Directors Message

Dear Friends,

As you will read in this issue, Charbonneau hosted a public lecture, titled Cancer 101: Causes to Cures, at Studio Bell this past May. Our trainees and speakers were fantastic and I am so proud of the way they shined.

On a more somber note, we are sad to see Dr. Verma leave Calgary at the end of July. He has been a strong supporter of cancer research and will be missed greatly.

I’d like to wish you all a very happy and healthy summer.

Greg

Contact Us

Arnie Charbonneau Cancer Institute
3280 Hospital Drive NW
Calgary, AB
Phone: (403) 210-3934
Email: charbonneau@ucalgary.ca
Website: charbonneau.ucalgary.ca

“Follow us” and “Like us”

Announcements

Late Night Lab at Studio Bell

The Institute held its first public lecture, Friday, May 31st, Cancer 101: Causes to Cures, as part of a series titled Late Night Lab at Studio Bell. The lecture was planned, designed, and executed by the Charbonneau Trainee Association and featured talks by Drs. Jennifer Chan, Darren Brenner, Paola Neri, and Douglas Mahoney, as well as live science demonstrations hosted by our trainees. The event was attended by over 200 members of the public and has received a glowing review by attendees. A few pictures of this event are included below and you can watch the lecture on our Youtube channel https://youtu.be/BUz7He_T3T0

We would like to thank the Charbonneau Trainee Association for their support with this event. It would not have been possible without their planning, creativity, excitement, and excellent presentation skills. A very special thank you to Myra Chen, Danielle Bozek, and Dan Berger for their leadership. We could not be happier with the response from the public and the requests to offer more lectures. Plans are underway to offer a second public lecture later this Fall.
Evict Radon Summit Workshop

On June 3 and 4th, the Charbonneau Cancer Institute’s Evict Radon research team organized a summit workshop for Canadian research leaders and major stakeholders in the areas of radon gas exposure, radon-induced lung cancer and alpha particle radiation protection. The major aim of this workshop was to launch some of the largest and most ambitious radon research endeavors in history, with the ultimate goals of being able:

- to measure a person’s radon exposure from easy-to-collect biospecimens (such as blood, hair, or nails),
- to be able to identify who amongst us is the most susceptible to radon based on their family genetics, and
- to develop effective tools to increase Canadian radon awareness and engineer solutions to the built environment to evict radon from Canadian homes and prevent future cases of radon-induced lung cancer.
Thank you, Dr. Verma

Dr. Sunil Verma will be leaving Calgary at the end of July. We are disappointed to see him go but want to thank him for his contributions to cancer care and cancer research in Calgary over the past several years. Sunil has done a wonderful job preparing us for the new Calgary Cancer Centre and leaves a legacy of leadership. He has been a strong supporter of cancer research and worked with Institute Leadership to build a common cancer research framework. The Institute will strive to leverage this momentum and continue to advocate for and support our cancer researchers. We wish Sunil every success in the years ahead.

Dr. Aru Narendran named Kids Cancer Care Chair of Clinical and Translational Research in Pediatric Oncology

Congratulations to Dr. Aru Narendran, who was awarded a new five-year Chair of Clinical and Translational Research in Pediatric Oncology by Kids Cancer Care. Dr. Narendran’s work focuses on the discovery and testing of new anti-cancer drugs for children with cancer. Through the Chair, he will develop anti-cancer vaccines and establish an educational program for newly trained pediatric oncologists interested in gaining experience in translational research.

Dr. Garnette Sutherland receives Governor General's Innovation Award

Congratulations to Dr. Garnette Sutherland on receiving the Governor General's Innovation Award for his work developing an intraoperative magnetic resonance imaging (iMRI) system that led to the creation of the neuroArm, a robot capable of performing neurosurgery on a patient inside an MR machine.

Dr. Sorana Morrissy named Canada Research Chair in Precision Oncology

Congratulations to Dr. Sorana Morrissy on being named a Canada Research Chair in Precision Oncology. Leveraging her expertise in computational biology, Dr. Morrissy’s work aims to understand how pediatric brain tumours arise and evolve following diagnosis. She has observed that there is very little genetic overlap between the clones (lineages of cells) in primary and recurrent tumours, suggesting that new treatment strategies are needed.
Trainee Success

Lisa Liang, Supervised by Dr. Donna Senger and Dr. Stephen Robbins recipient of Eyes High Postdoctoral Scholarship.

Melanie Finkbeiner, Supervised by Dr. Doug Mahoney awarded the Frederick Banting and Charles Best Canada Graduate Scholarship.

Alice Yuan, Supervised by Dr. Greg Cairncross who successful defended her MSc thesis.

Candice Poon, Supervised by Dr. John Kelly and Dr. Wee Yong who successfully defended her PhD thesis.

Congratulations to the following Charbonneau trainees who were recognized by the UCalgary Graduate Association for their valuable initiatives.

Zen Den: Nancy Adam
Method’s Day: Sophie Briggs & Rujuta Deshpande.

CRITERIA:
Esteemed and/or cutting edge
Seminar content must have a broad appeal

Please forward the name of a potential speaker to Carmen Coelho ccoelho@ucalgary.ca

UPCOMING FUNDING OPPORTUNITIES

- Clark H. Smith Brain Tumour Centre Graduate Scholarship – Deadline August 31, 2019
- Postdoctoral Scholar Recruitment – Deadline July 31, 2019
- Alex Cummings Trainee Travel Award – Deadline November 1, 2019

Please visit our website (https://charbonneau.ucalgary.ca) for details on how to apply.
Trainee Survey Out Now!

One of the main goals of the Charbonneau Trainee Association (CTA) is to improve the trainee experience. To do this, we have put together a Trainee Survey regarding the format of Work-in-Progress, Journal Club, Professional Development and the overall trainee experience here in the Charbonneau. We want to use the results of this survey to help guide and inform the changes coming in the future. The survey will be open from June 26th, 2019 until July 15th, 2019. All trainees who fill out the survey will be entered into a draw for a chance to win 1 of 5 prizes.

The link for the survey will be sent out from the CTA email. If you have any questions or concerns, please contact the CTA at charbonneau.trainee.association@gmail.com

Follow us on Instagram @ charbonneau_cancer_institute.

Summer Student Research Day & Barbecue
Tuesday, August 13, 2019
Clara Christie Theatre

The annual Charbonneau Summer Student Research Day is aimed at undergraduate students working for the summer under the supervision of a Charbonneau Full or Associate Member. The summer student research day provides an opportunity for our summer students to present their research project. The day features oral and poster presentations by our summer students.

Registration Deadline: August 1, 2019

Please register using the following link:

https://charbonneau.ucalgary.ca/education-training

Upcoming Events:

July 2, 2019
Ice-cream Day at Charb

July 19, 2019
Summer BBQ at Edworthy Park

September 2019
Work in Progress Update!

September 15, 2019
Terry Fox Run
Join the Charbonneau Team

Watch for Posters and Emails for further details on all upcoming events hosted by the CTA!
Facilities & Infrastructure

The Quant Studio 6 Flex Real-Time RT-PCR that was moved to the Weiss Lab has moved back to HRIC 2A25.

The Luminometer was moved from HMRB 336 to the Corcoran Lab in HRIC 2B29.

Over the next several months a number of renovations to offices and dry lab changes will occur. Dr. Mayi Arcellana-Panlillo will be moving to HMRB 390.

Admin staff currently located in HMRB 393/393A will move to either HMRB 368 or HRIC 2AA-07.

The Smart Vue temperature monitoring system is expected to be installed in July.

Lights will be upgraded on the west end of HMRB this summer. Labs and occupants of all offices will be given notice before the work commences.

CSM Safety Improvement Team (SIT)

Katrina Ellestad (Galo Lab) is the Charbonneau representative on the CSM Safety Improvement Team (SIT). Reps from SIT will be conducting unannounced lab inspections for the purpose of education.

Charb Lab Managers Meetings

Held the 3rd Tuesday of every month from 10-11am in HRIC 2A19. This group discusses common issues and works together to develop solutions. A rep from every Charb lab is welcome to attend.

Safety Reminders

Emergency eyewash stations need to be activated weekly for at least one minute to verify operation and flush any sediment and potential contaminate. There was an incident on main campus where an eye wash station did not work when required. King Hsieh will perform this weekly check to ensure it is being consistently done within the Institute.

Did you know?

Emergency response and business continuity planning is the process to ensure the appropriate process continuation and recovery of business functions in the event that an incident disrupts University of Calgary’s ability to operate. Floods, fires, power outages, blizzards, major computer system outages and water main breaks are examples of unanticipated events that can have a devastating impact on the University unless preparation has taken place. The Charbonneau Lab Manager’s group will be developing a Charbonneau Business Continuity Plan over the next year. Our first order of business will be to develop a plan for an extended power outage.

On the Move!

Dr. Doug Mahoney has moved from the second floor of HMRB to HMRB 309
Upcoming Major External Grants:

**CIHR Catalyst Grant:**
Patient-Oriented Research
Registration deadline: June 25, 2019
Application deadline: September 10, 2019

**Prostate Cancer Canada:**
Movember Translation Acceleration Grant
Expression of interest deadline: June 27, 2019
Application deadline: November 12, 2019

**CIHR Project Grant**
Registration deadline: August 2019 (anticipated)
Application deadline: September 2019 (approximate)

*NOTE:* Please plan ahead, as the RSO deadline is two days earlier!

Reminder: Internal Peer Review
Do you plan to submit a grant to CRS? CIHR? CCSRI?
If yes, have you registered for internal peer review?
To schedule a ‘Chalk Talk” lunch or peer review meeting, or arrange 1:1 peer feedback, contact:

Savraj Grewal
grewalss@ucalgary.ca

or Melissa Shea-Budgell
melissa.sheabudgell@ucalgary.ca

News to Share?
Have you received a new grant or award? Has your student recently defended?
Please share your story with us! We are looking for content for the website, our LinkedIn profile, and the newsletter!

---

Research News

**Four of 10 cancers may be attributable to lifestyle, the environment, and infectious agents.**

The Canadian Population Attributable Risk of Cancer (ComPARE) study, led by Drs. Christine Friedenreich and Darren Brenner, provides quantifiable evidence on how the incidence of cancer can be reduced in the future. The findings were released in 16 simultaneously released manuscripts in the journal, *Preventive Medicine*, as well as on a web-based dashboard available at [https://prevent.cancer.ca](https://prevent.cancer.ca).

**INNOVATION.CA**

Three projects approved by the VPR’s Office to proceed with proposals to the 2020 Canadian Foundation for Innovation competition:

- A U Calgary-led project focuses on DNA damage and aging and will be led by Drs. David Schriemer, Susan Lees-Miller, Jennifer Cobb, and Gareth Williams, with partners at UBC.
- A project led by the BC Cancer Agency and Dalhousie University will involve Dr. Aaron Goodarzi as a co-lead to study acceptable exposure limits of environmental carcinogens.
- A project led by Queen’s University will involve Drs. Andrew Daly as a co-lead with Drs. Nicole Prokopishin and Douglas Mahoney as co-applicants to study cell-based immunotherapy in partnership with six other centres.

**Congratulations to the Following Grant Recipients, Q1 2019-20:**

**Natural Sciences and Engineering Research Council (NSERC)**
Six Charbonneau members among 140 UCalgary researchers to receive funding from ‘unprecedented’ NSERC investment

**Canadian Foundation for Innovation**

*John R. Evans Leaders Fund*
Sorana Morrissy, PhD
Feature Article:
Mutation of Capicua, a transcriptional repressor, contributes to oligodendroglioma.

Jennifer Chan, MD
Neuropathology and Childhood Cancer
Childhood Cancer Research Program
Pathology & Laboratory Medicine


Oligodendrogliomas are rare but devastating tumours. Dr. Chan’s team, along with Drs. Gregory Cairncross and Stephen Robbins and trainees Tanveer Shiekh and Myra Chen, used a new conditional Capicua knockout mouse developed by her lab to show that loss of Capicua in the forebrain increases proliferation and self-renewal of neural stem cells and that re-expression of Capicua (by blocking the Ets transcription factor, ETV5) decreases proliferation, self-renewal, and tumorigenicity. ETV5 may therefore represent a potential therapeutic target for oligodendroglioma in the future.

Feature Article:
Cancer cells can adapt to low oxygen conditions by modulating lipid metabolism.

Savraj Grewal, PhD
Cell Growth and Cancer
Clark Smith Brain Tumor Centre
Biochemistry & Molecular Biology


In response to environmental changes, animals develop adaptations that allow them to survive. Low oxygen (hypoxia) is one type of environmental change that is normally lethal to animals, but Dr. Savraj Grewal and his team, including trainees Byoungchun Lee and Elizabeth Barretto, discovered that in Drosophila larvae, the Target of Rapamycin (TOR) kinase signaling complex, TORC1, and lipid metabolism are modulated in response to hypoxia. Since tumour cells often reside in hypoxic conditions, these results suggest one mechanism by which they may adapt to a stressful environment.

Feature Article:
New protein could be a future biomarker or drug target for acute lymphoblastic leukemia.

Ki-Young Lee, PhD
Cancer Biology
Alberta Children’s Hospital Research Institute; Cell Biology and Anatomy


Acute lymphoblastic leukemia is a fast-growing cancer of the white blood cells, affecting the bone marrow of patients. It is the most common childhood cancer but fortunately, the five-year survival for children is 85%. Dr. Lee and his team, including trainee Jung Kwon Lee, have identified a protein that, when under-expressed, can impair the ability of cells to undergo programmed cell death (apoptosis). This protein could represent a future biomarker or therapeutic target for acute lymphoblastic leukemia.
Population Health (Prevention and Early Detection) Research


Population Health (Prevention and Early Detection) Research (continued)


Population Health (Prevention and Early Detection) Research (continued)


Health Services/Implementation Research


Basic/Biomedical Research


Basic/Biomedical Research


Translational and Clinical Research (continued)


Translational and Clinical Research (continued)


