

The Microenvironment



THE CANADIAN
HEMATOLOGY
SOCIETY

SOCIÉTÉ
CANADIENNE
D'HÉMATOLOGIE

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NEWSLETTER NOVEMBER 2020

MESSAGE FROM THE PRESIDENT

DEAR COLLEAGUES

At this time of year, we look forward to ASH and meeting with friends at the Canadian Hematology Society Gala. For the first time in the 62 year history the ASH meeting will have a virtual platform. As such, we have planned a Virtual CHS Gala. Please plan to join us for the presentation of Paper of the Year, Abstract of the Year, and the Lifetime Achievement awards. We will forward login information to you soon and look forward to a celebration of Canadian Hematology. In December, I will complete a 3 year term as President of the CHS. It is a great honour to work with outstanding leaders from across the country who form the Executive Board and to see our future leaders emerging with Resident representatives. A special thank you to Dr. Gail Rock and Nathalie Brun for their operational support. As we continue to adapt to life in a pandemic, it is more important than ever to take care of yourselves and each other. Please be kind and stay safe. We will be together again.

Nicole



Dr. Nicole Laferriere
President, CHS

LE MESSAGE DE LA PRÉSIDENTE

CHERS COLLÈGUES

À cette période de l'année, nous avons hâte de participer à la conférence de la Société américaine d'hématologie (ASH) et de pouvoir rencontrer des amis au gala de la Société canadienne d'hématologie. Pour la première fois en 62 ans, la conférence de l'ASH disposera d'une plateforme virtuelle. À ce titre, nous avons prévu organiser le gala de la SCH de façon virtuelle. Nous vous invitons de nous rejoindre pour la présentation des prix de l'article de l'année, du résumé analytique de l'année et du prix d'excellence pour l'ensemble de ses réalisations. Nous vous ferons parvenir bientôt les informations afin de pouvoir vous connecter et nous nous réjouissons à la perspective d'une célébration de l'hématologie au Canada. En décembre, je terminerai un mandat de 3 ans en tant que président de la SCH. C'est un grand honneur de travailler avec des leaders exceptionnels de partout dans le pays qui forment le Conseil exécutif et de voir nos futurs leaders émerger avec des représentants résidents. Un merci particulier au Dr Gail Rock et à Nathalie Brun pour leur soutien opérationnel. Alors que nous continuons à nous adapter à la vie en période de pandémie, il est plus important que jamais de prendre soin de soi et des autres. Soyez aimables et prudents. Nous nous retrouverons.

Nicole

Canadian Hematology Society – Annual General Meeting

**2020 Dec 6, 2020 – 7:00 pm EST
via Zoom**

AGENDA

1. Welcome and President's Report
2. Secretary's Report and Membership Update
3. Chief Resident's Report – Win CASH @ ASH Round 1
4. Elections – President, Vice-President, Treasurer, Secretary
5. **Paper of the Year Award:** Dr. Clive Kearon, "Diagnosis of Pulmonary Embolism with D-Dimer Adjusted to Clinical Probability"
6. CASH @ ASH Round 2
7. **Abstract Awards:**

The John H. Crookston Award- Dr. Christopher Lemieux, "Outcomes after Autologous Stem Cell Transplant in Patients with Relapsed Multiple Myeloma"

AND

The Stephen Couban Award- Dr. Robert Puckrin, "Lack of Effectiveness of Intravenous High-Dose Methotrexate for Prevention of CNS Relapse in Patients with High-Risk DLBCL: A Retrospective Analysis from Alberta, Canada"

8. Update on Hematology Training in Canada
9. CASH @ ASH Round 3
10. **Lifetime Achievement Award:** Dr. Dale Dotten St. Michael's Hospital Toronto ON.
11. CASH @ ASH Grand Prize
12. Close

SAVE THE DATE!

The CHS is pleased to announce our
Annual General Meeting
will be held virtually on
December 6, 2020
at 7:00 pm EST.

It is important for all of us to come together as Canadian hematologists to celebrate the great work that continues in these uncertain times. While we would prefer to meet in person we are looking forward to showcasing Canadian hematology research, electing a new board of directors as well as presenting the annual Lifetime Achievement Award. We will also be hosting trivia games throughout the event with the opportunity to win

Cash @ ASH

Download the **Kahoot! App**
to your phone
(iPhone and Android
available) OR join on
your second screen
at kahoot.it for your
chance to win prizes
with **CASH @ ASH** on
the night of the event.



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THE CANADIAN HEMATOLOGY SOCIETY CELEBRATES 50 YEARS OF SERVICE TO CANADIAN HEMATOLOGY PRACTITIONERS, IN 2020!



GENESIS OF THE CHS

The early stages of the founding of the CHS are rooted in the constant quandary back in the late 1960s, that Canadian hematologists had no democratic mechanism to choose their own representatives.

Consequently, plans were made for a preliminary meeting to determine whether there was sufficient interest among Canada's hematologists to organize and address the issue.

Dr. Peter Galbraith undertook the task of writing to those he knew at the academic centres to develop a list of Canadian hematologists, in preparation for the initial gathering, held in Vancouver in January of 1969, at the time of the Royal College Annual Meeting.

INITIAL MEETING

That Vancouver meeting, organized by Wally Thomas, turned out to be a very well attended event, where abundant enthusiasm was evident for the concept of a Canadian Hematology Society. It was this recognition by Canadian hematologists of their acute need for a structured, democratic mechanism for representation at the international level combined with the positive mandate from the initial Vancouver meeting, that were the driving force behind the foundation of our present day society.

The outcome of this meeting was the appointment of **Drs Thomas, B Cooper** (Montreal) and **R. Langley** (Halifax) to pursue the matter. Then, at the December 1969 annual meeting of ASH, 57 Canadian hematologists expressed their support and asked Dr. Cooper to chair a founding meeting in Montreal on July 21, 1970. Forty two hematologists were present and there was a unanimous agreement to create the Hematology Society. An executive committee was elected consisting of **Dr. R K Smiley** (Ottawa) as chairman with **Dr. W Corbett** (Kingston), **Dr. L Cousineau** (Sherbrook) and **Dr. Cooper** as members.

FIRST ANNUAL MEETING

The first annual meeting of the Society was held in the Richelieu room of the Chateau Laurier in Ottawa on January 20, 1971 with 66 members present, subsequently the CHS was incorporated in May 1971.

A decision was made that membership was to be open to any professional who, in the opinion of the executive, had a serious interest in any aspect of hematology. In 1990 Dr. Smiley prepared a document reporting on the subsequent history of the CHS from its founding in 1970 through to that date and this information is available in the office of the society.

PAST PRESIDENTS

1970/1972: Dr. R.K Smiley
1972/1973: Dr. L. Isaels
1974/1975: Dr. A Zipursky
1975/1977: Dr. R. Langley
1978/1979: Dr. B. Cooper
1980/1981: Dr. J. Hirsch
1982/1983: Dr. B. Longpre
1984/1985: Dr. P. Galbraith
1986/1987: Dr. D. Cowan
1988/1990: Dr. B Whittemore
1991/1992: Dr. N. Buskard
1992/1993: Dr. P. LeBlond
1994/1995: Dr. John Kelton
1996/1998: Dr. Ken Shumak
1998/2000: Dr. Man-Chiu Poon
2001/2003: Dr. Gail Rock
2004/2005: Dr. Armand Keating
2005/2006: Dr. Pierre Laneuville
2007/2009: Dr. Jerry Teitel
2010/2011: Dr. Tom Nevill
2012/2013: Dr. Stephen Couban
2014/2015: Dr. Aaron Schimmer
2016/2017: Dr. Lynn Savoie
2018/2020: Dr. Nicole Laferriere

TASK GROUP REPORT

New Initiative to Improve Tracking of Plasma Protein Products

Contributed by: Bruce Ritchie, Angel Bhatal, David Page

Blood Traceability Task Group: Connecting the Dots in the Canadian Blood System

In a collaborative effort, Canadian Blood Services, Héma-Québec, and GS1 Canada have created a community-driven task group to establish a position statement, roadmap and recommended policies to advance a system-wide approach for vein-to-vein tracking of plasma derivatives in Canada.

The vision of the task group is to connect the dots, enabling vein-to-vein traceability and more effective sharing of information for blood safety and supply.

More than 20 years after the Krever Inquiry, commissioned by the federal government when Canadians received hepatitis C and HIV infected blood and blood products, some key recommendations remain unrealized. Justice Krever's Final Report recommended that the blood system be operated in "an open and accessible manner", "have a national integrated database to store and manage information about donors, donations, and recipients", and that there be "an effective exchange of information between the national blood services and all hospitals that supply fresh blood components and blood products".

Regulations and policies to support standardized system-wide traceability of the Canadian blood supply and solution providers (i.e. laboratory information systems - LIS, electronic medical health records - EMR, inventory management systems, and registries) have yet to be implemented in Canada, although these standards and mandates exist globally. In 2005, GS1 and ISBT agreed that the GS1 standard be used to identify pharmaceuticals and purified plasma products / plasma derivatives, whereas the ISBT standard identifies blood and blood products (i.e. single-donor products). In an effort to combat fraudulent products from entering the market, the United States Food and Drug Administration (US FDA) and European Medicines Agency (EMA) mandated addition of a

standardized barcode to the label of regulated plasma purified products. Then, in 2013, the FDA and EMA required the addition of a serial number to the smallest package unit (serialization) of regulated manufactured products. The Australian Therapeutic Goods Administration (TGA) completed consultation on serialization of medicines in July 2020 and is expected to rule in July 2021. Canada has yet to establish regulations or standards in standardized barcoding or serialization of labels. This means that Canada does not have efficient plasma product tracking or access to state-of-the-art tools. Roche has block-chain technology to facilitate the home delivery of products outside of Canada but is turning off their technology for product tracking in Canada because of the lack of Canadian regulations and standards on tracking and home delivery of these products.

Healthcare providers and thousands of Canadian patients require regulations and systems to support the tracking and tracing of blood products injected/infused in patient homes. This is especially critical during the Covid-19 pandemic, when in-home delivery, as opposed to hospital pick-up, has the potential to reduce reliance on scarce healthcare resources and reduce Covid-19 exposure risk. CBS and Héma-Québec have funded a service to do just that, but tracking issues impede implementation of the service. Recent shortages and gluts of short-dated product speak to the need for visibility of the plasma product inventory.

The Blood Traceability Task Group is an action-oriented collaboration that will champion global standards, serialization, and barcoding initiatives to harmonize community policies and Canadian regulations with global best practices. This collaboration will enable the sector to track recalled product, trace home deliveries, enhance patient safety through accurate EMR clinical record tracking, support vein-to-vein traceability, manage product shortages/wastage, and enable shared information between solution providers (i.e. LIS, EMR, registries, inventory management systems). The group will identify community barriers and propose solutions.

TASK GROUP REPORT CONTINUED

Objectives of the initiative include to:

- Establish a roadmap and position statement to provide vein-to-vein traceability and post-market surveillance.
- Advance an implementation roadmap for the integration of GS1 and ISBT standards.
- Facilitate peer-to-peer sharing aimed at supporting knowledge transfer and issue resolution.
- Mandate Canadian regulations to harmonize with global leaders' requirements.
- Establish a solution provider policy with a recommended infrastructure to share information and the use of standards.
- Enhance sector-wide efficiencies, safety, visibility and supply security.
- Improve inventory management and financial sustainability.
- Establish a community management governance structure to lead the strategy.

To achieve its objectives, the task group requires participation of senior subject matter experts and leaders, who can operate within the group's scope and have authority to act on behalf of their respective organizations. Participants will include, but are not limited to, plasma product manufacturers, blood product distributors, inventory management systems, the Canadian Bleeding Disorder Registry, healthcare professionals, laboratory information systems, EMR providers, transfusion medicine specialists, hospitals and clinics, Health Canada, Canadian Standards Association, patient groups, and GS1 Canada.

Leadership

- GS1 Canada Facilitator – Dr. Angel Bhathal, Senior Director, Industry Relations – Pharmacy
- Tri-Chair – Dr. Bruce Ritchie, Professor of Medicine, University of Alberta
- Tri-Chair – Héma-Québec, Caroline Ah-Kion and Rima Khalil
- Tri-Chair – Canadian Blood Services, Sylvain Grenier

Bruce Ritchie, Professor of Medicine, University of Alberta

Angel Bhathal, Senior Director, Industry Relations – Pharmacy / Directrice principale, Relations avec l'industrie – Pharmacie, GS1 Canada

David Page, Network of Rare Blood Disorder Organizations

Dear Canadian Hematology Society physician member,

**We invite you to participate in a practice survey.
Participation in the survey is voluntary.**

The survey is regarding the primary and secondary thromboprophylaxis of patients with Philadelphia chromosome-negative myeloproliferative neoplasms, which include polycythemia vera, essential thrombocythemia, and primary myelofibrosis. These diseases are rare, chronic hematological malignancies. The presence and allele burden of the JAK2 mutation are associated with an increased thrombotic risk. As such, we would very much appreciate your help in understanding your current practice surrounding the management of JAK2-positive myeloproliferative neoplasm patients and in determining factors that would prompt you to adopt a new thromboprophylaxis strategy in these patients. We expect the survey to take 10 minutes to complete. All answers will be anonymous.

If you would like to participate in this study, please click on the link below to access the survey:
<https://www.surveymonkey.ca/r/CM5V7Q8>

By completing the survey, you are providing your consent to participate in the study.

If one or more subsequent iterations are needed for the modified Delphi process, other rounds of invitations will be sent out. We expect the survey to require 1-3 iterations in order to complete the modified Delphi process.

This study is filed at the Ottawa Health Sciences Network Research Ethics Board:
#20200507-01H.

If you have any questions, please contact the study's Principal Investigator, **Dr. Miriam Kimpton**, at mkimpton@toh.ca or **613-737-8899**, extension **77190**.

Sincerely,

Miriam Kimpton

Thrombosis Physician, Department of Medicine,
The Ottawa Hospital
Clinical Investigator, Ottawa Hospital Research Institute

HISTORY CORNER

Maud Leonora Menten

Contributed by

Dr. Tom Nevill MD, FRCPC

Vancouver

General Hospital



Maud Menten was born in Port Lambton, Ontario on March 20, 1879. As a child, her family moved to Harrison Mills, British Columbia where her mother was a postmistress and her father piloted boats across the Fraser River to Chilliwack. Young Maud had an inquiring mind and excelled academically. After completing high school, she enrolled in the University of Toronto where she obtained her BA in 1904 and a Masters in physiology in 1907. At the time, research positions were not available in Canada for women and Menten was determined to pursue a career in research. She became a Fellow at the Rockefeller Institute for Medical Research in New York City and began investigating the use of Radium bromide in malignant tumours in rats. She was the primary author on the publication of this research, the Rockefeller Institute's first monograph. With this experience under her belt, she returned to Toronto where she became one of the first women admitted to the U of T Medical School, graduating with her MD in 1911.

In 1912, Dr. Menten travelled to Berlin to study enzyme kinetics with Leonor Michaelis, a renowned German biochemist. Together, they derived the "Michaelis-Menten equation" and published their work in 1913. The paper detailed the velocity of chemical reactions in relation to the concentration of the substrates and is widely recognized as the foundation of modern enzymology. Maude Menten returned to North America to study cancer at Case Western Reserve University in Cleveland and went on to obtain her PhD in biochemistry from the University of Chicago in 1916. She followed on this by taking a position as an Assistant Professor in Pathology at the University of Pittsburgh where she worked until her retirement from the University at the age of 71 in 1950.

Maude Menten's time at the University of Pittsburgh was extremely productive. She investigated the mobility of

proteins in electric fields – protein electrophoresis - and was the first to study the size and mobility of hemoglobin molecules in 1944, something that is often incorrectly attributed to Linus Pauling. She focused her work on the properties of hemoglobin but one of Dr. Menten's major accomplishments was the development of the azo-dye reaction that allowed for the identification of alkaline phosphatase within cells. Not only did the leukocyte alkaline phosphatase score become a useful diagnostic tool in chronic myeloid leukemia, the staining of cellular components was key in the development of the field of histochemistry – vital in the management of acute leukemia in the era prior to immunophenotyping with flow cytometry. Dr. Menten's work also included histochemical analysis of glycogen and nucleic acids in normal and leukemic bone marrow lymphocytes. Her characterization of Streptococcal toxins was instrumental in the development of immunization strategies. Despite her accomplishments, the University of Pittsburgh did not promote her to full Professor until the age of 69, two years before her retirement from the University.

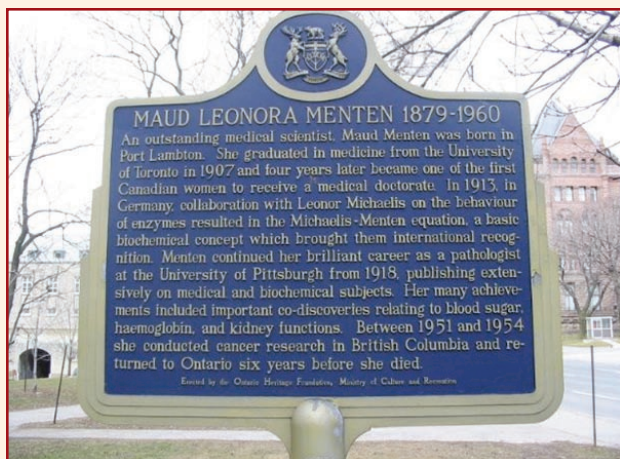
Appropriately described as a "petite dynamo", Maud Menten often worked 18-hour days in Pittsburgh where she drove a Ford Model T to work from 1918 until her retirement in 1950. The way she dressed was unique and she favoured Paris hats, blue dresses and Buster Brown shoes. To medical students, interns, residents and



fellows, she was an inspiring teacher; she was also a tireless advocate for the sick children in the hospital but she saved her greatest enthusiasm for medical research, authoring close to 100 papers. This is not to say that she did not have interests outside of work. She spoke 6 languages, played the

clarinet, did paintings that were shown in art exhibitions, was a mountain climber and even went on an arctic expedition.

In 1951, Maud Menten returned to British Columbia where she was a Research Fellow at the BC Medical Research Institute until her health began to fail and, in 1954, she went back to Ontario where she died in Leamington on July 17, 1960 at the age of 81. Her accomplishments may have been underappreciated during her



lifetime but her reputation grew after her passing. At the University of Pittsburgh, a memorial lecture and a research chair bear her name; plaques commemorating her life were dedicated at the University of Toronto in July 1979 and thereafter in the town of Port Lambton, Ontario. However, her place in Canadian medical history was recognized when Maud Leonora Menten was inducted into the Canadian Medical Hall of Fame in 1998.

Skloot, R. Some Called Her Miss Menten.
U of Pittsburgh Medical School Magazine, 2000.

Canadian Hematology Society Chief Resident 2020

The CHS Executive Board is pleased to welcome Dr. YAN XU as the CHS Chief Resident for 2020-2021.

Dr Xu is a second-year hematology fellow and co-Chief Resident of the program at the University of Ottawa. Having completed medical school at Queen's University and Internal Medicine training at the University of Toronto. Dr. Xu's clinical and research interests are in Thrombosis and Antithrombotic therapy.



Dr. YAN XU

Jerry Scott Day 2020

The 12th Annual National Hematology Retreat was held on July 17 and 18, 2020. For the first time ever, the two day event was held virtually via the Zoom platform rather than having all Canadian trainees meet in Toronto for OSCEs, workshops and the Jerry Scott Day lecture series. The National Retreat, coordinated by the U of T Hematology Program, could not have been possible without the tremendous support of Hematology program directors, OSCE and workshop coordinators, examiners, presenters and the National Hematology Retreat coordinators (Dr. Martina Trinkaus, Dr. Eric Tseng and Ms. Nina Chana).

The retreat's theme this year included Transfusion Medicine workshops with a variety of case-based teaching, led with virtual "breakout rooms", on approaches and management of common (and less common) transfusion reactions. The afternoon Jerry Scott education half-day began with project updates presented by Drs. Michael Scott and Jessie Peng, winners of the Hematology Education and QI Research Award.

This was followed by a scientific update in venous thromboembolism by Dr. Bill Geerts from the University of Toronto in which emerging data on IV and catheter-directed thrombolysis in VTE were reviewed. This was followed by a state-of-the-art presentation on CAR-T therapy by Dr. Ronan Foley from McMaster University, where key clinical trial results as well as management of immediate and long-term toxicities were reviewed. Finally, Dr. Chris Hillis from McMaster University presented the latest advances in chronic myeloid disorders, with an overview of myeloproliferative disorders and MDS. We are very grateful to all presenters, session facilitators and the Jerry Scott Day coordinators for their tremendous support for hematology trainees!

WHAT'S HAPPENING

CONCOR-1: Immunity, Opportunity and Unity

Contributed by: Dr. Donald Arnold MD, MSc, FRCPC, McMaster University

Authors: Kayla J. Lucier, Erin Jamula, Michelle Zeller, Donald M. Arnold

The novel coronavirus SARS-CoV-2 outbreak progressed into a worldwide pandemic at a speed the global community could not have anticipated. As the outbreak progressed, COVID-19 convalescent plasma (CCP) was being studied and used to treat patients with COVID-19 in China and other countries. CCP is plasma that contains neutralizing antibodies collected from individuals who have recovered from COVID-19. The theory is that transfusing CCP to individuals actively fighting COVID-19 transfers transient protection against the virus from immunized donor to non-immunized individual through a process known as 'passive immunization'. It is hypothesized that passive immunization has the potential to improve patient outcomes and reduce the risk of death from COVID-19.

Convalescent plasma has been used for over a century to treat different viral infections, including Influenza, SARS and Ebola; however, there has never been a definitive, randomized clinical trial that proves its safety or efficacy. As the COVID-19 pandemic spread, the Canadian blood suppliers – Canadian Blood Services and Héma-Québec – made a commitment to begin producing CCP. Meanwhile, on the clinical front, Dr. Donald Arnold, Dr. Jeannie Callum, and Dr. Philippe

Bégin recognized the need to rapidly develop interventions in the context of a well-designed clinical trial. Working together and in collaboration with the Canadian blood suppliers, they began intensive planning with colleagues from coast-to-coast. Thus, the **Randomized, Open-Label Trial of CONvalescent Plasma for Hospitalized Adults With**



Dr. Donald Arnold

Acute COVID-19 Respiratory Illness (CONCOR-1) was born. Since March 24th, 2020, a multi-disciplinary group of experts has been dedicated to CONCOR-1, staying connected via regular (and at times daily) virtual meetings and thousands of e-mails.

While it would typically take months or years to design and initiate such a randomized trial, the first donation of CCP in Québec was made one month to the day after the inaugural CONCOR-1 meeting in March. Five days later, the first CCP donation was made to Canadian Blood Services. The first patient enrolled in the CONCOR-1 study in Canada was randomized less than one month later in mid-May. As of September 24th, the CONCOR-1 trial has 58 participating hospitals and has enrolled 130 patients –six months to the day from that first meeting. These hospitals represent coverage in provinces across Canada and in New York City, with other Canadian and international sites expected to join in the coming months.

A study of this magnitude pressing forward at an unprecedented speed is made possible only by the dedication of a huge team of physicians, scientists, research coordinators and assistants, students, biostatisticians, and medical laboratory technologists. Early on, we recognized the need to engage patients and community members as collaborators in this trial, prompting the creation of the CONCOR-1 Community Advisory Committee, which includes members of

Dear Society Colleagues,

On **September 30, 2020**, Choosing Wisely launched a major initiative called **Using Blood Wisely**. They have developed a tool kit that includes email templates and graphics to use and adapt as needed.

For more information, please visit:

www.UsingBloodWisely.ca.

minority groups most affected by the pandemic; family members of long-term care residents; front line health care workers; COVID-19 patients; and blood donors. As we move forward and bring sites outside of North America onto the CONCOR-1 team, we are reminded daily of all the moving parts that make this trial possible. Study coordination at the best of times takes persistence, commitment, and collegiality. Research coordination during a pandemic requires flexibility, creativity, and resiliency – characteristics found in abundance within the CONCOR-1 team.

Ultimately, we hope CCP will be an effective and safe treatment for COVID-19; but as a scientific community dedicated to our patients, we need to be sure. Once completed, the CONCOR-1 trial will teach us whether CCP improves outcomes for patients admitted to the ward. During the process, the trial has already taught how to be nimble and to unite during times of extreme need.

To stay connected and updated on our progress, please follow the CONCOR-1 trial on **Twitter** (<https://twitter.com/CONCOR1Trial>) and visit our **website** (<https://CONCOR1.ca>).

NEW CANADIAN TRIAL IN APHERESIS Therapeutic Plasma Exchange in Septic Shock: A Pilot Study.

A new clinical trial has just received CIHR funding for a pilot study of plasma exchange and sepsis. The principal applicants of the study are Emily Rimmer and Ryan Zarychanski from the Department of Internal Medicine at the University of Manitoba. Dr. Rimmer and colleagues are planning an 80- person multicentre randomized controlled pilot feasibility trial at seven Canadian Apheresis sites with the patients randomized to receive plasma exchange or usual care without plasma exchange.



Emily Rimmer

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The two-year competency focused degree employs collaborative and self-directed "learning by doing" to challenge students to think differently. Students explore strategies, competencies, and creative problem-solving approaches indispensable for innovating people-centered processes, procedures, products, and services. Through real-world challenges, mentorship, networking, and personal development plans, students gain experience, expertise, and practical insights into processes, regulatory frameworks, translational networks, and strategies applicable to a range of careers across medicine, health, and care.

More information can be found on our website at <https://trp.utoronto.ca/>

Election of Board Members of the CHS 2021-23

It is once again time to elect the members of the board for the next two years. As directed in the bylaws, Section 6, the nominating committee, which is chaired by Dr. Lynn Savoie, has prepared a slate of potential members. This list has already been circulated to members.

In this regard please note that further nominations may be submitted to the secretary (Dr Christopher Hillis at office@canadianhematologysociety.org) if signed by five active members accompanied by the written consent of the nominee. Subsequently, an election should be carried out by acclamation at the annual meeting or by mail and secret ballot at least two weeks prior to the annual meeting. The executive is to be elected by acclamation rather than ballot if there are no candidates other than those put forward by the nominating committee (6.02)

The slate of officers proposed by the nominating committee is as follows:

| TERM | PRESIDENT | PAST PRESIDENT | VICE PRESIDENT | TREASURER | SECRETARY |
|------|--------------|-------------------|--------------------|--------------|-----------|
| 2021 | Jason Berman | Nicole Laferriere | Christopher Hillis | Hassan Sibai | Linda Sun |



Dr. Jason Birman

is nominated for President

CEO and Scientific Director of the CHEO Research Institute and the Vice President Research at CHEO Full Professor, Department of Pediatrics, University of Ottawa.

Jason Berman completed a clinical fellowship in Pediatric Hematology/Oncology at the Boston Children's Hospital and his post-doctoral training at the Dana-Farber Cancer Institute funded by the prestigious Pediatric Scientist Development Program. He was recruited to Dalhousie University and the IWK Health Centre in 2005 as the named MSC Clinician-Scientist in Pediatric Oncology. Over the next 14 years, he ascended through the academic ranks to become Professor of Pediatrics, Microbiology & Immunology and Pathology at Dalhousie University and Associate Chair Research for the Department of Pediatrics. He was awarded the Peggy Davison Clinician Scientist Award and Excellence in Innovation Award by CancerCare Nova Scotia. He served as Director of the Clinician Investigator Program and Medical Research Graduate Program at Dalhousie from 2014-2019. In 2017, he assumed the role of interim Vice President Research at the IWK Health Centre. He relocated to Ottawa in 2019 to assume the role of CEO and Scientific Director of the CHEO Research Institute and the Vice President Research at CHEO. He is a full professor in the Department of Pediatrics at the University of Ottawa. Dr. Berman has always integrated clinical care and research into his career. He is recognized internationally for pioneering research

using the zebrafish to study childhood cancers, cancer predisposition syndromes and rare inherited diseases. He has been a member of the Children's Oncology Group Myeloid Committee since 2008, vice-chair of Myeloid Biology (2009-2012) and is the current co-chair of AAML1531, an international trial of risk-stratified therapy in Down syndrome myeloid leukemia. He is the outgoing President of the Canadian Society of Clinical Investigation.



Dr. Christopher Hillis is nominated for Vice President

Dr. Hillis is a hematologist, assistant professor and the director of Post-Graduate Quality Improvement and Patient Safety Education at McMaster University. He is a medical education

specialist at Choosing Wisely Canada and is the course director of ASPIRE for the Royal College. His clinical practice focuses on the care of patients with MPNs and CLL.



Dr. Hassan Sibai is nominated for Treasurer

Dr Hassan Sibai completed his undergraduate and subsequent postgraduate education at the American University of Beirut in 2009 and followed this up with specialised

training in Medical Oncology and Hematology in 2012. After a short period of training in different centers, he completed his Fellowship in leukemia and allogeneic

BMT from 2012 to 2016 at the University of Toronto and Princess Margaret Cancer Center. After this enhanced training, he was appointed as an Assistant Professor at the University of Toronto with Staff Physician appointment in the Leukemia Program at the Princess Margaret Cancer Center, University Health Network. He has also completed the Master Teacher Program of the University of Toronto with special emphasis on resident teaching in malignant hematology. He has extensively published in the field of leukemia and has interests in myeloproliferative neoplasms and acute leukemia with a commitment to improving resident's teaching methods.



Dr. Linda Sun is nominated for Secretary

Dr. Linda Sun is an assistant professor at the University of Alberta and an adult hematologist. She received her MD training at the University of Toronto followed

by hematology and hemostasis fellowships at UBC. Her clinical and research interests include bleeding disorders and quality improvement. She is excited to join the CHS team and contribute to training and scholarly initiatives.

**YOUR
CHS NEWSLETTER**

The Microenvironment



**Member
submissions
welcome!**

Contact:

office@canadianhematologysociety.org

**Fast-Tracking the Diagnosis of Gaucher Disease:
A Clear Path Forward for Hematologists**

Secure your virtual seat today - an interactive, case-based webinar not to be missed!



Scan to register for the
Main event
Thursday, January 21st, 2021
7:00 - 8:00 pm EST



Scan to register for the
Follow-up session*
Wednesday, January 27th, 2021
6:00 - 7:00 pm PST
**re-broadcasting of main event followed by live Q&A with faculty*

Speakers



Dominick Amato
MD, FRCPC
Hematologist
Mount Sinai Hospital, ON



Jacqueline Costello
MD, FRCPC
Hematologist
Memorial University, NFDL

Objectives

- Identify the early signs and symptoms of Gaucher Disease
- Recognize the critical role Hematologists can play in shortening the diagnostic journey for patients with Gaucher Disease
- Choose the best method for screening patients when Gaucher Disease is suspected

For any questions about the event or to register via email, please contact
Charlotte Boyack of MedPlan Communications at cboyack@medplan.ca

This program is made possible through funding from Takeda Canada.

RK SMILEY 2020 AWARDS - PROGRESS REPORTS

2020 Awards

Identification of Glutathionylated Proteins in the Mitochondria of Leukemia Stem Cells

The long-term objective of this project is to target glutathione (GSH) regulated energy metabolism in leukemia stem cells (LSCs) with the overall goal of improving outcomes for AML patients. To achieve this objective, we proposed to identify proteins in LSCs that are regulated by GSH through protein glutathionylation. To date, our preliminary data suggests that three mitochondrial enzymes involved in oxidative phosphorylation are glutathionylated in LSCs. This is important because oxidative phosphorylation is a process LSCs are highly dependent upon. In the next six months, we plan to expand the number of AML specimens analyzed. Further, we will interrogate glutathionylation of non-mitochondrial proteins. Overall, these data will give us a more comprehensive understanding of protein glutathionylation in LSCs which we will use to identify novel targets for AML patients.

Courtney Jones, PhD

2020 RK Smiley Grant Recipient

Princess Margaret Cancer Centre

DEEPHEME: An Innovative Deep Learning Platform to Improve Diagnosis in Hematology

The field of pathology is gradually transitioning to digital workflows, where digital whole slide images (DWSI) of pathology specimens are replacing glass slides and microscopes. Digital pathology is a key enabler of using artificial intelligence (AI) techniques such as deep learning DWSI analysis as a diagnostic workflow support and scientific discovery tool. The current paradigm in applying AI to pathology DWSI uses supervised deep learning approaches, where pathologists manually annotate many thousands of cells or tissue patches to train AI algorithms. This approach has several problems: 1) it instills human bias into the AI algorithms (it assumes pathologists are the correct reference standard); 2) it is unfeasible to manually label the immense image datasets required for network training; 3) these models are difficult to generalize beyond small, single-center studies. We are addressing these challenges by implementing novel unsupervised methods (where AI algorithms learn morphological features without human-expert labelling) to extract a unique, patient-specific digital fingerprint from each slide. This fingerprint contains information extracted by our AI algorithms from hundreds of thousands of slide patches representing over 1000 patients. By observing how these patient fingerprints cluster together, we will then use pathology reports to elucidate the clusters and translate the

fingerprint into meaningful clinical information that can help pathologists guide diagnosis. We see high and proximate impact of this technology as a diagnostic support tool in both large busy tertiary centers, and small, less experienced community centers, as well as a tool to discovery new information that better defines patient groups, in what has been called precision medicine.

Dr. Clinton Campbell, MD, PhD, FRCPC

Co-Investigator Andrew Leber

McMaster University

RK SMILEY COMPLETED STUDIES

2018 Awards

An Interaction Between EZH2 Inhibition and Ikaros Degradation Sensitizes Diffuse Large B-cell Lymphoma to Tazemetostat"

Purpose: The efficacy of EZH2 inhibition is modest in diffuse large B-cell lymphoma (DLBCL), yet EZH2 inhibitors are well tolerated. Herein, we aimed to uncover genetic and pharmacological opportunities to enhance the clinical efficacy of EZH2 inhibitors in DLBCL.

Experimental Design: We conducted a genome-wide sensitizing CRISPR/Cas9 screen in the presence of tazemetostat, an inhibitor of EZH2. The sensitizing effect of *IKZF1* loss-of-function was then validated and leveraged for combination treatment with lenalidomide. RNA-seq and ChIP-seq analyses were performed to elucidate transcriptomic and epigenetic changes underlying synergy.

Results: We identified *IKZF1* knockout as the top candidate for sensitizing DLBCL cells to tazemetostat. Treating cells with lenalidomide, an immunomodulatory drug that selectively degrades Ikaros and Aiolos, in combination with tazemetostat, phenocopied the effects observed in the CRISPR/Cas9 screen. The combined drug treatment triggered either cell cycle arrest or apoptosis in a broad range of DLBCL cell lines, regardless of *EZH2* mutation status. RNA-seq analysis revealed strong upregulation of the interferon signaling and antiviral immune response signatures. Gene expression of key immune response factors such as *IRF7* and *DDX58* were highly induced in cells treated with lenalidomide and tazemetostat, with a concomitant increase of H3K27 acetylation at their promoters. Furthermore, transcriptome analysis and immunofluorescence staining demonstrated derepression of endogenous retroviruses (ERVs), with significant overlap between derepressed ERV loci and H3K27 acetylation- and trimethylation-enriched regions in DLBCL.

Conclusions: Our data underscore the synergistic interplay between Ikaros degradation and EZH2 inhibition on modulating epigenetic changes and ultimately enhancing anti-tumor effects in DLBCL.

Dr. Robert Kridel

University Health Network

R. K Smiley Grant Recipient 2018

The Monocyte Monolayer Assay: Enhancing Care for the “Untransfusables”

In collaboration with Canadian Blood Services (Professor Donald Branch) and by the support of the RK Smiley Research Grant, we have provided monocyte monolayer assays (MMA), an ex-vivo “vital” mode of red blood cell (RBC) crossmatching, to an increasing number of patients for more predictive modelling of transfusion outcomes. In 37 individuals in whom significant barriers to transfusion were identified, high-frequency antibodies (HFA) and/or a history of hyperhemolysis syndrome (HHS) dominated (4 with both HFA/HHS, 19 with HFA alone, and 6 with HHS and a spectrum of non-HFA reactivities). Other cases included acquired seronegative (presumably autoimmune) hemolysis in two, hemolytic reactions with IVIG in 5, and a hemolytic reaction imputing a low frequency antibody not previously known to be deadly. More than half of the cohort derived from marginalized communities such as those with inherited red cell disorders (17 with sickle cell

disease [SCD], 2 with beta thalassemia major [BTM]). The MMA showed many HFAs to be inconsequential, thus enabling the safe transfusion of RBCs despite conventional serologic incompatibility, while sparing the use of rare donor units. In one case of SCD with HFA, re-qualification for a life-saving chronic transfusion regimen followed the identification of 14 suitable donors from a sampling of 24 super matched but otherwise serologically disqualified candidates, with 18 successful monthly sittings (38 RBC units) achieved to date. SCD/HHS cases remain the most challenging, as a negative MMA has not been able to guarantee freedom from HHS recurrence on RBC re-exposure. This work will contribute to the understanding of the role and limitations of the MMA, with data to support its broadened use by Canadians threatened by the predicament of under transfusion from their unique clinic laboratory bearings.

Dr. Christine Cserti
University Health Network
2018 R.K Smiley Grant Recipient



SUBMISSION DEADLINE MARCH 1, 2021

Canadian Hematology Society / Société Canadienne d'Hématologie 2021 R K Smiley Research Grant

Established in 2011 to mark the Fortieth Anniversary of the Canadian Hematology Society's service and to support hematology practitioners in Canada, this award is named in honour of the CHS Founding President, Dr. R. Kennedy Smiley. Many impressive submissions from across Canada have been funded under the previous invitations to submit applications to this research grant program since its inception.

The CHS Executive Committee is very pleased to announce that the next deadline for submissions to the R K Smiley Award is Monday, March 1, 2021.

The R K Smiley Research Grant provides start up grants of **\$20,000** for pilot projects expected to lead to larger follow-up studies funded by CIHR or other grant funding agencies.

ELIGIBILITY CRITERIA:

- Applicants may be clinicians or scientists with a project relevant to the field of hematology.
- The Principal Investigator must be a Canadian Hematology Society member-in-good-standing.
- Preference will be given to groups who will benefit maximally from the limited start up funds.
- Only one application will be received per applicant in a given year.
- The principal applicant should be able to hold grant at his or her institution.

APPLICATIONS SHOULD INCLUDE

1 — The proposal: 1 page, maximum length should include:

- ✓ Title of project
- ✓ Name of *Principal Investigator
- ✓ Names of Co-investigators
- ✓ Project Background
- ✓ Relevance to hematology

2 — The Budget: 1 additional page, maximum

3—CV of Principal Investigator, 5 pages, maximum



Dr. R. Kennedy Smiley
1922 - 2010

Founding President
Canadian Hematology
Society

FORMAT REQUIREMENTS

MS Word format

- ✓ Double-spaced ✓ Font size 12
- ✓ Funds are to be used within one year of the award being granted.

*** Principal Investigator must be a CHS Member-in-good-standing**

N.B.

Submit by email to: **office@canadianhematologysociety.org**

— By: 1800 hrs EDT, Monday, March 1, 2021.

— We will confirm receipt of all proposals.

— Decisions will be announced in May.

Sponsored in part by the pharmaceutical industry.



The Canadian Hematology Society

Paper of the Year



The Canadian Hematology Society is now accepting nominations for *"the best hematology paper in Canada"*.
Deadline Oct 30, 2020.

Please include:

- A PDF of the paper
- A one-paragraph description of the work and its significance to hematology



Eligibility requirements:

1. Papers must have been published between September 1, 2019 - August 31, 2020.
2. Nominated individuals must be CHS members in good standing.
3. The recipient or designate must be available to accept the award.
4. Awards will be presented at the CHS Virtual Awards Gala on December 6, 2020.
5. Papers addressing clinical or lab-based hematology research will be considered.
6. Applicants of all levels are encouraged to apply.

Nomination procedure:

- Nominations are now open (until Oct. 30 2020).
- Individuals may self-nominate or may nominate others.

Deadline:

- **Friday, October 30, 2020.**
- Nominations must be submitted by email to: office@canadianhematologysociety.org



Annual Research

Abstract Awards: 2020

Submission Deadline: Friday, October 30, 2020

The Canadian Hematology Society invites young Canadian Researchers, whose Abstracts have been accepted by ASH, to apply for annual research awards in two categories:

- Residents and Fellows
- PhD and Post doctoral

Eligibility Requirements

1. Completed application form (signed by supervisor)
2. Copy of ASH letter of acceptance
3. Copy of Abstract in MS Word format
4. Applicant must be a member of the CHS
5. Email completed application to: Office@canadianhematologysociety.org

Note: only one application per individual will be accepted

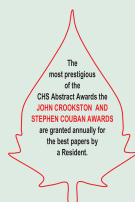
The Application Form:

- may be downloaded from the CHS website, or
- by email request from: Office@canadianhematologysociety.org



CHS Bulletin

THE CANADIAN HEMATOLOGY SOCIETY



CHS Lifetime Achievement Award



The Canadian Hematology Society executive board, is excited to announce the **2020 CHS Lifetime Achievement Award**.

The presentation of this prestigious CHS award will be made at the **Virtual Members Gala On December 6, 2020.**

The 2020 CHS Lifetime Achievement Award will recognize an individual who:

1. Is well-known and has an outstanding reputation in the field of hematology in Canada,
2. has done the majority of their hematology work in Canada,
3. has achieved international recognition and impact for their work in the field, and
4. has made an impact by nurturing and encouraging young faculty.

Don't miss this great opportunity to nominate your mentor!

SUBMISSION PROCESS:

1 — Please include a brief **letter of nomination** which must include

- A. The full name of the nominee
- B. The institution of the nominee
- C. Nominee mailing address
- D. Nominee email address

2 — **Email nomination, in WORD format** to the CHS office at: office@canadianhematologysociety.org

Deadline for Nominations: Thursday, October 30, 2020.

The executive looks forward to receiving your nominations and welcoming you to our virtual gala event!

Nicole Laferriere

Nicole Laferriere, President



**2019 Winner of the LAA
Dr. Victor Blanchette,
Toronto.**

The **John H. Crookston Award** is presented each year by the Canadian Hematology Society for the best paper given by a resident. Established in 1988 this award is named after the late John Hamill Crookston (1922-1987) who was the Laboratory Hematologist-in-Chief at Toronto General Hospital and a Professor of Medicine and Pathology at the University of Toronto from 1957 until his death in 1987.

The **Stephen Couban Award** was created in 2019 and named after the late Stephen Couban (1961-2019) to acknowledge his dedication to his profession in hematology and as the former President of the Canadian Hematology Society, President of the Canadian Bone Marrow Transplant Group and the co-chair of the hematology site group for NCIC. Dr. Couban was the Division head of hematology at Dalhousie University at the time of his death.

JOB POSTINGS



TORONTO EAST HEALTH NETWORK


825 Coxwell Avenue
Toronto, ON M4C 3E7

DEPARTMENT OF HAEMATOLOGY AND MEDICAL ONCOLOGY

Hematologist locum position: Jan 4, 2021 – March 30, 2022

We are advertising an excellent opportunity to work with a great team of three hematologists within a Community Cancer Centre close to downtown Toronto. This opportunity includes a parttime AFP Malignant Hematology position, with the additional opportunity to bill fee for service for benign hematology. Job duties include outpatient care of Hematological malignancies, inpatient hematology consults and occasional heme / onc inpatient-ward coverage.

For further details and to apply for the position, please contact Patricia.Disperati@TEHN.ca

Best,  Patricia Disperati, MD, FRCPC



Locum, Malignant Hematologist

The Juravinski Hospital and Cancer Centre at Hamilton Health Sciences is seeking a locum hematologist to work within the Division of Malignant Hematology at the Juravinski Hospital and Cancer Centre. The position is currently open and can be offered until February 2022. This position is eligible for funding through the Provincial Oncology Alternate Payment Plan.

The successful applicant would have a preferred focus on lymphoma and myeloma but other hematology disease sites could be considered. We would expect participation in the hematology on call roster (2 weekdays and one weekend every 4-6 weeks on average), and as ward attending for the Juravinski Hospital (8 weeks per year), and inpatient consultation service (4 weeks per year). The ward is staffed by nurse practitioners and rotating hematology residents.

Applicants should possess the following:

- A certificate of registration for a valid license to practice in Ontario, issued by the College of Physicians and Surgeons of Ontario
- FRCP in Internal Medicine with subspecialty training in Hematology
- Membership in the Canadian Medical Protective Association

Qualified candidates are invited to submit their curriculum vitae, and any questions, to:

Dr. Tom Kouroukis,
Head, Division of Malignant Hematology
Associate Professor, Department of Oncology, McMaster University
Juravinski Cancer Centre
699 Concession Street
Hamilton, Ontario, L8V 5C2
Tel: 905 387 9711 Ext. 67658
Fax: 905 575 6340
Email: kourouk@hhsc.ca

Your



Canadian Hematology Society
Société Canadienne d'Hématologie

Newsletter

Membership Matters



The Canadian Hematology Society has represented all physicians and scientists with an interest in the discipline in Canada since it was founded in 1971, and currently has over 500 members.

1. Active Members

- Physicians and researchers in the practice of clinical or laboratory hematology in Canada, or
- Canadian physicians engaged in such practice, or
- Persons with university degrees making continuing contributions to research in hematology physiology or pathology in Canada

Active members only shall:

- vote
- hold office
- receive CHS grants, and
- pay dues.

2. Allied Health Members

- Health care workers engaged in the practice of clinical or laboratory hematology in Canada

3. Members-in-Training (Associate Members)

- Residents and fellows engaged in hematology training
- Masters and PhD graduate students
- Post-doctoral fellows engaged in hematology research
- The Program Director shall sponsor membership
- Shall hold all privileges of the Corporation except payment of dues or voting at the AGM
- Expected to become Active Members upon completion of training

4. Emeritus Members

- All individuals who have retired from full time hematology practice or research, or those who were active members and request a transfer of status with adequate reason.

5. Honorary Members

- Non-members may be invited to become Honorary Members of the corporation by virtue of their outstanding contributions to any discipline which is of importance to hematology.

CHS members are reminded...If you have not sent in your **\$125** dues payment for **2020** it is now past due

The CHS annual dues for **2021** is **\$125** for **Active members** and **\$75** for **Allied Health**.

Annual dues payments may be made online at the CHS website: www.canadianhematologysociety.org



2020 Membership Renewal / Address Change: Canadian Hematology Society

Membership Status

- Active ☐
- Associate ☐
- Allied ☐
- Emeritus ☐

Has your status changed?

- Yes ☐
- No ☐

Name: _____

Title: _____

Email: _____

Work Address: _____

Work Phone: _____

Work Fax: _____