to education and training in the clinical chemistry field in Africa. The IFCC EB members who attended were the Immediate Past President Professor Jocelyn Hicks, Treasurer Ghassan Shannan, APFCB President Joseph Lopez and Daniel Mazziotta. National representatives from the Africa countries included Dr Angela Amayo of Kenya, Dr Mabel Charles-Davies of Nigeria and Professor Vanessa Steenkamp of South Africa.

During this workshop Professor Hicks discussed the role of the IFCC and the support available. The representatives of the African countries in turn described the state of clinical chemistry in their respective countries. This workshop started to put the concept of the African Federation of Clinical Chemistry in motion. The AFCC will

be a regional federation belonging to the IFCC, similar to the Arab Federation of Clinical Biology, the APFCB and COLABIOCLI. The aim of the AFCC will be to promote clinical chemistry in Africa. This will include academic exchange between African countries and other developed countries. African countries will also be provided with the opportunity to attend annual meetings, which is currently not the norm. The AFCC will strive to encourage accreditation and improve the quality of laboratory services in Africa. Other aspects of importance include the development of diagnostic guidelines for specific pathological conditions that are unique to Africa. It was noted that test areas that were important to the developing world included malaria, TB and HIV. Lifestyle diseases such as diabetes and cardiovascular diseases are increasing at an alarming rate and require attention. Also of importance are issues such as harmonization of curricula, continuing education programmes, distance learning and postgraduate education.

The inauguration of the African Federation of Clinical Chemistry was held in conjunction with the 5th Biennial Scientific Conference of the Association of Clinical Chemists of Nigeria, 25–28 October 2009, under the auspices of the IFCC. The conference venue was the University of Ibadan. The inaugural dinner took place on the 27th October and the first president of the AFCC was selected – Professor Vanessa Steenkamp. At present Kenya, Morocco, Nigeria, Rwanda, South Africa, Sudan and Tunisia are member societies of the AFCC. Presidents of the national societies of clinical chemistry of Nigeria (Professor Bashiru Okeshina), Kenya (Dr Angela Amayo) and South Africa (Professor Vanessa Steenkamp) attended the inauguration. IFCC Visiting lectureships were awarded to IFCC past-presidents Professor Jocelyn Hicks and Dr Donald Young. They were invited as plenary speakers and were the recipients of awards in recognition of their contributions to the field of clinical chemistry. The theme of the conference was non-communicable diseases and scientific sessions include Lifestyle and disease; Diseases Associated with Ageing and The Environment and Disease.

A hands-on pre-conference workshop in molecular biology was also held. The IFCC delegation visited the clinical chemistry laboratories at the hospitals of the Universities of Ibadan and Lagos. The visit provided us the opportunity to see firsthand the enormous challenges that are faced in Africa and allowed us to identify the key areas requiring immediate attention.

(This report was forwarded by Joseph Lopez)



From L to R: Angela Amayo, Vanessa Steenkamp, Bashiru Okeshina, Jocelyn Hicks, Mabel Charles-Davies



From L to R: Josephine Onakoya, Mabel Charles-Davies, Donald Young, Bashiru Okeshina, Jocelyn Hicks and Vanessa Steenkamp in the inaugural shirts.

ARAB MEDLAB CONFERENCE – Beirut Lebanon – October 1–3 2009

Contributed by Ms Samar Sadeddin, Laboratory Directorate, Ministry of Health, Amman, Jordan



Different topics were covered during the Arab MedLab Conference, including clinical chemistry, microbiology, immunology, hematology, transfusion science, molecular biology, and quality assurance. Although numerous lectures were presented in French, simultaneous translation was available for all lectures (French«English). Most of the lectures focused on laboratory diagnosis and new added values in laboratory science. Some examples of presentations follow.

Dr. Corinne Liesnard, the 1st lecturer in the field of virology presented on the influenza epidemics & pandemics. She also presented on CMV, HIV, RUBELLA, HSV, VZV Varicella zoster and hepatitis B prenatal congenital viral infections that have dangerous and even fatal sequels on the fetus. The 2nd lecture was on the origin of HIV, history& cross species transmission.

Dr. Hector Rodriguez highlighted the importance of testing for the presence of ESBL enzymes (>35 different enzymes) amongst all Enterobacteriaceae and emphasizing the role of the laboratory in reporting these enzymes. He also introduced the Carbapenem resistance that is a worldwide growing problem, which can be solved only with the aid of competent laboratories that have well developed quality control programs.

Dr. Madonna Matar emphasized the role of the medical laboratory by presenting a study which objective was to assess the clinical findings of patients with Brucellosis. Bone marrow culture was the most sensitive and specific diagnostic tool. Surprisingly, a case for a woman with joint aches, with no other clinical presentation relevant to brucellosis, showed positive culture for Brucella when her synovial fluid was cultured, although her other results were negative.

A group of Sudanese scientists reported a study on the role of HLA Class II antigens in the protection/susceptibility to visceral Leishmaniasis, a problem in Sudan, affecting young people. They used PCR–SBT sequencing as the typing technique for the HLA–Class II alleles, a technique considered non–conventional for such testing.

In the clinical chemistry field, Dr.Peter Bialk discussed the merits of the new high sensitive Troponin T assay by Roche, an important marker for myocardial infarction

that, through its apparent sensitivity and specificity, could be an added value as a marker for myocardial infarct and replace other frequently ordered tests such as CK and CK-MB.

Dr. Mohamed Zakaria also presented an interesting lecture on asymmetric dimethylarginine (ADMA), an upcoming marker for cardiovascular disease that has proven its utility in a research context but that has not yet translated into a diagnostic test. The use of oxidative stress markers in the elucidation of the pathophysiology of many diseases has also been covered in more than one lecture.

In the second day of the conference, most of lectures concentrated on genetics and molecular biology topics. Different genetic diseases (common & rare) e.g. G6PD deficiency, PKU, FMF, Thalassemia, cystic fibrosis, all proven to be present in the Lebanese and Middle-East population. Once more, the speakers underlined that an efficient support laboratory to the diagnosis coupled to genetic advices could lead to reduction of budgets through a decrease in morbidity caused by these diseases. Prof. Jean-Francois Schved made an excellent historical review of different diseases that affected the talents and the professional lives of scientists, painters and artists.

In terms of general interest, several well-attended lectures focused on the importance of implementing quality assurance programs in medical laboratories. The experience of applying the criteria of ISO 15189 in laboratories of the Ministry of Health in Lebanon was given.

The conference also counted on several workshops, some industry-sponsored, on diverse technologies such as flow cytometry, new chemistry auto-analyzer and diagnostic value of bone markers, new trends in diagnosing Hepatitis C by testing for the HCV antigens.

The many industrial exhibits were well attended and allowed to see the new technology in the various fields of laboratory medicine.

Edited by Edgard Delvin PhD, FCACB, FACB, Editor

SNPpets – short news spliced from the APFCB region

Contributed by Joseph Lopez, President, APFCB



12th APCCB Preparations

With less than 12 months to go before the 12th Asian-Pacific Congress of Clinical Biochemistry, Chris Lam, the APFCB Immediate Past President and I visited Seoul in early November to observe preparations. We were treated to an excellent briefing and much more by our Korean colleagues who appeared to be well advanced in their organisation of this congress. The wide-ranging scientific programme is almost complete. It will have 5 plenary speakers, two of whom will be from the APFCB region, two from Korea and one from Europe (details are given in the invitation letter from Professor WK Min, the Chairman of the Organising Committee). The APFCB will have a scientific presence by way of one of the plenary speakers and at least one society-sponsored symposium. The congress will be held at the COEX in Seoul, a huge convention centre with an underground shopping mall, a subway station and a 5-star hotel attached to it. Support from the diagnostics industry has been encouraging with participation from most of the big names and many local companies. About 18 scholarships are expected to be offered for young scientists by the APFCB, the IFCC and the congress itself.

As ever, the APFCB Council will hold its triennial meeting at the congress, as will other APFCB and IFCC business meetings. APFCB member societies are urged to support this congress among their individual members. Look out for details in <http://www.apccb2010.org>. From what I have seen, this congress should be a very good one.

Reference Intervals Meeting, Osaka

Professor Kiyoshi's reference intervals project, in which the APFCB is a partner, is perhaps only one of its kind in the world. The current study, which is the third in the series, has attracted much attention from outside the region. A meeting entitled "International Symposium on Joint Determination of Reference Intervals and Data Analysis for Evidence-Based Laboratory Medicine" was held in Osaka, Japan, on 25 September to discuss the results of the 3rd Asian Project on Reference Intervals. Samples were collected from a total of 3540 healthy individuals. Of these, 1456 subjects were from 9 cities outside Japan (Seoul, Beijing, Taipei, Tainan, Hong Kong,

Macau, Kuala Lumpur, Ho Chi Minh City and Jakarta), and, 2084 were from 12 areas within Japan.

Representatives from participating laboratories and from Beckman Coulter Japan and BD Diagnostics, both of which provided support for the project, attended the meeting. Professor Ichihara, representatives from participating laboratories in Japan, China, Taiwan, Hong Kong and Professor Kano made the presentations. I was honoured to be invited to present the keynote entitled “Perspectives on Common reference Intervals”. At the time of writing, data analysis is nearing completion. Expect a slew of publications next year.

An expanded version of this study is planned for 2010. It is expected to cover a wider geographical area and involve more subjects.

Lab Automation Conference, Kuala Lumpur

The AACC is known for the speciality meetings that it organizes within and outside the United States. The AACC-APFCB-M (Malaysian) ACB Laboratory Automation conference was held in Kuala Lumpur on 22 and 23 October. Of the six speakers, 3 were from the APFCB region, viz. Dr Leslie Burnett of Australia, Dr Sunil Sethi of Singapore and Dr John Hwan-Sub Lim from Korea while the remaining three were Americans, among who were including James Nichols and Charles Hawker. The meetings had 6 sponsors: Abbott, Beckman Coulter, Ortho-clinical Diagnostics, Sysmex, Siemens and Techo Medica (Japan). There were more than 155 participants who came from within and outside our region, including unlikely places like Nigeria and Greece. This is the first time that the APFCB has co-hosted a specialty meeting. We hope that it will not be the last.

CSLM is 30 year old

The Chinese Society of Laboratory Medicine (CSLM) celebrated its 30th anniversary in Beijing from 5-7 Nov 2009 with much fanfare. Chris Lam and I represented the APFCB at this event. Foreign speakers included the Presidents of the IFCC and AACC, Drs Graham Beastall and Barbara Goldsmith. Others from abroad included Professors Vic Blaton of Belgium, Nader Rifai, Gerard Siest and Mauro Panteghini who concluded his IFCC Visiting Lectureship to the APFCB region at this meeting. I had the pleasure of presenting the CSLM President, Dr Shang Hong, with a pewter plaque at the Opening. This enjoyable event, *inter alia*, showcased the performing talents of the CSLM's own members, both young and old. The Chinese version of LabTests Online was launched at the event.

PAMET – the newest IFCC member

One of our newest members, the Philippines Association of Medical Technologists Inc. (PAMET) was elected as the 83rd member of the IFCC in November this year. With its election, 15 of the APFCB's 16 members are now IFCC members.

PAMET is one of the APFCB newest members. It has an estimated membership of 10,000, with foreign chapters (branches) in the USA, Saudi Arabia and Singapore. This makes it one of the largest national societies of the APFCB.

I was privileged to attend its 45th annual convention that was held from 25th to 27th November, at the grand 97-year old Manila Hotel, the oldest 5-star hotel in the Philippines (there is even a book on its history, on sale at the hotel). About 2700 participants attended the convention including members from PAMET's overseas chapters. Pre-congress workshops were held on the 25th and the Opening ceremony on the morning of the 26th. It was a grand affair complete with a choir and ladies formally dressed in long evening gowns. One of the local newspapers carried a full-page newspaper advertisement on the convention, with messages from national leaders including the country's President. The meeting was well supported by the local diagnostics industry. The social event that I attended was a delightful night to remember.

APFCB Publications

Any good scientific work should always end in a publication. Since the APFCB's regional projects were launched a few years ago, it has been our aim that these should end in publications in reputed scientific journals. To date, the APFCB has had three publications:

1. Ichihara K, Itoh Y, Lam CWK, Poon PMK, Kim J-H, Kyono H, Chandrawening N, Muliaty D and the Science Committee for the Asian-Pacific Federation of Clinical Biochemistry. Sources of variation of commonly measured serum analytes in 6 Asian cities and consideration of common reference intervals. Clin Chem 2008; 54: 356-65.
2. Shiesh S-C, Hsiao-Mei Wiedmeyer, Kao Jau-Tsuen, Vasikaran SD, Lopez JB and the Laboratory Management Committee for the Asian-Pacific Federation of Clinical Biochemistry. Proficiency Testing of HbA1c: A 4-year experience in Asian and Pacific Region. Clin Chem 2009; 55: 1876-80.

3. Vasikaran SD, Lai LC, Sethi S, Lopez JB, Sikaris KA. Quality of interpretative commenting on common clinical chemistry results in the Asia-Pacific region. Clin Chem Lab Med 2009; 47: 963–70.

Expect more in the future!

Ninth Congress of the Columbian National College of Bacteriologists (Clinical Chemists)

Contributed Dr Andreas Rothstein



Left: Andreas Rothstein Middle: Ana Leticia Caceres de Mazzelli, actual President of COLABIOCLI, Right: Dr. Karen Morris, a member of the Colombian Federation (Colegio Nacional de Bacteriología)

The 9th Colombian Congress of the National College of Bacteriologists (Clinical Chemists) of Colombia was held between October 10–13, 2008, at the Lucy Tejada Convention Centre and the Hotel of Pereira. Eight international speakers and 1500 attendees were present at the meeting, as well as the diagnostics and pharmaceutical companies that occupied the 36 stands available.

The Congress was organized by the National College of Bacteriologists (Clinical Chemists) of Colombia. Many workshops took place prior to the meeting and covered a variety of subjects such as Chain of Custody, Environmental Management in the Clinical Laboratory, Identification of Blood Cells, Importance of the Quality of Water on the Quality of Analysis, Management of the Adverse Event and Patient Safety; and the use of Control Strains on the Quality in Microbiology.

Israel Alberto Londoño Londoño, Mayor of Pereira, gave the welcoming speech to the audience and underlined the importance of the clinical laboratories to the development of the Country healthcare system, and to the enhancement of the health of the Colombian population in general and especially for that of his region. The president of the CNB-Colombia, gave a summary of all the activities held during the year that was finishing. During the opening ceremony, the President also presented the yearly Awards to the Professionals and Institutions, who distinguished themselves for their long-life commitment to the Columbian Clinical Laboratories. This year Dr. Andreas Rothstein, Dr. Marino Vargas, Dr. Luz Marina Palacio Duque and the University of Antioquia received he awards.

Each day, the 3-day Meeting started with a one-hour plenary session that was followed by simultaneous morning and afternoon symposia. The symposia covered topics such as Biotechnology, HIV/AIDS, Professional Development, Biochemistry, Quality, Risk Markers, Reproductive Medicine, and Industrial and Food Microbiology, among others.

The Minister of Environmental Matters of Colombia gave the talk of the 1st day plenary session on Environment. The meeting was then divided into three morning symposia: Immunology, Environmental Impact and Health Management, followed by afternoon symposia on Hematology, Microbiology and Quality. Of particular importance were the lectures about “Immune Response in Toxoplasmosis”, External Evaluation of Quality”, The Validity of Adenosine Deaminase (ADA) in comparison to culture for the early detection of non-pulmonary tuberculosis”.

The 2nd day plenary lecture, given by Dr. Baruch Rivetz, was entitled “New Tendencies in the Early Detection of HIV. Symposia on: the preservation of the human egg” and the “Metabolic Syndrome”, merit mention and were greatly appreciated by the audience.

Dr. Ana Leticia de Masselli, President of Colabiocli, gave the 3rd day plenary lecture on the “Evaluation of Indicators to Implement a Management Quality System” that was highly valued by the audience. Later lectures on “D-Dimer, from Laboratory to Practice” and the Presentation of the Law 1193, that complements the actual Law for the practice in the Clinical Laboratory, were of paramount importance for the audience.

The “becerrada”, in which amateur bullfighters had the opportunity of showing their aptitudes in the arena in challenging young heifers, and a trip to the mountains to enjoy thermal waters and the marvelous landscape offered by the Coffee Region of Colombia, were the focal point of the social program.

In summary, the Meeting met the expectations of the attendees who are now eagerly looking forward to the next Congress, which will be held next year in Bogotá.

Edited by Edgard Delvin PhD, FCACB, FACB; Editor

International Conferences of POCT Paraguayan Biochemistry Association and VLP (EMD,IFCC) Crowne Plaza Hotel, Asunción September 1–3, Asunción – Paraguay

Contributed by Prof. Dra. M. G. Montserrat Blanes. President Paraguayan Biochemistry Association. Chair WG IANT, Editor RIA. Editor DIV (CPD,IFCC)



In the front row from left to right: Profs. Khosrow Adeli, Ellis Jacobs, Christopher Price and Prof. Dra Mantserrat Blanes. In the 2nd row of the far right Dra Stella Raymondo, Uruguay National Representative of IFCC.

The International Conference of POCT, held under the auspices of IFCC, was co-sponsored by the National University of Asunción: Faculty of Chemical Sciences, the Faculty of Medical Sciences, the Institute of Health Sciences Research, the Maternal and Children's Center and Hospitals of Clínic. The Children's Hospital "Heroes de Acosta Nú", the Ministry of Public Health and Social Welfare, the Institute of Tropical Medicine, the Central Laboratory of Public Health National Hospital of Itaguá and the Centre of Medical Emergencies



An opinion survey, that had to be filled to receive the attendance certificates, revealed that the 140 participants unanimously qualified the event as excellent. The keynote lecturers were Dr. Ellis Jacobs, Dr Khosrow Adeli and Dr. Christopher Price.

Dr Jacobs spoke on the International Regulations and Accreditation Requirements for POCT, and on the Implementation & Management of POCT. Quality Systems: Approach to POCT Quality Control & Quality Assurance).

Dr. Khosrow Adeli discussed the following topics: POCT in the Paediatric Setting, POCT in Coagulation and Perfusion and future of POCT: Real time Patient Monitoring using Biosensors.

Dr. Christopher Price addressed the subjects of Evidence Based Medicine & POCT, POCT in Diabetes Management and POCT in Critical Care & Emergency Medicine.

On the occasion of a post-meeting event held at the San Lorenzo campus of the Faculty of Chemical Sciences of the National University of Asunción, Dr. Ellis Jacobs presented a 2-hour lecture on Implementation & Management of POCT. Thanks to a widespread advertisement by the Dean's Office and the Academic and University Extension Departments, the Dean, the Faculty academic officers and 300 students attended this session. As a result, the Academic Direction and the Area Coordination proposed the inclusion of POCT in the curriculum of Clinical Biochemistry.

The contribution of Index SACI and of Abbott Diagnostics was invaluable in the development and the advertising of this event.

I would also like to express my deepest gratitude to the IFCC Educational and Management Division and the Visitor Lecturer Program for supporting us in highly prized meeting that had positive repercussions on our practice in Clinical Biochemistry.

Edited by Edgard Delvin PhD, FCACB, FACB, Editor

THE 5th EFCC SYMPOSIUM FOR BALKAN REGION

Contributed by Prof. Dr. Nada Majkić-Singh, President of the Society of Medical Biochemists of Serbia

The Society of Medical Biochemists of Serbia and the Institute of Medical Biochemistry of the Clinical Centre of Serbia jointly organized the Fifth EFCC Symposium for the Balkan Region entitled "*Proteins: from electrophoresis to proteomics*" in Belgrade, from October 8–19, 2009. The Symposium was organized under the auspices of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), European Federation of Clinical Chemistry and Laboratory Medicine (EFCC) and the Balkan Clinical Laboratory Federation (BCLF), as well as under the Ministry of Science of the Republic of Serbia. The Society, as the member of IFCC and EFCC, greatly appreciates the role it has in the continuing development of our discipline according to the IFCC mission and the Strategic plan. The symposium coordinators were Prof. Dr Nada Majkić-Singh, Chair of the Meeting, and Professor Victor Blaton, EFCC Past President.

The idea of this EFCC Symposium was to show how the continuum of different electrophoretic techniques for protein profiling can contribute to proteomics by allowing the detection and measurement of a wide array of proteins, and the definition of their structures and functions.

The proteome is defined as the entire array of proteins, including their post-translational modifications, produced by an organism or system. Thus the proteome will vary with time and physiological or pathological events, or stresses, that a cell or organism undergoes. Proteome analysis is emerging as a potentially powerful tool to decipher pathophysiological processes, resulting in the establishment of the

field of clinical proteomics. One of the main goals of clinical proteomics is to discover biomarkers for diseases in biological fluids and tissues. The complexity of the proteome requires a separation step by different electrophoretic techniques before the analysis by mass spectrometry.

The 1st part of the 5th Symposium covered the clinical utility of serum protein electrophoresis (Xavier Bossuyt, Belgium), agarose gel electrophoresis and capillary electrophoresis in clinical chemistry (Jean-Francois Giot, France), the use of lab-on-chip electrophoresis and other methods in protein profiling (Olgica Trenčevska, Macedonia), MADGE-Microplate array diagonal gel electrophoresis (Sanja Stanković, Serbia), isoelectrofocusing and PCR amplification-reverse hybridization assay in evaluation of alfa-1-antitrypsin deficiency (Anđelo Beletić, Serbia) and application of proteomics techniques in biomarker discovery (Antonia Vlahou, Greece).

The 2nd part of Symposium covered the urinary proteome analysis using capillary electrophoresis coupled to mass spectrometry as a powerful tool in clinical diagnosis, prognosis and therapy evaluation (Harald Mischak, Germany), glucocorticoid receptors in health and disease (Gordana Matić, Serbia) and molecular diagnosis of phenylketonuria: from detective protein to disease-causing gene mutation (Sonja Pavlović, Serbia).

The following lectures covered experiences in clinical protein arrays: biochip cardiac array technology (Grazyna Sypniewska, Poland), cytokine and growth factor array (Hans J. van Pelt, The Netherlands), colorectal cancer array - simultaneous analysis of DNA alternations with biochip array technology (Andrew Cartwright, UK) and multiparameter testing of colorectal cancer (Bernhard Risse). Jim Thorn (United Kingdom) presented the use of the Analis CDT assay for screening for alcohol abuse.

The organization of the 5th EFCC Symposium for Balkan Region was the result of work and effort of coordinators and of the Organizational Committees. More than 300 participants from Serbia and Balkan countries participated actively in the Symposium. During the Symposium a permanent exhibition of equipment and reagents organized by different companies has been display.

All lectures are published in Journal of Medical Biochemistry 2009; 28: 221–326 (www.versita.com) the National Journal of the Society of Medical Biochemists of Serbia.



Lecturers of the 5th Symposium for Balkan Region (From left to right): Anđelo Beletić, Olgica Trenčevska, Sanja Stanković, Nada Majkić-Singh, Antonia Vlahou, Victor Blaton, Andrew Cartwright, Svetlana Ignjatović, Jim Thorn, Xavier Bossuyt

4th International Conference On Quality

Contributed by Rosa I. Sierra-Amor, PhD, National Representative IFCC, Mexican Association of Clinical Biochemistry.



On July 15th, 2009, the 4th International Conference on Quality was transmitted by Internet from the IMSS Medical Center Auditorium “Century XXI” in Mexico City, to 9 sites in Latin America and to 12 provinces in Mexico. In total, there were 1.604 attendees, health professionals in medical laboratory and blood bank specialists.

This event, as in the past, was held under the IFCC auspices, and the Mexican Association of Clinical Biochemistry, the Mexican Federation of Clinical Pathologists, and the Mexican College of Clinical Chemists. The IFCC National Societies from Chile,

Ecuador, Colombia, Peru and Uruguay also gave their auspices to this event, The support and collaboration of BIO-RAD representatives from the above listed countries helped to have a full program put in place.

Dr Graham Beatal, President IFCC sent his welcome message to the audience by video clip from London, UK. His message highlighted the conference by allowing all participants to meet him as the representative of the IFCC Board and membership. This was possible with the help of BIO-RAD UK and BIO-RAD Mexico/Latin America.

M. Octavio Zendejas, BIO-RAD Latin America director, opened the conference wishing everyone a very successful event and declared that this virtual meeting would definitely increase the knowledge and understanding of quality concepts, not just in one country but region-wise with a common aim of improving patient care.

This year, the speakers very well recognized experts in quality matters, were Luis Rene Garza, MD, Clinical Director, Laboratorios Moreira, Monterrey, NL, Mexico, who first spoke about "Quality, today's reality in the clinical laboratory in Latin America"; immediately after, Greg Cooper, PhD, Manager of Clinical Standards and Practices, Bio-Rad Laboratories, US spoke about "An introduction to Risk assessment in the laboratory"; an expert from the academic field, Dr Curtis Parvin, PhD, Clinical Research Associate Professor of Pathology and Immunology. Division of Biostatistics. Washington University School of Medicine, St Louis MO US, spoke about "QC Strategies in the era of laboratory automation" and finally, Gianni Tamburini, PhD, from Italy, and Manager of Quality Control Division, Clinical Diagnostic Europe, Bio-Rad Laboratories spoke about "the quality control in blood bank".

We are looking forward to meeting the experts next year on another successful quality party!

**News from the Canadian Society for Clinical Chemists
Clinical Laboratory Accreditation by Accreditation Canada
The First Two Years of the Programme From a Personal Perspective
Part One: Background and the Present Situation**

Contributed by Dr. Maurice Dupras. Translated by Dr. Mary-Ann Kallai-Sanfaçon Editor-in-Chief, CSCC News, First published in the CSCC Newsletter

In 2005 the Quebec Ministry of Health and Social Services sent a directive to all public institutions stating that before the end of 2008, all clinical laboratories would have to become accredited by an internationally recognized body. The accreditation in question would have to conform to standards based on the international standards ISO 15189 as well as the standard CSA Z-902 developed for blood bank services and approved by the Ministry. After a tendering process, the Ministry approved the accreditation programme jointly developed by Accreditation Canada formerly known as CCACC (Canadian Council of Accreditation of Health Services) and CSA (Canadian Standards Association). Accreditation Canada already had the necessary infrastructure and experience concerning the logistics of accreditation visits, that is: the training of visitors, a communication network with the establishments it serves, the deployment of teams in the field, results evaluation templates etc, while the CSA provides expertise in the development and adaptation of standards.

In order to comply with the Ministry, visitors were to be recruited from clinical laboratory professionals (scientists, laboratory physicians, technologists). The Ministry was also adamant that clinical laboratory visits be carried out in parallel (simultaneously, if possible) to accreditation visits of the entire establishment. This was, at least, the initial plan and it would have required major changes because the present programme is not a programme for the accreditation of clinical laboratories, contrary to current belief. Rather, it is a programme to evaluate health care facilities in which clinical laboratories are also visited and the clinical laboratory only contributes 10 to 15% to the overall grade of the hospital or perhaps a bit more due to the weighting of certain criteria.

The importance of the clinical laboratory should be emphasized because until now, a visit of this department only represented a tiny part of the visitors' activities. It is thus inaccurate to speak of "laboratory accreditation" and this has consequences that cannot be ignored. In the first place, laboratory professionals who have been misled in believing that this accreditation would lead to an ISO 15189 accreditation have been disappointed. Secondly, and more importantly, the impact of an unsatisfactory laboratory visit is attenuated by the fact that it is buried in the overall evaluation of the institute visited whether multi-site or not. The tragedy is that

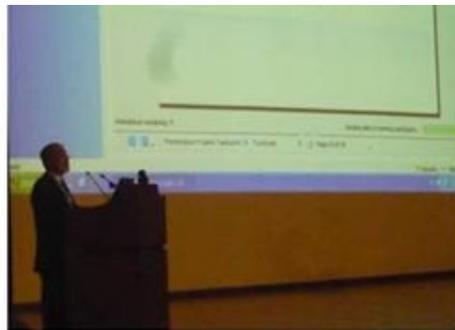
administrators of these centres thus have little incentive to allocate funds to improve quality assurance in the laboratory.

This being Quebec, there has to be an intra-provincial/provincial/national conflict in the mix. The Conseil québécois d'agrément (CQA) a uniquely Quebec body and a competitor of Accreditation Canada (despite the fact that they have essentially the same goals) has also been given the authorization by the Ministry to accredit public health care facilities. Furthermore, because the CQA does not have the expertise to evaluate clinical laboratories, it has signed an agreement with the Bureau des normes du Québec (BNQ), which is accredited for the evaluation of numerous standards including those of quality assurance, for example ISO 9000 and its derivatives (ie. ISO15189). This is not the end of it. The CQA subsequently entered into a partnership agreement with Accreditation Canada for the accreditation of all the CSSSs (Centres de santé et services sociaux) of Quebec. These establishments (CSSS) are local entities that unify under the 2 same administration all the public health care and social services facilities of a particular district: acute health care (hospital centres), community health services (CLSCs and/or clinics) long term care facilities etc. In theory, this agreement should have put an end to national/provincial competition. However, the contract with BNQ for the clinical laboratories has not been cancelled; laboratories in an institution that has asked for a "Quebec" accreditation visit by the CQA are visited by the BNQ. What this means is that at the present time there are two different criteria and two different groups of visitors. This should end shortly at the conclusion of ongoing negotiations between Accreditation Canada and the BNQ.

In principle both Accreditation Canada and the BNQ use the same Ministry-approved evaluation criteria. It is therefore curious that they do not approach a laboratory visit in the same way. Accreditation Canada is more interested in verifying that the necessary policies, processes and procedures are in place and that the practice corresponds with the written SOPs without necessarily looking at the content of those procedures. The BNQ, on the other hand, is more interested in judging the content of procedures in order to ensure that that the directives of the professional orders are respected. How the evaluation of a laboratory by the BNQ (never done at the same time as a general visit by Accreditation Canada) will fit in with the global evaluation of a CSSS and what will be the consequences of an unsatisfactory evaluation of a clinical laboratory is far from clear.

If this is not confusing enough, it seems that the BNQ will continue to be in the picture. They can grant an official ISO 15189 accreditation to a hospital laboratory or a part of a laboratory and they have no intention of giving up this activity. In contrast, at least for the time being, Accreditation Canada cannot. There is a single hospital laboratory in the public sector that is trying to be accredited ISO but who knows how this project will evolve. I certainly don't have a clue.

Accreditation Canada also offers to inspect laboratories in provinces other than Quebec who wish to be accredited and who don't have their own provincial programme. Up until now the Atlantic Provinces have been evaluated often on a voluntary basis. Similarly to Quebec, the visit and evaluation of the clinical laboratories is only part of the overall evaluation of the particular regional establishment visited. Accreditation Canada also has foreign health care institutions as its clients, in particular in the Middle East, the Carribean, Italy and South America. Therefore an accreditation visit of the clinical laboratory is within the realm of possibility and in fact I had the opportunity to participate in such a visit in Saudi Arabia. I gained some valuable lessons from this visit and I will share my experiences in part two of my article in the next issue of CSCC News.



Speakers, organizers and participants of the 4th International Conference on Quality, Greg Cooper, Gianni Tamburini, Hugo Baez, Luis Rene Garza, Rosa I. Sierra-Amor, and Curtis Parvin at the Auditorium Century XXI of IMSS Medical Center in Mexico City last July 15th, 2009.

News from the Canadian Society for Clinical Chemists

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IFCC Roche Travel Scholarship Reports

The IFCC Professional Scientific Exchange Programme (PSEP)

Ta Thi Thu Thuy, PhD. Department of Biotechnology, Hanoi Open University, Vietnam

I am currently working as a lecturer at Department of Biotechnology, Hanoi Open University, Vietnam. I was honoured to be awarded a PSEP Scholarship supported by IFCC.

It gave me the opportunity to work and study at the Department of Biological and Chemical Engineering – Science and Technology Centre at Tufts University. I had a

chance to participate to an antibiotic production and to a pharmaceutical engineering project, both in which I am very interested.

My research involved:

- The production of an antibiotic through chromosomal engineering, including recombinant DNA of polyketide and deoxysugar gene cluster from bacteria.
- The production of a sugar pathway–plasmid test with a polyketide core that involved research on deoxysugars that are crucial moieties in the structure of many antibiotics.
- The production of hybrid antibiotics by generating recombinant plasmid DNA to aid heterologous transfer and gene expression.

I was invited to join my colleagues for journal clubs, research presentations and lectures. During my entire stay, I benefited from the guidance of professor Blain Pfeifer from fruitful exchanges with the researchers who are experts in this field. This environment allowed me to improve my knowledge in the field of pharmaceutical engineering and gain hand-on experience that will be extremely valuable in my future research and teaching in Vietnam.

My sojourn also created the opportunity of collaboration for future research projects between the Department of Biotechnology of Hanoi Open University and the host Department in Tufts University. In addition, I had the chance to discover Boston, a 200 year-old hospitable and peaceful city, filled with history. Not only is the City famous for its sightseeing, but also with a center of many top-rank world renowned Universities like Harvard, MIT, Boston and Tufts.

Finally, I would like to express my deep gratitude and sincere thanks to Past President Prof. Jocelyn M. Hicks, who kindly and generously encouraged me in applying for the fellowship. My sincere thanks also go to the present IFCC President, Dr. Graham Beastall, for the support of fellowship (PSEP) and to Ms Lisa Ionescu, Administrator of IFCC Head Office, for her help with the application process.

I would finally like to thank Prof. Dr. Blain Pfeifer for his guidance and my colleagues for their help and encouragement throughout my visit at the Department of Biological and Chemical engineering – Science and Technology Center.

Edited by Edgard Delvin PhD, FCACB, FACB, Editor

Dr. Michal Vostry, Department of Clinical Biochemistry & Hematology, Charles University Medical Faculty, Pilsen Czech Republic



I am a PhD student at the Department of Clinical Biochemistry and Hematology of the Charles University Medical Faculty in Pilsen, Czech Republic. Being awarded the IFCC PSEP scholarship, I have had the great experience of spending three months at the Clinical Chemistry Department of Charles Foix Hospital in Paris, France.

I was given the opportunity to operate a freshly acquired multiplex analyzer using the Luminex's xMAP bead technology (Bio-Plex 200 system from Bio-Rad). It is capable to detect any substance whose capture molecule can be fixed to the solid support, i.e. polystyrene microspheres. The assay allows antigens, antibodies, nucleic acids, enzymes or receptors to act as the target structures and the unique internal fluorescent labelling of the beads enables a simultaneous determination of up to 100 analytes.

After exploring the theory of the underlying technology and multiplexing strategies in general, I started working with this powerful instrument. I have performed all the procedures required for the measurement, including assay protocol preparation, microplate processing, and data acquisition and analysis. We experimented with various means to construct the standard curves, visualize and export the results, and we also checked the analytical performance of the method. Some of our observations were presented at the Corata-IBS Immunoanalysis conference in Marne-la-Vallée.

An additional aspect of my stay was getting to know a different system of laboratory routine. As the Charles Foix Hospital is dedicated to geriatrics, I have been trained in clinical biochemistry of elderly patients. I spent a couple of days in the Hospital Pharmacy and have been introduced to the principles of medication supply and individual dosing system. I also assisted the cytostatics preparation. Finally, I had the honour to attend the ceremony of laying the first stone of a new research centre (Institute of Longevity). The head of the department, Professor Jean-Louis Beaudeau, was so kind as to arrange two short visits in other hospitals. I have seen

the newly equipped laboratory in one of the largest European hospitals (Pitié-Salpêtrière). In the same hospital, I have also visited a laboratory division of local pharmacy specialized in therapeutic drug monitoring. The second visit took place in a highly modern facility named Georges Pompidou European Hospital. There I was astonished by an elegant organization of laboratory workplaces and an efficient system of intra-hospital and intra-laboratory sample transport.

I have spent a wonderful time in the charming city of Paris. I met a lot of kind colleagues and will never forget this professionally, personally and linguistically beneficial experience.

I deeply appreciate having been accepted for PSEP and I gratefully thank IFCC and its President Dr. Graham Beastall for the support. I would also like to express my gratitude to Prof. Beaudoux for having accepted me in his laboratory and for a professional management of my stay. I thank all my co-workers and entire staff of the department for their helpfulness. Last, but not least, I acknowledge the kind agreement of my supervisor Prof. Jaroslav Racek to participate in this programme.

News from Corporate Members

Welcoming new corporate members: AbD Serotec & Gentian



Mrs. Julie MAW, Market Segment Manager, MorphoSys UK Ltd T/A AbD Serotec

AbD Serotec is the research and diagnostic antibody division of [MorphoSys](#), one of the world's leading antibody technology companies. The AbD Serotec brand was created in early 2006 to market the combined products and services of Antibodies by Design, Biogenesis, Serotec, and Oxford Biotechnology – more than 14,000 antibodies and immunological reagents, custom monoclonal antibodies developed from the MorphoSys HuCAL library, and large and small scale antibody production and conjugation services.

AbD Serotec prides itself on its commitment to providing its customers in research and industry the highest quality products and services, from its ISO certified

production facility in Kidlington, near Oxford UK. This new facility is the AbD Serotec headquarters, and supports sales offices in Raleigh, North Carolina and Duesseldorf, Germany. Custom monoclonal development services are performed at MorphoSys headquarters in Martinsried, near Munich in Germany. Website: www.abdserotec.com/oem

Gentian

M. Bard Sundrehagen, Sales Vice President

Gentian is a privately held company with products and patent protected technologies for chemical analysis of human and veterinary samples.

Gentian's tests are based on particle enhanced turbidimetry and nephelometry. Focusing on precise measurements of kidney function, Gentian has become a leading force in introducing the novel renal marker Cystatin C in routine diagnostics in clinical laboratories worldwide. Superior to serum creatinine, MDRD and invasive renal diagnostic methods, Cystatin C is also an early risk marker for cardiovascular disease. However, the potential of this marker is dependent on a strong assay signal. The technology of enhancing assay signal strength is Gentian's market advantage.

Gentian is situated in Oslo, Norway and Beijing, China. Valid certificates include ISO 13485:2003 and ISO 9001:2000.

www.gentian.no



Letters to the Editor

Synthetic biology: the ethical dilemma

Contributed by Dr Bernard GOUGET, SFBC-EFCC representative, Deputy Secretary general International Francophone Federation of Clinical Biology and Laboratory Medicine (FIFBCML), IFCC Executive Board Member

Man's biotechnological powers are expanding in breadth at an accelerating pace. However many of these powers are double-edged, offering on one hand to help alleviate human suffering and on the other, threatening harm to the dignity of man.



Synthetic biology is the use of advanced science in the intent of engineering biological components and systems that do not exist in nature, and of reengineering natural biological elements. The primary intention is the design of artificial biological systems rather than the understanding of natural biology. The main emerging areas of research are the creation of minimal genomes, the regulation of signalization pathways, and even the production of totally artificial cells or microorganisms, with the intent of standardizing genetic components with specific functions.

Synthetic biology calls upon the know-how of an interdisciplinary task force composed of biologists, bioengineers, chemists and information technology specialists, and fosters philosophical, anthropological, ethical concerns. Biosafety, biosecurity and intellectual property issues are also part of the considerations that increase the complexity of the assessment of social, and legal outcomes of this emerging field.

Synthetic biology, rapidly growing and evolving as it establishes itself in the scientific community, is increasingly reported the scientific and lay press. The orientation of the coverage varies, some emphasizing the potential risks and benefits, some focusing on the future applications and yet others examining the social and ethical concerns that might emerge when the technology will be applied.

Considering that the accuracy of scientific communications and research ethics are two major factors that guarantee the important role of science and research in society, many countries have implemented national ethics committees that include different areas of expertise such as research integrity, biologic and genomic technologies, medical and healthcare ethics, laboratory animal sciences, etc. This diversity in their composition assures a better coverage and comprehension of this multifaceted field. Undoubtedly, a network of all such committees will benefit from synergistic effects in increased visibility, authority and trustworthiness.

The EFCC mission statement of fundamental values affirms that, while the European membership is multicultural, there is an amalgam of shared values that is intimately linked to the identity of the Federation of Clinical Chemistry and Laboratory Medicine. This may help to nurture not only a European identity, but also a European way of implementing policies based on open debate, mutual respect and tolerance.

Recently, the IFCC Ethics Committee was asked, as a priority, to develop ethical guidelines for the Federation's scientific activities and publications. This general ethical framework, based on well-established international guidelines, such as the Declaration of Helsinki is eagerly awaited. The ability of the scientific community to regulate itself is critical to the maintenance of the public trust. Adherence to ethical guidelines is the basis of the professional responsibilities and commitments in the pursuit of knowledge.

At time that synthetic biology is emerging, would it not be the time to promote an IFCC/EFCC debate on ethics related to this subject? Ethical, legal and political governance is needed in order to secure that the interests of science and society are equally respected, always remembering that science serves mankind.

Edited by Edgard Delvin PhD, FCACB, FACB, Editor

Meetings Announcement

SAVE THE DATES



The 12th Asian–Pacific Congress of Clinical Biochemistry “Challenges in the Future Diagnostics” will be held from October 3rd to the 7th 2010 at the COEX in Seoul, Korea

The important deadlines are

Abstract submission opens:	January 11th, 2010
Abstract submission deadline:	May 31st, 2010
Award submission deadline:	May 31st, 2010
Early–Bird registration deadline:	July 15th, 2010
Pre–Registration deadline:	August 31st, 2010

Contact : Won–Ki Min, MD, PhD, Chairman, APCCB 2010 Organizing Committee
Email : seoul@apccb2010.org Website : www.apccb2010.org



Planning of the International Congress of Pediatric Laboratory medicine has begun. It is being held May 13 –15 2011 in Berlin, Germany just prior to the IFCC Worldlab/EuroMedlab Berlin conference. Watch the website www.icplm2011.org for developments.