

Canadian Hematology Society
Société Canadienne d'Hématologie



BULLETIN

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NOVEMBER 2006

AMERICAN HEMATOLOGY SOCIETY
48TH ANNUAL MEETING
DECEMBER 9 – 12, 2006
ORANGE COUNTY CONVENTION CENTER
ORLANDO, FLORIDA

CHS RECEPTION
SEAWORLD, ORLANDO
SUNDAY, DECEMBER 10, 2006
6:00 PM – 7:30 PM

Editor Gail Rock

Executive 2006 - 2007

President: Pierre Laneuville

Secretary-Treasurer: Sue Robinson

Vice President: vacant

Past-President: Armand Keating

THE CHS RECEPTION AT ASH IS SCHEDULED FOR SUNDAY, DECEMBER 10, 2006

- 6:00 p.m.** Transfer by bus from the Convention Center to SeaWorld Orlando
Buses will be outside the West Building on International Drive
The entrance of the Ports of Call is located on 7007 SeaWorld Drive
- 6:30 p.m.** Canadian Hematology Society Cocktail at Ports of Call Patio & Gardens
Hors d'oeuvre and beverages will be served
- 7:30 p.m.** End of the CHS cocktail. Individuals who will not be attending the Berlex Canada Research Awards Night may leave right after the CHS Reception at 7:30 p.m.
- 7:30 p.m.** Beginning of the Berlex Canada Research Awards Night in the Wild Artic Plaza
(by invitation only)

We would like to extend our thanks to Berlex and Johnson & Johnson for their support in sponsoring this event.

25TH ANNIVERSARY OF THE BMT PROGRAM IN OTTAWA

In October, the bone marrow transplantation unit at the Ottawa Hospital celebrated its 25th anniversary honouring, in particular, Dr. Lothar Huebsch, the Program Director. I was asked to speak at the closing dinner to describe the activities related to the development of the unrelated bone marrow donor program in Canada - as I had done two years earlier when the Canadian Hematology Society annual meeting featured the topic of cord cell transplantation.

The history of the UBMDR

The history of the Canadian unrelated bone marrow donor registry is particularly interesting as we contemplate the future of cord cell transplantation in Canada. The American Red Cross, through Jeffrey McCullough had begun a registry of unrelated bone marrow donors in the United States. Shortly thereafter, our then Deputy Minister of Health, Monique Begin, approached the Canadian Hematology Society and the Canadian Red Cross Society to consider how unrelated marrow donors could be located in Canada. Originally, it was considered possible that the plateletpheresis registry (already typed HLA donors) could be used for this purpose. However, ethicists and lawyers pointed out that the people who had already been identified as a potential or actual match should not be approached with a specific patient in mind.

Dr. Francine Decary was one of the members of the Red Cross committee so, following her move to Ottawa to become the Deputy Medical Director of the local Red Cross Center, we sought the help of a local lawyer, Mr. Richard Marks, to develop a new approach which overcame the ethical issues that had previously confounded the development of the program. In short, we sent invitations to attend information sessions to our regular blood donors, all the people on the apheresis registry, and approached an equivalent number of members of the public who we contacted through tables set up in shopping centers and in other public places. Any one interested in becoming a bone marrow donor was invited to attend an information session in which we outlined the program, described the procedures and the risks involved and requested consent to donation after a further period of contemplation. These sessions were done on the evenings and weekends by Drs. Ken Smiley, Francine Decary, Lothar Huebsch, Bert Aye and me with the assistance of the nursing staff of the Ottawa Centre of the Red Cross. We established a link with the American Registry through Dr. McCullough, and, amazingly, found our first match after only 500 donors were registered. Subsequently, following an intensive search for a male donor for a member of the RCMP in Vancouver and considerable fundraising at that site, it was agreed to move the main communication site, for liaison with the United States, to Vancouver with Dr. Noel Buskard who had previously trained in marrow transplantation. Winnipeg was next on board with Dr. Marlis Schroeder, an enthusiastic proponent.

Subsequently, we wrote a submission to the governments requesting funding to take the program nationally and the rest, as they say, is history.

I know that everyone involved with this original pilot project in Ottawa, the data from which was first published in the CMAJ in 1987⁽¹⁾, feel as proud as I do every time we hear of another successful match made through this now very extensive program.

However, in considering the history of this registry, it is important to note that technology is changing and it is time, as addressed at the 2004 CHS annual meeting, that we now move forward to consider the development of a national cord cell registry. Certainly, at the recent meeting of the AABB in Miami, there were a very large number of papers related to cord cell transplantation. Yet little activity is ongoing in Canada. Whether the program should be developed within the Canadian Blood Services, as a separate federal program, or as a program coordinated nationally, but linked through the individual provinces - most of which have now developed some form of blood program through the hospitals, remains to be seen. However, it is abundantly clear that it is time to move forward. In this regard, I have summarized some of the more recent events for your consideration.

Cord cells: current status

While Bone Marrow transplantation is used as a therapy for a variety of diseases, finding the suitable HLA match can be quite difficult. 1 in 40,000 donors provides a perfect match and can take up to four months to locate. Moreover, life-threatening graft-versus-host disease occurs in more than 50% of transplants from unrelated donors.

Umbilical cord blood offers a viable alternative to BMT. The numbers of granulocyte-macrophage progenitor cells in UCB are equal to or greater than that of the adult bone marrow. Its transplantation requires less strict matching parameters, providing a wider pool of donor cells, and incurs fewer incidence of GVHD. UCB provides a virtually unlimited source of stem cells that can be collected without the problems associated with bone marrow collection. Once processed and stored, it is available immediately.

Some estimates place the market for cell-based therapies at \$30 billion by the end of the 2010, even though most of the research is still on the preclinical level.

Because the success of UCB engraftment is directly proportional to the number of cells transplanted, it has mostly been given to pediatric patients. To date, 9,000 UCB transplants have been successfully grafted worldwide. However, with improved processing and storage techniques it is now conceivable to recover over 90% of the stem cells in the initial sample. In addition, ex vivo expansion of stem cells and grafting of combined samples to increase cell dose has shown increasing success in transplantation in adults. As of 2005, over a quarter of all recipients were over 18 years.

Cord Blood Cryopreservation

There are three reasons for stem cell loss during processing and preservation stages. First are poor volume-reduction techniques. UCB is collected in various volumes, but the storage volume has to be consistent. Traditional methods, such as via Ficoll density gradients, result on average, in 25% loss of viable CD34+ cells. Next, incorrect rates and temperatures of sample freezing add 10% loss of cell viability. Finally, storage conditions at above -196°C combined with transient warming events lead to another 20% loss of viability.

Stem Cell Therapeutic and Research Act of 2005

Phil Coelho, President and CEO of Thermogenesis, was instrumental in drafting H. R. 2520, introduced in 2003 by Representative Christopher Smith (R-NJ). The bill was signed by President Bush in December 2005. It requires the Health Resources and Services Administration to enter into contracts with qualified banks for the purposes of establishing and maintaining the National Network of Cord Blood Stem Cell banks, called C.W. Bill Young Cell Transplantation Program.

The legislation allocates \$79 million over five years to increase the amount of available human cord blood stem cells to at least 150,000 high-quality units. Some of this funding will be used to purchase cryopreservation equipment such as the \$150 AXP processing disposable or \$250, 000 BoiArchive System, which stores and preserves 3,626 cord blood units. The total cost to collect and process one unit comes to about \$1,500, which includes testing for communicable diseases and tissue and DNA typing.

New York Blood Center, GE Announce Milestone in Cord Blood Banking

According to Pablo Rubinstein, MD, director of the NCBP, ...performance data compiled by Ludy Dobrila, Ph.D Associate Director of Processing, and presented on May 5th at the International Society of Cellular Therapy (ISCT Annual Meeting in Berlin, Germany, showed that the AXP can harvest 97 percent of the mononuclear cells (MNC) population, which contains the stem cells) from cord blood consistently and efficiently. When these cells are frozen and archived in the BioArchive System, the cell viabilities after thawing exceed 94 percent.

Cord blood processing labs must use efficient and reliable methods for processing, cryopreserving, freezing and storing cord blood to maximize recovery and viability of hematopoietic stem and progenitor cells for bone marrow transplantation. These cells are critical for patients who require stem cell reconstitution in the treatment of diseases like acute leukemia lymphoma and numerous genetic diseases.

NYBC pioneered the use of umbilical cord blood as a source of hematopoietic (blood-forming) stem cells for bone marrow restoration after receiving a three-year research and demonstration Award from the National Heart, Lung and Blood Institute of the National Institutes of Health (NIH). With the NIH support, Rubinstein and NYBC established the NCBP as the world's first public cord blood bank. This program requests mothers to donate the blood left in the babies' umbilical cord blood and placental veins after birth for any patient who might need it. Over 33,000 donations later and more than 2,000 patients transplanted at 150-plus clinical centers around the world, the Blood Center's program has shown that cord blood can be perfectly matched to the patient, a special benefit for patients with rare tissue types including members of ethnic minorities.

Reference

⁽¹⁾ Rock G, Décary F, McCombie N, Smiley RK, Aye MT, Huebsch L. Registry of unrelated bone marrow donors. *Canadian Medical Association Journal* 1987; 137: 294-296

INTERNATIONAL SOCIETY ON THROMBOSIS & HAEMOSTASIS SCIENTIFIC & STANDARDIZATION COMMITTEE (SSC) INTERNATIONAL REGISTRY

The SSC Subcommittee on Perinatal and Pediatric Hemostasis would like to remind members of SevNBleep registry recently created. The registry is described below for your information and possible participation.

The SevNBleep registry is an International Registry endorsed by the SSC Perinatal and Pediatric Hemostasis subcommittee of the ISTH that is gathering information on use of rFVIIa in nonHemophilia bleeding in Pediatrics. This registry is for all children from ages 0-21. The registry has been created to gather evidence for the treatment of life-threatening bleeding with rFVIIa. Access to the registry is located at the URL <http://www.med.unc.edu/isth/databases/sevenbleep.html>

The system registers individual cases when rFVIIa has been administered to control massive haemorrhage/excessive bleeding. The system is based on a stable Oracle 9i platform with secure web-based interface for data entry, and the software is supported by the University of Brno, Czech republic and overseen by Dr. Jan Blatny, Dr. Prasad Mathew and the chair of the SSC Subcommittee on Perinatal and Pediatric Hemostasis, Dr. Patti Massicotte. Users log in with their user name and password and the system enables them to view/edit existing episodes on the central server and add new ones.

This site is not supported by Novo Nordisk, Inc. and there is no funding support for the individual centers. They are dependant on the altruism and the "goodness of your hearts" to register patients on this website. If everyone agrees to put at least one-two patients on this site then the registry will be a success. Each of the investigators will be acknowledged in any publications resulting from this. It is hoped to use this data to pave the way for prospective studies using rFVIIa. Thank you for your support of this registry.

Sincerely,

Dr. Jan Blatny and Dr. Prasad Mathew

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THE ARGENTINEAN HEMATOLOGY SOCIETY IS HONOURING THE CANADIAN HEMATOLOGY SOCIETY ON APRIL 19-20, 2007 IN BUENOS AIRES, ARGENTINA

SPEAKERS:

PROFESSOR ANDREW BELCH

PROFESSOR OF MEDICINE
DIVISION OF HEMATOLOGY AND ONCOLOGY
CROSS CANCER INSTITUTE, UNIVERSITY OF ALBERTA

PROFESSOR VICTOR BLANCHETTE

CHIEF, DIVISION OF HEMATOLOGY/ONCOLOGY
PROFESSOR OF PEDIATRICS, UNIVERSITY OF TORONTO, THE HOSPITAL FOR SICK CHILDREN

PROFESSOR JOSEPH CONNORS

CHAIR, LYMPHOMA TUMOR GROUP
CLINICAL PROFESSOR, UNIVERSITY OF BRITISH COLUMBIA,
BRITISH COLUMBIA CANCER AGENCY, VANCOUVER

PROFESSOR MARK CROWTHER

ASSOCIATE PROFESSOR, McMASTER UNIVERSITY
HEAD OF SERVICE OF HEMATOLOGY, ST. JOSEPH'S HOSPITAL, ONTARIO

FOR FURTHER INFORMATION, PLEASE GO TO THEIR WEBSITE:direction@hematologia.anm.edu.ar

Letter sent to board members of the CHS:

As a member of the Technical Committee on Blood and Blood Components, I attended the October, 2005 Canadian Standards Association meeting and have the following report:

The new draft (revision 4) of the 2nd edition of the "Standard for Blood and Blood Components" was recently reviewed by the Technical Committee to the Canadian Standards Association. The Technical Committee includes health care professionals as well as representatives of the federal, provincial and territorial governments, user groups, and blood centres.

The Scope of the Standards encompasses the following:

1. The Standard provides management requirements for facilities that collect, process, store and use human blood and blood components for transfusion. It addresses issues of safety and efficacy for recipients, and safety for facility personnel and others who are exposed to or potentially affected by blood and blood components.
2. The Standard applies to blood centres and transfusion services and to any other organizations that collect, process, store, or use human blood or blood components for transfusion.
3. The Standard is not intended to replace detailed specifications and operating procedures; rather, it is intended for use in their preparation. It includes requirements for policies and procedures, quality management, personnel, physical plant, and equipment. In addition, the Standard outlines specific requirements to be included in the facility's operating procedures for the following activities
 - (a) donor selection
 - (b) collection of blood and blood components
 - (c) preparation, testing, and labelling
 - (d) storage, packing and transportation
 - (e) acceptance criteria, pre-transfusion testing and selection of components
 - (f) transfusion
 - (g) autologous blood collection and transfusion
 - (h) apheresis

- (i) designated donations and directed donations
- (j) walking donor programs
- (k) home transfusion
- (l) adverse event monitoring and corrective action
- (m) record management
- (n) validation and maintenance of computer systems

The Standard also provides requirements for the administration of Rh immune globulin.

Note: Although Rh immune globulin is considered to be a blood product rather than a blood component, requirements for administration are included in the Standard because of the frequency of use and its importance in the treatment of Rh-negative pregnant women, and the need for serological testing of recipients.

4. The Standard does not include requirements for activities associated with
- (a) the collection of source plasma and
 - (b) the processing, manufacture or distribution of plasma derivatives and related blood products, including solvent detergent plasma

It is intended that, when complete, the revised Standard will be submitted to the Standards Council of Canada for approval as a National Standard of Canada. Details are available on the CSA web site at www.csa.ca Public consultation on the document will be sought by early winter.

Please note that I will put this report into the next newsletter and secondly, that it should be followed up because there are potential issues for the CHS vis a vis laboratory issues.

Sincerely,
Dr. G. Rock



GTC BIOTHERAPEUTICS

RECOMBIANT HUMAN ANTITHROMBIN CLINICAL TRIAL UPDATE

On August 2nd, the European Commission granted market authorization to A Tryn®, recombinant Human antithrombin, for the prophylaxis of venous thromboembolism in surgery of patients with hereditary antithrombin deficiency (HD)

We continue to recruit patients for our second international study supporting an application for US registration (HD patients undergoing surgery and delivery), and for expansion of the use of A Tryn® in Europe.

Contact Mel Carlson, Senior Director at ATinfo@GTC-BIO.com

JOB POSTING: Director of the Calgary-based Alberta Blood and Marrow Transplant Program

The Division of Hematology, Departments of Oncology and Medicine, University of Calgary, Alberta Cancer Board (ACB), Tom Baker Cancer Centre (TBCC), and the Calgary Health Region (CHR), invite applications for a full-time academic position as Director of the Calgary-based Alberta Blood and Marrow Transplant Program. Duties include participation in clinical practice and teaching; developing, reviewing, and monitoring practice standards and policies in accordance with Health Canada and FACT standards; cooperatively managing the program budget; conducting independent research; and fostering career development of others. Qualifications include an MD or equivalent, certification in Internal Medicine and Hematology or Medical Oncology, eligibility for licensure in the Province of Alberta, at least 7 years clinical experience in BMT, academic rank of Associate Professor or Professor, a proven track record in clinical or translational BMT research, and demonstrated leadership and administrative skills. Please submit curriculum vitae, a statement of career goals and the names of three referees by December 15, 2006 to:

Douglas Stewart, MD, FRCPC
Chief, Division of Hematology and Hematological Malignancies
Departments of Medicine and Oncology, University of Calgary
Tom Baker Cancer Centre , 1331 – 29 Street N.W.
Calgary, AB, Canada T2N 4N2
e-mail: douglast@cancerboard.ab.ca

*SEASONS GREETINGS AND
OUR VERY BEST WISHES FOR 2007*

