



The Future of Laboratory Medicine: Researchers Look for New Possible Sources of Error in Order to Guarantee Patient Safety

by Gabriel Lima-Oliveira Brazilian Society of Clinical Analyses in Sao Paulo State, Brazil & MERCOSUL: Sector Committee of Clinical Analyses and in Vitro Diagnostics

Nowadays important organization like World Health Organization - WHO and International Federation of Clinical Chemistry and Laboratory Medicine - IFCC are intensively working to decrease laboratory error thus guaranteeing patient safety.

Many laboratory professionals think that to eliminate laboratory error is enough to make internal quality controls and proficiency tests. The problem is that most frequently errors in laboratory occur in extra-analytical phases (i.e., pre- and post-analytical). Moreover, there are only few routine procedures for the detection of nonconformities in this field of activity. In the preanalytical phase, the procedures involving phlebotomy, critical to obtaining of diagnostic blood specimens, are poorly studied as regards the major sources of errors and the proce-

dures related to the quality control process. Personally, I did study during my master's degree the impact of tourniquet application time during diagnostic blood specimen collection and was able to find a new way to eliminate this problem by transillumination.

From a practical point of view, the tourniquet-induced venous stasis promotes the exit of water, diffusible ions, and low molecular weight substances from the vessel thereby increasing the concentration of various blood analytes at the punctured site thus potentially influencing the interpretation of laboratory results. More so, when the vascular microenvironment is subjected to both hypoxia and concurrent stasis, accumulation of some bioproducts ensues such as the protons that have the potential to pro-

mote changes in laboratory parameters.

Thus, the use of tourniquet has the potential to generate false positive results and prospectively induce the caring physicians to adopt undue treatments. On the other hand, transillumination is able to eliminate or greatly reduce these risks on hematological, biochemistry and coagulation laboratory tests. The use of transillumination device is based on cold near-infrared light-emitting diodes (LEDs) whose light is absorbed by intraerythrocyte hemoglobin flowing along the veins. In the course of my PhD program, I am presently dealing with the preanalytical issues both at Verona University (Italy) and at Federal University of Parana (Brazil). The working group, which consists of Prof. Gian Cesare Guidi and Prof. Giuseppe Lippi, Prof. Martina Montagnana and Dr. Gian Luca Salvagno, is helping me to identify the new source of errors to guarantee the patient safety.

I am very lucky because I am a young scientist and this very important working group has opened doors to me. With this working group, I learn, work, and help improve patient safety. If Labs are vital then young scientist are essential to study sources of laboratory errors both to guarantee patient safety and to improve the future of laboratory medicine.

Elections in Berlin

New IFCC and EFCC Executive Boards Elected

At the General Assembly held on Sunday May 15, the new EFCC executive board was elected for the period July 1, 2011- 2013. It is as follows:

President: Dr. Ian WATSON (United Kingdom); Past President: Prof. Andrea Rita Horvath (Hungary); President-Elect: Prof. Mauro Paneghini (Italy); Secretary: Dr. Ana-Maria Simundic (Croatia); Treasurer: Prof. Dr. Peter Schuff-Werner (Germany); Members-At-Large: Dr. Huib Storm (The Netherlands), Prof. Tomas Zima (Czech Republic).

At the Council Meeting held recently in Berlin the IFCC Executive Board was elected to serve for the period January 1, 2012, to December 31, 2014. It is as follows:

President: Graham Beastall (UK); Past President: Jocelyn Hicks (US); Vice President: Howard Morris (AU); Secretary: Sergio Bernardini (IT); Treasurer: Bernard Gouget (FR); Member: Vanessa Steenkamp (ZA); Member: Larry Kricka (US); Member: Ulisses Tuma (BR); Corporate Member: Thomas Brinkmann (Unilabs).

News from the Corporate Members: New Layout for Lab Tests Online Entry Point

Brussels, 5 May 2011 – EDMA is proud to announce that www.labtestsonline.info is now online with a new layout. Aiming at providing a better entry point for patients looking for accurate information on laboratory testing, the new page emphasizes the international scale of the project (14 countries worldwide, 10 of which in continental Europe coordinated by EDMA).

Lab Tests Online offers a clear and easy way to understand information to citizens and physicians about the diverse and advantageous contributions of laboratory medicine to health protection and care. Thus, users can inform themselves about the tests they have been prescribed, the conditions usually related to the assays, and how the success of the treatment is evaluated. To get a better understanding of the project please visit: www.LabTestsOnline.info where you can access all national sites. For more information, please visit the EDMA website or contact: Daniele Dosi, EDMA Communications Officer (Tel. +32 2 777 02 78).

Clinical Chemistry Trainee Council: A New Initiative

During the IFCC WorldLab-EuroMedLab meeting in Berlin, the journal *Clinical Chemistry* launched a new initiative entitled Clinical Chemistry Trainee Council. This initiative is an extension of the educational program of the journal that is meant to reach trainees in clinical chemistry and laboratory medicine throughout the world. The journal currently publishes a variety of educational materials including Clinical Case Studies, Q&A (a virtual roundtable discussion among a group of experts about a hot topic), and the Guide to Scientific Writing (a series of 14 articles). In addition, the journal periodically publishes interviews with world scientific leaders and articles about prominent clinical chemists (Inspiring Minds) that can be of great interest and serve as an inspiration to young scientists. Through the Council, the journal will make these materials available to trainees free of charge. The materials can be accessed via a special website that has been specifically designed for this purpose. The website will also enable the journal to provide the trainees with Webcasts (lectures by leading international scientists), Pearls of Laboratory Medicine (10-15 minute presentations about a laboratory test), and Council Chat (a chat room directed by 6 junior faculty members from around the world). In addition, the trainees will have access to our more than 70 popular podcasts, which have been downloaded over 230,000 times in the last 2 years. To access the website go to www.traineecouncil.org

The recently launched English version of this program targeted over 7,000 MD/PhD trainees and future leaders in clinical chemistry and laboratory medicine in 25 countries. In November of 2011, this initiative will be launched in Spanish during COLABIOCLI in the Dominican Republic, and in 2012 in Russian, Arabic, and Chinese. In the near future, we hope to produce a Portuguese version of the program.

by Nader Rifai, Editor in Chief, *Clinical Chemistry*



【Biochemistry】 【Immunology】 【Coagulation】 【Hematology】 【Urinalysis】

No.1

Chinese Supplier of Biochemistry and Immunology Products

NEW



Chemray 240

Fully Biochemistry

NEW



RT-7600

Hematology

Rayto Life and Analytical Sciences Co., Ltd.

Tel: +86(755)86168182 Fax: +86(755)86168796
E-mail: info@rayto.com <http://www.rayto.com>

VISIT US AT

ACC

2011 ANNUAL MEETING

Booth: 4305