

#### Lab Tests Online Celebrates 10 Years

Teaching the World What We Do

ab Test Online had a birthday this year, and while there was no cake with candles, there was plenty of celebrating - and plenty to celebrate. The US site hosted its 100 millionth visitor in February; a Turkish version of the site launched in March, and AACC launched a mobile version for Apple and Android devices at the AACC meeting in July.

Official anniversary festivities kicked off in May with a reception for Lab Tests Online editors attending WorldLab in Berlin. Representatives from 14 of the 17 Lab Tests Online sites heard AACC President Ann Gronowski laud their contributions to the cause of laboratory medicine, "Lab Tests Online has become a global phenomenon - a global standard for patient education - because of all of you. It has been your willingness to step forward to help give a public voice to the laboratory profession, and your commitment to supporting a model of patient education that has exceeded our wildest dreams, that has made it all possible."

AACC continued the celebrations in Atlanta during its Annual Meeting with frequent acknowledgements of Lab Tests Online's many partners and sponsors, large banners adorning the halls of the conference center, and two major events. At the first event, AACC recognized the founding editors of the original site who have committed thousands of volunteer hours to setting the standards for its award-winning content. A video of this event can be seen on the Lab Tests YouTube channel at Online http://youtu.be/5833t7LB6OI.

The second event, a banquet for national society presidents and other VIPs from around the world, featured comments about Lab Tests Online from AACC, IFCC, and other organizations. The poignant remarks of IFCC President Graham Beastall best captured the significance of the event. After telling two very personal stories about how "clinical chemists change people's lives every day", Beastall congratulated Lab Tests Online for showing the laboratory community that it was possible to deliver this message to the public at large. Dr. Beastall's full remarks are available online at http://labtestsonline. org/site-news/mnews/valuing-laboratory-medicine/.

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In looking ahead to the next 10 years, Lab Tests Online expects to continue to broaden its audience and to increasingly connect the need for health literacy with the desire for stronger doctor-patient collaboration and improved health outcomes.

A booklet commemorating Lab Tests Online first 10 years is available at www.labtestsonline.org.



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IT-focused healthcare world, improving efficiency and quality, assuring patient safety, and managing cost constraints. Attend this meeting and learn how fellow laboratorians have harnessed the power of automation to meet these challenges head on.

Here's just a few of this year's highlights:

- Uncovering what you don't know: Asking the right questions when starting your lab automation project
- Planning ahead to minimize workarounds in the automated lab
- · Metrics for the automated lab
- Integrating middleware and autoverification
- Unlocking the power of QC: Your key to lab excellence

Whether you're facing the prospect of a new installation or looking to leverage your existing capacity, our expert faculty will be on hand to discuss the tips and strategies you'll need to keep your lab automation projects on the road to success.

For more information or to register, go to the AACC web site at www.aacc.org or call AACC Customer service at (800) 892-1400 or (202) 857-0717.

For information on corporate partnership opportunities, please contact David Sainato at AACC (dsainato@aacc.org).



#### MESSAGE FROM THE PRESIDENT

by Dr. Graham Beastall, President, IFCC

#### Method Standardization and Harmonization

or several years, IFCC, through its Scientific Division, has been a global leader in method standardization. Several projects have resulted in the production of refer-

ence materials, reference measurement procedures, and international reference laboratories. Working with the diagnostics industry it has become possible to demonstrate traceability and commutability between these reference standards and the results obtained in service laboratories using commercial products. Method standardization has been achieved for a

growing number of the most commonly performed analytes in clinical chemistry. A list of standardized methods is available from the website of the Joint Committee for Traceability in Laboratory Medicine (JCTLM), which is strongly supported by IFCC (www.bipm.org/jctlm/).

This program of method standardization will continue to be supported by IFCC. In addition, however, there is a growing realization that patient safety is being compromised by method dependent differences for many clinically important biomarkers. This is especially true in the developing areas of microbiology and molecular diagnostics. In many cases, it is not currently possible to meet the exacting requirements of method standardization.

Consequently, a project has commenced under the leadership of the American Association of Clinical Chemistry (AACC). This project aims to reduce between method variability through harmonization rather than full standardization. A summary of the project and an explanation of the differences between standardization and harmonization have recently been published: Millar WG, Myers GL, Gantzer ML et al. Roadmap for harmonization of clinical chemistry laboratory measurement procedures. Clin Chem 2011; 58: 1108-1117

IFCC supports the harmonization project and is working with AACC and other international stakeholders to introduce a coordinated system that enable an increased number of important biomarkers to be considered for method standardization or harmonization. This is truly a project of global importance.

Further updates will be available through future issues of IFCC News. In the mean time if you have comments or suggestions then please direct them to Graham Beastall (gbeastall@googlemail.com).

## Canadian Society Awards Honorary Life Membership to Dr. J. Gilbert Hill

by Arlene Crowe, PhD, FCACB (Emeritus)

t the annual CSCC conference, one of the chief highlights is the presentation of awards mainly to CSCC members in recognition of significant contributions to the profession and the Society. This year, at the stunning banquet, held on the final evening of the June conference in Vancouver, Dr. Edward Young presented a seldom given Honorary Life membership to Dr. J. Gilbert Hill of Toronto. CSCC's Constitution and By-Laws state that 3 past-presidents combine to make the nomination. Council approved unanimously the nomination, made by Drs. Matthew McQueen, Raymond Ogilvie, and Arlene Crowe at its winter meeting. The larger part of the description below of Dr. Hill's many services to CSCC is excerpted from my introduction of Dr. Hill at the banquet.

Dr. Hill's university education began with a BSc in Engineering Chemistry obtained at Queen's, followed by his MD, CM at McGill, and then his PhD in Biochemistry back at Queen's. A seminal part of Dr. Hill's laboratory experience took place at the Montreal General Hospital, in the very lab of Dr. William Bauld, one of the three Montrealers regarded as the primary founders of our Society. After completing his PhD, Dr. Hill became the Clinical Biochemist at Kingston General Hospital and Assistant Professor in Queen's Department of Biochemistry. In 1965 he moved to the Hospital for Sick Children in Toronto, working under Dr. Sanford Jackson, yet another illustrious name in CSCC's history, until Dr. Jackson's retirement in 1975. Dr. Hill became then Biochemist-in-Chief, Service Division, while rising through the ranks on the teaching side to full professor at the University of Toronto. Mention should also be made that, when certification was being introduced, Dr. Hill, although perfectly eligible to be grandfathered, was the first CSCC member to receive his CSCC certification by examination rather than by grandfathering - he stated that he wanted "to keep the process honest."

In 1970 CSCC Council appointed Dr. Hill to be the Chairman of the Central Coordinating Committee (CCC) for the forthcoming IX International Congress of Clinical Chemistry, which saw CSCC and AACC acting as joint hosts for the huge meeting to be held

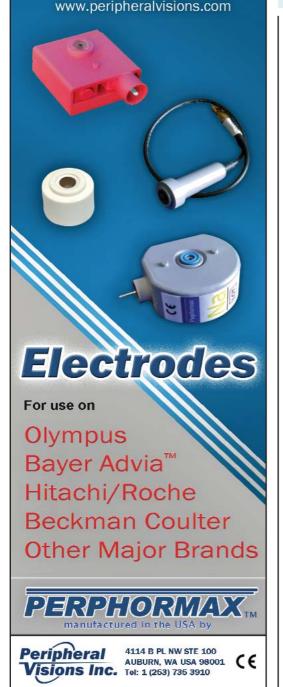


Photo; Dr. Gilbert Hill (left), Dr. Edward Young, CSCC Past President (right)

in Toronto in the summer of 1975, the first time (and only time so far) that IFCC has designated a Canadian city to be the site for this prestigious meeting. Those CSCC members who attended have very fond memories of this conference – superbly organized with fascinating up-to-the-minute symposia and posters, a large exhibition area, and an array of social outings to the Stratford and Shaw Festival Theatres, the McMichael Gallery in Kleinburg, the Toronto Islands, etc., all of which took place under constant blue skies. It is difficult to overstate the impact the 1975 meeting had on raising CSCC's profile among clinical chemists internationally, as several thousand attended from Europe, Latin America, and the USA.

During the frequent meetings of the CCC planning for the Congress, Dr. Hill also managed to serve as a CSCC Councillor from 1973 to 1975; then, without so much as a breather, he served as President-Elect 1975-76 and President the following year. In 1982, Dr. Hill was named the recipient of what was then called the Ames Award, which we all know now as the CSCC Award for Outstanding Contributions to Clinical Chemistry (presented this year at the banquet to Dr. Sherry Perkins).

On the provincial side Dr. Hill was the founding President of the Ontario Society of Clinical Chemists 1969-71, and again it is difficult to overstate his contributions to the growth of OSCC and its important Cont'd on page 70



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### COLABIOCLI Develops Distance Learning Course on Quality Management Systems and Good Laboratory Practices

by Prof. Dr. Ana Leticia Maselli President COLABIOCLI

Given the growing number of diseases that threaten public health and the need for accurate and reliable laboratory testing to be available in every country, the COLABIOCLI Committee of Quality, Educational and Scientific Program and Finance has mandated its Working Group on Distance Education to develop, during 2010 and 2011, a Distance Learning Course on Quality Management Systems and Good Laboratory Practices.

Two hundred young professionals and students participants, from 19 countries received training under the coordination of the Fundación Bioquímica de Argentina and the certification of the Facultad de Ciencias Químicas y Farmacia of the University San Carlos of Guatemala. This Distance Learning Course was developed in close collaboration with the PAHO/WHO Public Health Laboratory Services and it is based on the II Edition of the PAHO Curso de Gestión de Calidad y Buenas Prácticas de Laboratorio, (Course on Quality Management and Good Laboratory Practices) 2009, ISBN 978-92-75-33028-9.

This Distance Learning Course has allowed the improvement of the performance of the laboratories in patient care and surveillance as it enabled the participants to disseminate their newly acquired knowledge in the Region and thus facilitate the review of national regulations for Medical Laboratories and their operational accomplishment to meet internationally recognized quality standards.

#### The present COLABIOCLI Executive Board

The last General Assembly was held in April 2010 in Santiago (Chile), where the Executive Board was reelected. The Operational Structure of COLABIO-CLI, consist of an Executive Board. The Executive Board reelected during the 19th Latin American Meeting of Clinical Biochemistry celebrates in April 2010 in Santiago of Chile.



Photo: (COLABIOCLI Executive Board from left to right) Angel Rodríguez (Guatemala) Secretary, Ana Leticia Maselli (Guatemala) President, Graciela Queiruga (Uruguay) Member, Loida Gonzalez (Dominica Republic) Member, Manuel Morejon (Cuba) member, Norberto Cabutti (Argentina) Vice President and Carolina Richter (Guatemala) Treasurer.

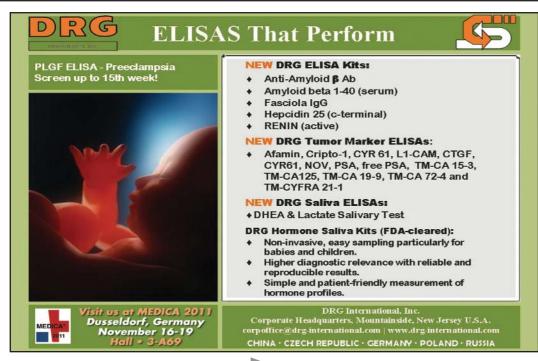
#### Canadian Society Awards Honorary Life Membership to Dr. J. Gilbert Hill

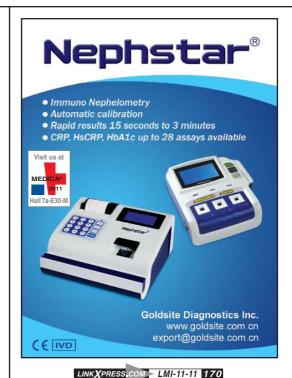
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relationship with the Ontario Ministry of Health. Dr. Hill will modestly say that many other CSCC and OSCC members were responsible for the building of positive relationships within CSCC itself and with external associations, but the astute CSCC/OSCC member who can read between the lines recognizes full well Dr. Hill's guiding hand. After 1975, Dr. Hill went on to serve IFCC in several capacities and also to serve on the Section of Laboratory Medicine of the Ontario Medical Association. Yet another international meeting for which he acted as Chairman of the Central Coordinating Committee was the International Congress of Pediatric Laboratory Medicine, held in Toronto in 1983.

In summary, from as long ago as the late 1950s, at the time just when automated analysis, quality

control, and information technology were becoming integral features of any clinical chemist's practice, Dr. Hill's unique training in engineering, medicine, and chemistry made him our unofficial expert and an unassuming but influential guide in any new direction CSCC undertook. Even though he has supposedly again "retired" (having officially retired from Sick Kids in 1995), he continues to be active and involved to this very minute, and it should be mentioned that he is the only clinical chemist serving on Infoway, the project aiming to provide standards for the reporting of tests and methods that will hopefully render uniform Electronic Health Record introduction across the country. It is a safe bet that Dr. Hill will continue to enlighten us about that project, and generate even more new ideas for our profession and our Society.







## News from the Vietnamese Society

Contributed by Prof. Hoang Thi Bich Ngoc, President

On August 19-20, 2011, in Do Son (Hai Phong province), the Vietnam Association of Clinical Biochemists (VACB) held its tenth Annual Congress in conjunction with Annual Scientific Conference of Clinical Biochemistry of Hanoi and Northern Provinces of Vietnam, to which more than 300 delegates of many provinces of Vietnam participated.

Prof. Dai Duy Ban, President of the VACB, chaired this event and conducted the election of the new Executive Board, which that will serve until December 2015. Prof. Hoang Thi Bich Ngoc was elected President (hoangbichngoc.hs@gmail.com); Prof. Pham Thien Ngoc, Vice President and General Secretary (thienngoc2001@hotmail.com), Dr. Tran Hoai Nam, Executive Vice President (HoaiNamVThos@yahoo.com.vn)

Dr. Tran Huu Thang, Executive Vice-President of the Vietnam Medical Association (VMA), on behalf of the VMA, recognized and congratulated the new VACB National Committee. The Scientific Conference included nearly 20 presentations in a wide array of fields in Clinical



Photo: (From left to right) Prof. Hoang Van Son, member of the Executive National Committee of the VACB; Prof. Le Duc Trinh; Prof. Do Dinh Ho, member of the ENC of VACB; Prof. Bach Vong Hai; Prof. Dang Hanh Phuc; Prof. Hoang Thi Bich Ngoc, VACB new President; Prof. Pham Thi Mai.

Chemistry such as Tumor Markers, Molecular Biology, Immunology, Proteomics, Genomics, Pharmacogenomics, Endocrinology, Quality Control, and others. The scientific discussions were very active and cheerful.

The VACB Congress has outlined an interesting program for the 2011-2015 period: organization of the Golden Jubilee of the 50th Anniversary of the foundation of the VACB (1963-2013), and active international cooperation.



## "Mapping the Future of Laboratory Medicine for Young Scientists in Countries Represented in BCLF"

by E. Konsta, Chemist, MSc in Clinical Chemistry, Phd, Scientific Collaborator in Second Department of Internal Medicine, Division of Hematology, ATTIKON General University Hospital, Athens, Greece

There are approximately 500 laboratories in public hospitals and 2,500 private laboratories in Greece (doing microbiology, hematology, biochemistry, immunology, and molecular techniques). Medical doctors (biopathology), scientists (chemistry, biology, biochemistry, molecular biology), and pharmacists are able to practice in the field of clinical chemistry and laboratory medicine. In addition, in some laboratories, there are persons with academic (usually technological) education without postgraduate specialization.

In Greece there is no officially organized training of the specialists in clinical chemistry and laboratory medicine. In 1973, the Greek State passed a law was introducing the Clinical Chemistry specialty for scientists (chemists, biologists, biochemists, pharmacists; law 131/1973). This law is still active but it was never implemented due to the strong opposition by the medical Biopathologists. The Greek Society of Clinical Chemistry-Clinical Biochemistry (GSCC-CB) via the NCCRC ([Greek] National Clinical Chemistry Registration Committee) decided to organize a voluntary specialists training (duration 5 years) for

scientists and pharmacists. This training includes both theory and practice.

The theoretical education is based on the EC4 Syllabus. In its November 2005 meeting in Prague, after voting among the European countries, the EC4 Registration Committee decided that the standards of the Greek Register were equivalent to the standards of the European Register. A voluntary examination is organized by the GSCC-CB and the NCCRC on the content of the educational program. Success in the examination leads to a certificate of (theoretical) competence. It is estimated that more than 40% of the scientists who practice Clinical Chemistry in Greece, participated in this educational activity. It should be noted that more than 80% of the participants were ranked "good" or "very good" in the examination. Nowadays, this program is provided as an e-learning application and it is open for all scientists who want to follow the discipline of clinical chemistry. The written examination is organized twice a year under the responsibility of the Greek Clinical Chemistry Registration Commission. The GSCC-CB encourages all the young scientists who enter the field of clinical chemistry and laboratory medicine to follow this educational program and also to follow the on-the-job training according to the logbook provided by the GSCC-CB. The practical training is being realized by means of a "professional training dossier (PTD)" (Logbook). The PTD describes all the laboratory procedures that the trainee has to go through.

Today, the Greek Register counts 224 members, whereas 108 of them have become members of the European Register.

#### Reference:

The organization of an educational program for specialists in Clinical Chemistry by the Greek Society of Clinical Chemistry-Clinical Biochemistry, Biochemia Medica, 21(1): 30-7 (2011).





# Which Strategies to Prevent and Control Noncommunicable Diseases?

#### by Dr. Bernard Gouget

SFBC-EFCC Representative; Secretary General International Francophone Federation of Clinical Biology and Laboratory Medicine (FIFBCML); IFCC Executive Board Member, Secretary General

mong the major healthcare tran-Asitions witnessed in the beginning of the twenty-first century, the most globally pervasive change has been the rising burden of noncommunicable diseases (NCDs). This has given rise to new challenges when providing acute chronic care for NCDs, especially with an existing mismatch between healthcare needs and available resources. NCDs, both physical and mental injuries, violence, disability and, especially cardiovascular diseases, cancers, diabetes, and chronic respiratory diseases represent the major health problem in the industrialized countries. They accounted for 8.1 million deaths in 2004, including 1.5 million deaths before the age of 60.

Low and middle-income countries have an additional burden, as health systems usually have fewer resources for the prevention and early detection of disease as well as for the provision of comprehensive healthcare to those afflicted.

Inequalities and the social determinants of health including gender also play a role. These are the greatest cause of preventable mortality and morbidity. In most of the developed world, three out of four deaths are due to cardiovascular diseases, cancer, accidents, and other violent causes. Globally cardiovascular diseases are responsible for every third death, and coronary heart disease is already the number one killer in the world.

During the past few decades, extensive medical research has been carried out to ascertain the causes and mechanisms of these noncommunicable diseases. Research has involved large epidemiological studies within and between populations, basic biochemical and animal studies, intervention trials, and large-scale community-based preventive studies. Research has clearly shown that CVDs or events leading to them have their roots in unhealthy lifestyles or adverse physical and social environ-



ments. Such factors as unhealthy nutrition, smoking, harmful use of alcohol, high blood cholesterol, obesity, physical inactivity, excess use of alcohol, and psychosocial stress are among major lifestyle issues.

Recently, WHO EU published an action plan for implementation of the European strategy for the prevention and control of noncommunicable disease 2012-2016. This plan aims to give guidance on concrete, evidencebased actions for the prevention and control of NCDs adaptable to the European member states' varving levels of experience and existing policy and legislation, within a framework amenable to monitoring and evaluation. A number of actions are currently in progress to support countries in the development, implementation and evaluation of diseases specific control programs, as for example with national cancer-control programs and to support countries in their strategies for integrated prevention of NCDs. Carefully planned community-based programs form an important part of the effort to help solve this problem. The fact that there is a huge gap between the existing medical knowledge and everyday situations in society, results from several obstacles for healthy changes: cultural, political, economical, psychological, etc. The aim of a community program is to try to build a bridge for people and communities to

overcome these obstacles.

Prevention and control of NCDs requires leadership at all levels, and a wide range of multilevel, multisector measures aimed at the full spectrum of NCD determinants, from individual level to structural, to create the necessary conditions for leading healthy lives. This includes promoting and supporting healthy lifestyles and choices, relevant legislation and policies; preventing and detecting disease at the earliest possible moment to minimize suffering and reduce costs; and providing patients with the best possible integrated health care throughout the life cycle including empowerment of the patient.

Effective NCD prevention and control require also the active and informed participation and leadership of individuals, families and communities, civil society organizations, healthcare providers, and, of course, the international community of specialist in lab medicine. These last can help to implement, monitor, and evaluate national and sub-national strategies and programs on NCDs, as well as promoting access to comprehensive and cost-effective prevention, treatment, and care for integrated management of NCDs that create equitable health promoting environments that enable individuals, families, and communities to make healthy choices and lead healthy lives.

Although, certainly much will still be learnt in the future, very much is thus known already to serve prevention. Actually, so much is known that the main question for NCD prevention is not "what should be done," but "how should it be done." The key question is how the existing knowledge can best be applied for effective prevention in real life.







### The EFCC-Abbott Labs Are Vital Award 2011 Honors Sheffield University Team Led by Steve W. Goodacre

he EFCC-Abbott Labs are Vital Award 2011 Honored University of Sheffield Team in the United Kingdom. The team, led by Steve W. Goodacre, PhD, was recognized for its scientific article published in Heart titled, "The Randomized Assessment of Treatment Using Panel Assay of Cardiac Markers" that showed the use of point-of-care (POC) cardiac biomarkers resulted in shorter hospital stays and increased the number of patients successfully discharged after emergency department assessments.

The EFCC/Labs Are Vital Award for Excellence in Outcomes Research in Laboratory Medicine Award was created in 2009 to recognize outstanding published research demonstrating favorable clinical or economic outcomes from the use of an in vitro diagnostic test.

Dr. Goodacre and his coauthors, Mike Bradburn, Elizabeth Cross, Paul Collinson, Alasdair Gray, and Alistair Hall, investigated whether testing with POC cardiac biomarkers would increase the rate of successful patient discharges following emergency department exams of individuals presenting with chest pains. More than 2,200 suspected myocardial infarction patients in the UK were studied. In the article, the authors noted that the rise of hospital admissions has been described by the National Health Service as a problem such that could bankrupt the UK health care system.

The study explored the potential benefit of using POC biomarkers to lower the admission rate of chest pain patients, who account for about 25 percent of patients admitted from

the emergency department. POC testing for cardiac biomarkers can substantially reduce turnaround time and transmit results rapidly to attending emergency department staff. The study concluded that POC cardiac assessments resulted in a greater proportion of patients being successfully discharged after emergency department assessments and also reduced the median length of initial hospital stays. Dr. Goodacre and his team have highlighted the vital role laboratory scientists play every day in diagnosing and preventing disease and in applying advanced diagnostic technologies to help assure favorable outcomes for patients," said Kathy Turner, divisional vice president, Abbott Diagnostics. The research team received an award and EUR 15,000 honorarium.



The EFCC-Abbott Labs are Vital Award 2011 Honored the research team, led by Steve W. Goodacre, PhD, of University of Sheffield Team in the United Kingdom.

### Croatian National Congress to Host Joint European EFCC-UEMS Meeting

Pollowing the successful inaugural EFCC-UEMS meeting in Lisbon in 2010, the delightful city of Dubrovnik was chosen to host the second meeting with our Croatian colleagues as hosts. It is, therefore, a pleasure to welcome you to the 2nd EFCC-UEMS Congress, a coming together of two European organ-

#### Invitation

Inder the auspices of the Joint Committee for Traceability in Laboratory Medicine (JCTLM), the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the European Federation of Clinical Chemistry and Laboratory Medicine (EFCC), the Center for Metrological Traceability in Laboratory Medicine (CIRME) of the University of Milan is organizing the 5th edition of its annual meeting. This year the program will deal with the following topics:

- Definition and clinical relevance of cTnI measur-
- SRM 2921 reference material for cTnl
- Preparation of secondary reference materials for
- Reference measurement procedure for cTnI
- Performance requirements for cTnI measurement in clinical setting

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Congress Topics: Accreditation and laboratory izations with a common interest in promoting the profession of Laboratory Medicine and ensuring a forum management; Evaluation of analytical systems; Extra-analytical laboratory phase; Clinical chemto discuss the clinical and scientific developments in our specialty with our invited speakers, who are istry; Cardiovascular diseases; Central nervous system diseases; Hematology; Homeostasis; Kidney experts in their fields. The significant developments in diagnosis of disdiseases; Liver and gastrointestinal diseases; Lung ease, monitoring of therapy and screening under condiseases; Bone metabolism; Connective tissue dissideration are juxtaposed to the ever-increasing costs eases; Diabetes mellitus; Metabolics; Endocrinoloand demands for health care, these are challenges we gy; Pregnancy; Sexually transmitted diseases; all face. It is through meetings such as this that we gain Molecular diagnosis; Immunology; Oncology and tumor markers; Toxicology and TDM; Education of the perspective of what is necessary and appropriate for patient care when we return to our laboratories fired specialists in laboratory medicine; Microbiology; with the enthusiasm imparted by the speakers and the Cytology; Transfusion medicine; Others. stimulating conversations held with colleagues old and Abstract Submission: January 15, 2012; Reduced new. We are delighted to welcome you on behalf of registration fee: May 1st, 2012; Abstract deadline: EFCC and we trust you will enjoy the meeting. May 15, 2012; Web: www.dubrovnik2012.com;

E-mail: info@dubrovnik2012.com



### Increasing Awareness of the Importance of STIs and Their Potential Health Impact

by Dzintars Ozolins, MD, PhD, President of the Latvian Society of Laboratory Specialists

o increase awareness of the importance of Sexually Transmitted Infections and their potential health impact, it is necessary to convince health professionals that these infections have a significant public health impact, as well individual impact. As with HIV, such an approach could increase awareness of the significance of STIs, their impact on populations, and the need to adequate diagnostic, care and prevention / control capacity. This requires effective

advocacy at European and country level," so said the members of scientific committee of European Conference of National Strategies for Chlamydia Trachomatis and Human Papillomavirus (NSCP conference) during their meeting in May 25-27, 2011, in Jurmala (Latvia). Full Conference Report will be published soon at www.cthpv.org.

There are very substantial variations across Western, Central and Eastern European countries in terms of political systems, GDP, income levels, health policy, health systems, and health expenditure. This is no less the case for sexually transmitted infections. In this area there is currently great heterogeneity between countries in terms of provision of testing and care for STIs, STI laboratory diagnostic methods used (type; performance; QA) and their performance, clinical and laboratory reporting mechanisms; type, functioning and completeness of surveillance systems; and availability of epidemiological and microbiological data on rates of STIs.

These differences impact on who is tested for STIs; which STIs are tested for; how much infection is detected by the laboratory methods used, and how reliable a diagnosis is; on what proportion of infections detected are reported, and therefore how meaningful surveillance data on numbers and rates of reported STIs are, and to what extent the numbers reflect the true incidence and prevalence of STIs in a particular country.

These points are well illustrated in a work carried out by the European Surveillance of STIs Network (ESSTI), which was set up and hosted by the UK Health Protection Agency from 2002-2009. From 2009 the network has been under the auspices of the European Center for Disease Prevention and Control (ECDC); and their recent report "Sexually transmitted Infections in Europe," published by ECDC on behalf of the ESSTI Network, was presented at the European Conference on National Strategies for Chlamydia trachomatis and Human Papillomavirus

The report shows marked differences of reported STIs and trends in STI epidemiology across the 30 countries of the European Union and European Economic Area (EU and EEA). For example, the majority of Chlamydia infections were reported by only 4 out of 30 countries (Denmark, Norway, Sweden, and the United Kingdom). High numbers can often be linked to enhanced case detection, improved diagnostic tools and surveillance systems, while low rates in other countries may reflect the lack of accurate diagnostic tools, diagnostic capacity or poor reporting and surveillance mechanisms.

Similarly, the Eastern European Network for Sexual and Reproductive Health (EE SRH Network) has demonstrated through a survey of laboratory diagnostic methods among the network countries that individual tests and approaches used to establish a diagnosis often do not achieve recommended international standards. For example, serological tests are used to diagnose chlamydial infection in up to 70% of clinical laboratories in several EE countries, while screening for gonococcal infections in women is largely conducted by using microscopy of Gram-stained cervical smears.

In this context, the NSCP conference was organized in order to bring together experts from different Western. Central and Eastern European countries, in order to share knowledge and expertise, find common ground, identify key challenges and make recommendations for ways forward which would be appropriate to the diversity of countries in the region. Recommendations must take into account and must be applicable to be achievable in a widely diverse region in terms of economic performance, health expenditure, and systems; thus different approaches, and phased approaches, may be necessary depending on the country context.

Countries also differ widely in terms of the implementation and performance of prevention and control programs for STIs, and the importance accorded to such activities. This includes Chlamydia control programs to reduce the frequency of secondary sequelae through screening asymptomatic individuals; as well as implementation of HPV vaccination. These latter two issues were the two main areas of the conference.

International Conference National Strategies for TORCH complex, Chlamydia trachomatis, and Human Papillomavirus will be held in November 15-16, 2012, in Kiev (Ukraine). The conference will assist to provide guidance about national strategies for TORCH complex, Chlamydia trachomatis, and Human papillomavirus (HPV) early detection, control, and treatment. This event will expand the achievements of already traditional Ukrainian annual TORCH conferences in November. Conference President is Prof. George N. Drannik, President of Ukrainian Society of Allergology and clinical immunology. Please visit www.iecclm.org to find information about the conference.

2nd European Conference of National Strategies for Chlamydia Trachomatis and Human Papillomavirus will be held in May 23-24, 2013, in Berlin. The acceptance of Prof. Harald zur Hausen who shared the 2008 Nobel Prize in Medicine for his work on papillomaviruses and cervical cancer to act as Conference President will provide high scientific level of the meeting and will assist to convince health professionals that these infections have a significant public health impact, as well individual impact. Please visit www.cthpv.org to find information about the conference.

NSCP conference arises from the Project European Conference of National Strategies for Chlamydia Trachomatis and Human Papillomavirus-NSCP, which has received funding from the European Union, in the framework of the Public Health Program.

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### **EFCC CORNER**





## Training of Laboratory Medicine Specialists in Greece

by Dr. Alexander Haliassos MD, PhD, EurClinChem, Greek Society of Clinical Chemistry-Clinical Biochemistry on behalf of the Greek National Clinical Chemistry Registration Committee

he Greek Society of Clinical Chemistry-Clinical Biochemistry (GSCC-CB) was founded in 1989 by scientists who were working in the clinical laboratories in the state hospitals of Greece. The Society has been a member of the IFCC since 1994 and also a member of the EFCC and the European Communities Confederation of Clinical Chemistry and Laboratory Medicine (EC4). Almost 90% of the Society members are of scientific background (chemists, biochemists, biologists), but there are also a 7% of medical doctors, specialized in Biopathology or Clinical Chemistry.

In Greece, there is no officially organized training in clinical chemistry for scientists. Although in 1973 the Greek State passed a law that introduced the Clinical Chemistry specialty for scientists (chemists, biologists, biochemists, pharmacists), this law was never implemented due to the strong opposition of the medical Biopathologists. The clinical chemistry labs of the public hospitals in Greece are staffed almost exclusively by scientists, while MDs are working mainly in the microbiology or hematology labs of the hospitals. There are about 270 public hospitals and health centers of various sizes in Greece. The small size hospitals have usually one central laboratory that does microbiology, hematology, biochemistry, and immunology while the bigger hospitals have separate specialized laboratories. In the private sector, there are more than 2,500 diagnostic centers and laboratories, usually of small to very small size.

In 2002, after the encouragement and help by the Registration Commission and the Board of EC4, the GSCC-CB decided to start a voluntary Register for specialists in clinical chemistry, in order to:

- Provide high standards of professional education and practice in clinical chemistry in Greece, equivalent to those of the other European countries;
- Provide the possibility for each member to register in the European Register for Clinical Chemists and thus, facilitate the free movement of scientists within the European Union;
- Contribute to the improvement of the quality of laboratory results in clinical chemistry and as a consequence to promote the public health services:
- Strengthen the efforts towards the recognition of the specialty of clinical chemistry in Greece.

The main problem that the GSCC-CB had to solve in the process of establishing the Register in Greece was the lack of proper and official education and training for scientists that had been

working for many years in the State or private clinical laboratories. Many of them had as many as 20 years of service. In order to overcome this situation the Board of the GSCC-CB decided to organize an intensive educational program for all the colleagues, independent of their professional experience.

The educational program comprised a series of 18 seminars each one dedicated to a different part of the clinical chemistry content as it is described in the EC4 Syllabus. The Educational Committee (SEC) appointed by the Board and voted by the general assembly of responsibility for the organization of the seminars was assigned to a Scientific and the Society. The SEC was responsible for choosing a coordinator for each seminar who, in collaboration with the SEC, was liable for the scientific program of the seminar, the choice of the speakers, and the examination. The duration of each seminar was about six hours and consisted of six to nine lectures (presentations). Each speaker had to provide an extended text of 10 to 15 pages of his lecture. The texts were edited by the coordinator and the SEC and were published in print as a separate volume (book) for each seminar, which was available to all participants on the day of the seminar. The texts were also available on the internet, through the web page of the Society, at least 10 days prior to the date of the seminar. Access to the texts was limited only to those who had confirmed attendance in that particular seminar.

At the end of each seminar, there was a voluntary written examination, which comprised of 24 multiple-choice questions. For each participant, the attendance to the seminar and the performance in the examination were graded up to a maximum grade of 10 points. Successful completion of the Educational program led to a Certificate of Competence under the following prerequisites: attendance of at least 14 out of the 18 seminars (78%) and total examination score of at least 60% of the possible maximum score (180 points).

The seminars were attended by both members and nonmembers of the GSCC-CB. Nonmembers of the GSCC-CB held at least a four years university degree in chemistry, biology, or biochemistry. One hundred eighty-nine colleagues was the mean attendance per seminar for the seminars of the first cycle, 146 (77%) of them were members of the GSCC-CB and 43 (23%) nonmembers. The mean attendance per seminar for the seminars of the second cycle was 38 colleagues of whom 19 (50%) were members and 19 (50%) nonmembers of the GSCC-CB.

It is estimated that more than 40% of the scientists who practice Clinical Chemistry in our country, participated to some extent to this educational activity. This successful massive educational activity of the Greek Society raised the scientific level of clinical chemistry professionals in our country and had also a positive impact on the level of laboratory medicine services provided in our country. The series of the 18 seminars in a two-year period raised an enthusiasm among the colleagues, since they had the opportunity to cover again most of the discipline of clinical chemistry and their participation strengthened their professional confidence.

In its November 2005 meeting in Prague, the EC4 Registration Commission decided, after voting among the European countries, that the standards of the Greek Register were equivalent to the standards of the European Register.

Today, the Greek Register has 224 members and more than 108 of them have become members of the European Register.

The educational program is now provided by the GSCC-CB in the form of distance learning. The written examination is organized twice a year under the responsibility of the Greek National Clinical Chemistry Registration Commission. The GSCC-CB encourages all the young scientists who enter the field of laboratory medicine to follow this educational program and also to follow the on-the-job training according to the logbook provided by the GSCC-CB.

#### Reference

The organization of an educational program for specialists in Clinical Chemistry by the Greek Society of Clinical Chemistry-Clinical Biochemistry. Biochemia Medica 2011; 21(1): 30-7





## Challenges of Quality Management and Accreditation: A BCLF-European Perspective

#### Report from 3rd Symposium on Quality Management in Laboratory Medicine

by Mustafa Serteser, MD, Acibadem University, School of Medicine, Department of Medical Biochemistry, and Acibadem Labmed Clinical Laboratories, Istanbul, Turkey

he Quality management symposium was successfully held under the chairmanship of Bernard Gouget from Paris (France), Costanta Popa from Bucharest (Romania), and Todor Shipkov from Sofia (Bulgaria). The accreditation/certification procedures in different European and Balkan countries, and arguments in favor and against were evaluated. As it is accepted without any doubt, accreditation is based on standards that have both requirements for quality systems and requirement for quality management and technical competence as well. It is a procedure by which an authoritative body gives formal recognition that an entity is competent to carry out specific tasks. Accreditation gives formal recognition of competence, facilitates exchange of service between different laboratories, provides management tools, but the most importantly one could be ensuring the

needs and requirements of both clinicians and patients. The benefits of accreditation to the laboratory could be summarized as the improvement in the management of laboratory and its performance, and the competitive advantage that it provides.

Among the different type of laboratories present - medical, testing and calibration laboratories - a medical laboratory cannot function outside the scope of patient care. In medical laboratories, integrated procedures are used for the diagnosis, confirmation, and follow-up of disease. Using relevant tests, trusted results, timely and affordable laboratory services, an ethical approach, and the safety both patients and for staff are expected from medical laboratories. Patient safety is reporting, analyzing, and the prevention any medical errors that could cause adverse health effects. The principal causes of medical errors are human factors, system failures, and complex technologies used in medical disciplines. Different patient safety indicators are being used on clinical settings: complications from anesthesia, decubitus ulcers, foreign body left-in during a procedure, iatrogenic pneumothorax, postoperative infections, respiratory failure, embolism, thrombosis, transfusion reactions are some exam-

While medical laboratories are contributing to patient care, services providers should be supervised under the scope of patient safety. ISO 15189 is a standard; it uses terminology easily understood by medical staff. It includes entries not only on the analytical phase but also on the pre- and postanalytical phase. When applied correctly, all steps in the standard will contribute to patient safety by means of analyzing the correct sample from the correct patient under correct preparation, by correct analysis settings.

### INVITATION EFCC Symposium: Education in Clinical Chemistry and Laboratory Medicine

We would like to invite you to the EFCC conference on Education in Clinical Chemistry organized by the EFCC with the cooperation of Czech Society of Clinical Chemistry (www. education2012efcc.cz). The conference will consist of a situation report in Europe in different areas of education, workshops, and round table discussions with the aim to reach consensus on education in clinical chemistry and laboratory medicine.

The Czech Society of Clinical Biochemistry was established on April 24, 1959, and it is a member of IFCC and EFCC. The Society hosted Euromedlab 2001, and the FESCC Symposium 2004 in Prague, which focused on postgraduate education. See you in Prague in March 2012.

Tomas Zima, Conference chair

Program topics and coordinators: Specialization and different schemes in Europe - compensate the differences of curriculum - core curriculum (our profession - specialist in laboratory medicine and EC4 register) -Simone Zerah; Credits of EFCC -Continuing education - Elizabeta Topic; Pre- and post-graduate education - Tomas Zima; EFCC and UEMS Medical biopathologists - Victor Blaton; Meeting of EB EFCC with national representatives - Open discussion - Ian Watson

Congress Business Travel; Lidická 43/66, 150 00 Praha - Andl; Czech Republic; Tel: (+420) 224-942-575; Fax: (+420) 224-942-550; e-mail: education2012@cbttravel.cz, Symposium Secretariat: CBT

Coordination with CELME Cutting Edge of Laboratory Medicine in Europe - EFCC Conference, March 20 - 21, 2012 Corinthia Hotel, Prague - http://celme.org







### Bulgarian National Congress Hosts International Experts

he seventh Conference on Bulgarian Laboratory Medicine took place in the resort Zlatni Piassatzi (Golden Sands) situated on the Black Sea coast between Varna on the South and the picturesque resorts Albena and Balchik to the North. The success of the Meeting stemmed from the excellent work done by its Chairman, Prof. Tzatchev, and the Scientific Board of Bulgarian Society of Clinical Laboratory. Contributing factors were the very successful selection of topics, the high level of all 73 presentations (28 plenary lectures including 13 from foreign leading experts and 45 very good posters), the excellent social programs that opened facilities to additional discussions and consolidation of links between participants, as well as the marvelous weather throughout the meeting.

The conference began with Prof. Tzatchev's Opening Lecture, followed by greetings from the Chairman of Bulgarian Medical Association and the heads of other medical institutions in Bulgaria.

The main topic of the Meeting, Accreditation, was presented in a lecture by Prof. Bernard Gouget (Paris, France) titled, "French experience in compulsory accreditation of Medical Laboratories according to ISO 15189." Emphasis was laid on the requirements for quality and competence of medical biologists in France, including total patient management, encompassing all the steps from the diagnosis of most pathologists and their follow up and treatment. This integral approach is strengthened by a modernized legal framework for medical laboratories (LBM 1975) for the practice of the profession by compulsory ISO 15189 Accreditation for all laboratories no later than the end of 2016. Special conditions for conducting medical biology tests outside the laboratory, including the preanalytical phases and setting up strict limits for the scope of this discipline, such as POCT, fast screening tests for use by clinicians and home tests by patients, are defined. The reform reasserts the professional transformation of the discipline. No longer the technician, but the medical biologist has a full medical role and is involved in patient management. Jointly with clinical practitioners, he is now responsible for the entirety of the medical process. Thus, the reform sets out to harmonize the operating rules for laboratories sharing the private and public sectors. This scheme will encompass all laboratories in France - private and public, university and non-university to reinforce the quality and safety of the testing according to a strictly defined infrastructure: COFRAC is the sole body of accreditation based on the NF ENISO 15189 and 22870 standards, whose decisions are transmitted to the national authorities of health (HAS), the French Products Safety Agency (AFSSAPS), the Biomedicine Agency (ABM) and Regional Health Agency (ARS). The entire system is under the auspices of IFCC, EFCC, and ILAC (International Accreditation Cooperation).

Prof. M. Oellerich's (Göttingen, Germany) lecture, "Pharmacogenetics and individualized drug therapy," promoted personalized medicine by TDM based on gene testing, facilitating the selection of the proper drug and its dose. Several instances of this approach are:

- Association between MDR1 genotype and drug response and toxicity
- ABC-transporter polymorphisms potential markers of mitoxanthrone response in MS patients
- Vit K epoxide reductase and CYP2C9 modulators of warfarin dose requirements--a possible alterna-

tive to INR testing?

- CYP2Cl9 polymorphism and clopidogrel responsiveness
- CYP2D6 polymorphism and responses to antipsychotic and antidepressant drugs
- Oncology pharmacogenetics: Tamoxifen metabolizers CYP3A and CYP2D6 point to various outcomes; UGTIAI' 28 and toxicity of irinotecal in colorectal cancer; TPMT deficiency and myelosuppression in thiopurine treated patients

Prof. David Berry (London, UK) points to the problems of individualized treatment of epilepsy with 25 currently used drugs by employing various TDM strategies.

Prof. Dobrin Svinarov's lecture on "Vitamin D-renaissance and challenges" shows that calcitriol modulates the expression of 900 target genes linked to immune and various pathological events. Hence, the protective effect of Vitamin D is strongly advocated in inflammatory autoimmune, neoplastic and cardiovascular disorders. The target values (80-160 nmol/L) may be monitored by immunological or chromatographic methods.

Dr. Maria Shipkova (Stuttgart, Germany) discusses the steady increase of drug testing in cases of drug abuse, drug medication, and medico-legal problem solving or compliance testing. Misinterpretation of results depends on many factors such as test principle, performance, detection period, sampling, and specimen used. Special differentiation between instrumental assays (performed by trained laboratory staff in various samples including blood) and noninstrumental ones (performed by nonprofessionals, chiefly in urine, and saliva) is pointed out.

Prof. Giovany Fogazzi (Milan, Italy) extends the diagnostic possibilities of urinary sediment testing by phase contrast microscopy.

According to Prof. Shishenkov (Sofia, Bulgaria), several steps towards urinary sediment standardization (urine sampling by aspiration needle, linked to vacuum chamber; serial microscopy of engraved slides and automated walk away technologies) may enhance precision and accuracy of the results.

The lecture of Prof. Eberhard Wieland "Creatinine and Creatinine Clearance - what is the truth?" raises problems concerning the optimal and timely diagnosis of chronic kidney disease (CKD). As creatinine clearance is prone to many errors to estimate GFR, the outcome is strictly to comply with NKDEP 2007 recommendations for improving the determination of serum creatinine and to utilize standard reference materials such as NIT SRM 967 (2007). Cystatin C may become an alternative GFR marker provided it is analyzed at lower prices.

Three lectures on blood coagulation were of special interest:

- New vision of the coagulation model (Prof. A. Russeva)
- New direct anticoagulants obviating direct routine monitoring of hemostasis (Prof. A. Stancheva))
- Prof. N. Dontcheva discussed HDL-colesterol as the most important marker of CHD and its complications with special emphasis on the method, recommended by recent guidelines.

Prof. Shipkov and T. Bozilova discussed four new tumor markers: HE4 (human epidydimal protein) in early detection of ovarian carcinoma; HER2neu-indicator for breast carcinomas responding well to treatment with monoclonal antibodies; cPSA-a more specific prostate carcinoma marker than PSA; ProGRP (progastrin releasing peptide) in the differential diag-



nosis and follow-up patients with small cell lung carcinoma.

Prof. L. Mitev, et al. characterized cytogenetic changes in 122 patients with refractory anemia. In 43% of the patients clonal defects were identified including abnormalities Yq, 12p, 6q, 9q, 1p, 16q and 11q.

The closing symposium "Quality Assurance of Laboratory Investigations" included three lectures:

- "New Guidelines of Federal Medical Association" by Prof. H. Reinauer (Dusseldorf, Germany). In Germany quality assurance and management are regulated by mandatory guidelines. Recently six different guidelines on quality assurance in laboratory medicine have been issued by Federal Medical Association, whose common bases are the Fundamental Requirements for Quality Assurance in the Medical Laboratory. The accreditation of medical laboratories remains a voluntary action, whereas the quality management according to the guidelines is mandatory.
- "Problems and Perspectives of the National Society of Quality Assurance in 2010" by Prof. K. Tzatchev and Prof. L. Lambreva. The progress of Bulgarian model of quality assurance is discussed.
- "What is new in EN ISO 15189/2011" by Prof.
  T.Shipkov and D. Bozilova. As the immediate task
  of all European and Bulgarian Labs is to comply
  with the requirements of ISO 15189. The version of
  2011 is of special interest by concretizing the
  requirements for the laboratories applying for
  accreditation. Several basic issues, such as 5.1.
  (staff), 5.8 (communication of results) are discussed.

