University of Windsor

Scholarship at UWindsor

UWill Discover Undergraduate Conference

UWill Discover 2020

Experiential Learning is the Key to Enriching Student Success and Advancing Cancer Research Education

Jake Frank *University of Windsor*, rank112@uwindsor.ca

Subidsa Srikantha *University of Windsor*, srikants@uwindsor.ca

Kaila Wilson University of Windsor, wilson22@gmail.com

Follow this and additional works at: https://scholar.uwindsor.ca/uwilldiscover

Frank, Jake; Srikantha, Subidsa; and Wilson, Kaila, "Experiential Learning is the Key to Enriching Student Success and Advancing Cancer Research Education" (2020). *UWill Discover Undergraduate Conference*. 14.

https://scholar.uwindsor.ca/uwilldiscover/2020/online/14

This Event is brought to you for free and open access by the Conferences and Conference Proceedings at Scholarship at UWindsor. It has been accepted for inclusion in UWill Discover Undergraduate Conference by an authorized administrator of Scholarship at UWindsor. For more information, please contact scholarship@uwindsor.ca.





2018

IMPACT REPORT

Bridging Research and Hope

TABLE OF CONTENT



- Message from the Executive Committee
- The Numbers 2018
- Funded Research
- Clinical Trials
- **Building Collaborative Research**
- Think Tank Series
- **Cancer Smart Community**
- Researcher Snapdshots
- **CURES Team**
- Inaugural CURE Class
- Cheers to Hope
- CTV 5 Part Cancer Research Series
- The Heart of Research
- Testimonials
- Thank You to Our Supporters

A united community bridging cutting edge research with world class cancer care.



MESSAGE FROM THE EXECUTIVE COMMITTEE





Lisa Porter University of Windsor



Caroline Hamm Windsor Regional Hospital



Dora Cavallo-Medved University of Windsor



Krista Naccarato Windsor Regional Hospital



Ken Schneider Windsor Regional Hospital



John Trant University of Windsor



Michael Naccarato Royal Bank of Canada



Karen Metcalfe WCRG

The Windsor Cancer Research Group (WCRG) strives to enable researchers to advance bright ideas and work together to find new and innovative solutions in the areas of cancer prevention, detection, diagnosis and treatment. We also aim to support our community through their cancer journey by improving survivorship and educating and empowering patients and their families. This Impact Report highlights some of our successes and key initiatives of 2018.

Over 40% of the population will be diagnosed with cancer in their lifetime. Thankfully, because of research, we now better understand the actions of cancer and ways to protect ourselves from the disease. We also have enhanced diagnostics that can detect the disease earlier and more accurately. Year after year we see improvements in the treatments available, and as a result, mortality rates for all cancers combined continue to decline. Today 60% of people diagnosed with cancer will survive 5 years or longer. But for the other 40%, we need to do better.

Research outcomes have a global benefit, but there are additional impacts felt when research is funded locally. Research brings cutting-edge infrastructure to the community, delivers the latest innovative treatments to local patients, elevates knowledge of all healthcare providers, and attracts and retains the brightest professionals. Data shows that patients treated in institutions with active research programs have improved outcomes. Research saves lives.

THE NUMBERS - 2018

WCRG members are involved in building a dynamic cancer research environment in the Windsor-Essex region. Their contributions are important to the continued growth of WCRG and significant to the success of cancer research programs in our community. A general overview of our 2018 progress is illustrated below.

Cancer grants
15

These grants focus on basic sciences, translational, clinical, and quality of life research .

Active Collaborators

93

The number of collaborators on currently funded projects continues to increase. Collaborators come from a variety of disciplines, organizations and institutions.



Trainees are affiliated with the University of Windsor and the Schulich School of Medicine and Dentistry and include Post-doctoral Fellows, Residents, Graduate and Undergraduate students.



Grants over \$25,000 were awarded from the following funding agencies:

- Canada Foundation for Innovation
- Canadian Institutes of Health Research (CIHR)
- Canadian Cancer Society Research Institute
- Katelyn Bedard Bone Marrow Association
- Natural Sciences and Engineering Research Council (NSERC)
- Windsor Cancer Centre Foundation, Seeds4Hope

^{*} Metrics are the outcomes of the 26 Core Members - local researchers who are active in the cancer field (PI/Co-PI) on cancer grants/clinical trials, publish in the cancer field, hold an academic appointment AND have contributed significantly to WCRG.

FUNDED RESEARCH

Funding from local, regional and national granting agencies is vital to supporting local research. Our funded projects are often cross-disciplinary in nature and focus on basic sciences, translational, clinical and psychosocial cancer research. Highlighted are a sample of some key projects that received initial funding in 2018.

2018 Seeds4Hope Research Project

Establishing a Brain Tumour Organoid Screening Model to Optimize Therapeutic Options for Patients with Glioblastoma Multiforme

Dr. Swati Kulkarni

Oncology - Windsor Regional Hospital Biological Sciences - University of Windsor

Project Description

To develop a brain tumour screening model that will advance our understanding of brain tumour biology, accelerate testing of new and promising drugs, and optimize therapeutic options for patients.

Multi-disciplinary Research Team

University of Windsor

- Dr. Dorota Lubanska Biological Sciences
- Dr. Lisa Porter Biological Sciences
- Dr. Simon Rondeau-Gagne Chemistry & Biochemistry
- Dr. Keith Frank Stringer Pathology, Cincinnati Sick Kids

Windsor Regional Hospital

Dr. Abdalla Shamisa - Neurosurgery

Michigan State University

Dr. Eran Andrechek - Computational Biology



2018 Ride for Dad Research Project

The Role of Spy1 as a Novel
Therapeutic Approach for Treatment
Resistant Prostate Cancer

Dr. Lisa Porter

Translational Research Director - Windsor Cancer Research Group

Project Description

Research has led to the development of some very effective therapies for prostate cancer that has subsequently saved many lives. However some men still progress to drug-resistant forms of disease. This work will be the first to investigate a novel mechanism of drug targeting that shows promise to be a new therapy for some of the most advanced and accressive prostate cancers.

Keen I In With:

Porter Lab

PORTER LAB

@L_Porterlabrats

WINDSOR CANCER RESEARCH GROUP

Collaborators

Gi Jeong Cheon Seoul National University College of Medicine Seoul Korea

Xuesen Dona

Vancouver Prostate Centre, University of British Columbia Vancouver, Canada

Alastair D. Lamb

Cancer Research UK Cambridge Institute Cambridge UK

PhD Student Lead

Martin K. Bakht University of Windsor



2018 CIHR Grant

A Matter of Timing: Circadian Clock Regulation of Intestinal Healing and Cancer

Dr. Phil Karpowicz

Biological Sciences - University of Windsor

Project Description

The circadian clock tells stem cells when to grow and when to divide during the day. When the clock is broken because of activities like shift work we hypothesize this can lead to uncontrolled cell growth, a feature of cancer. To studying the dangers of a disrupted circadian clock, we will look at both mice and intestinal organoids, which are mini organs grown from stem cells in cell culture. Dr. Caroline Hamm from Windsor Regional Hospital will help obtain human tissues from cancer surgeries to study these processes in human cells in addition to, the project will also investigate how medical treatment could be significantly improved by knowing how time of day affects healing.

Keen up with us





Clinical trials are an important part of any successful cancer research network. WCRG is fortunate to work in partnership with the Clinical Trials Department at Windsor Regional Hospital to facilitate and improve connections, communications and collaborations for our members. The Clinical Trials Business Coordinator, Krista Naccarato, provides financial tracking and budgeting considerations for each trial. Since 2017, the department has developed a Quality Assurance Process that has led to an improvement in data quality as noted at site audits. The collaborations have led to a number of clinical trials with local impact including the development of a process to collect fresh tissue for research. Krista also serves on the WCRG Executive Committee.



Staff

The Clinical Trials Department at Windsor Regional Hospital is comprised of 4 Study Coordinators who recruit patients and conduct local clinical trials, and 1 Business Coordinator who directs daily outputs and manages the administrative logistics.



Open & Recruiting Clinical Trials

Clinical trials at Windsor Regional Hospital Cancer Centre open and close throughout the year. Of the 14 trials in 2018, two were initiated by local clinical investigators.



Recruited Participants

Our local cancer patient recruitment rate matches the national average of approximately 3%. WCRG is committed to support efforts that increase the number of clinical trials operating in Windsor-Essex and their accessibility to our local cancer patient population.

In 2018, core members were published in peer-reviewed journals, proceedings and books that include collaborators from computer science, biological sciences, psychology, oncology, chemistry and biochemistry, physics, diagnostic imaging, mathematics, kinesiology, pathology and nursing. Highlighted are 2 publications and their impact on the future of cancer diagnosis, treatment and care.



Bakht, M.K., Derecichei, I., Y Li, Ferraiuolo, R.M., Dunning, M., Oh, S.W., Hussein, A., Youn, H., Stringer, H.F., Jeong, C.W., Cheon, G.J., Kwak, C., Kang, K.W., Lamb, A.D., Wang, Y., Dong, X., Porter L.A. (2018) <u>Neuroendocrine differentiation of prostate cancer leads to PSMA suppression</u>. *Endocrine-related cancer* **26**: 131-146.

Prostate specific membrane antigen (PSMA)-imaging has revolutionized how we image and treat prostate cancer. This work identified and characterized a group of metastatic prostate cancer cells referred to as neuroendocrine prostate cancer (NEPC) with a low or no expression of PSMA. This presents the potential issue in that NEPC is a particularly advanced, aggressive stage of disease and may not be detected and then targeted using PSMA. This work provides potential alternative approaches for effective imaging of NEPC. The data produced through this project may change how we detect and treat select forms of prostate cancer.



Taimoory, S.M., Sadraei, S.I., Fayoumi, R., Nasri, S., Remington, M., Trant, J.F. (2018) Preparation and Characterization of a Small Library of Thermally-Labile End-Caps for Variable—Temperature Triggering of Self-Immolative Polymers. *Journal of Organic Chemistry*, **83**: 4427-4440.

This work provides a foundation for making controlled-release drug nanocapsules which will improve how drugs are able to effectively target select cancers. This will greatly decrease off-target effects and improve quality of life for patients in chemotherapy. The Trant lab is building on these results to address drug targeting to a host of different cancers. The Trant lab is a large multidisciplinary team which includes researchers at all levels of training. Dr. Trant is proud that this publication is a lab first in that it has undergraduate student authors, Sarah Nasri and Rose Fayoumi. Keep up the great work Trant Team!

BUILDING COLLABORATIVE RESEARCH

07

WCRG is focused on activities and events that build collaborative cancer research networks. In 2018, we continued to grow our membership, hosted our 4th International Cancer Research Conference, and partnered with the Office of Research and Innovation Services at the University of Windsor to provide research workshops. Our newsletter, WCRG Matters, is circulated throughout the year to keep our members engaged and informed.



WCRG Membership

- 26 Core Members
- 171 Student Members
- 203 Affiliate Members



Cancer Research Conference

- 170 participants
- 26 Speakers
- 57 Posters



'WCRG Matters' Member Newsletters

- 6 issues
- Shares member successes.
- Enhances communication

Select Researcher Recognitions

Dr. Caroline Hamm - Cancer Care Ontario, Human Touch Award

Dr. Khalid Hirmiz - Schulich School of Medicine and Dentistry, Department of Oncology's Excellence in Academic and Teaching Award

Dr. Phillip Karpowicz - Ministry of Research, Innovation and Science, Early Researcher Award

Dr. Lisa Porter - Brain Tumour Foundation of Canada, David Kelly Award for Community Service

Moving Ideas Forward

In 2018, WCRG continued its quarterly Cancer Research Think Tank series. The objective of the Think Tanks is to present and discuss cancer research topics of interest and identify collaborative teams that can work together to bring these projects forward for funding. This series has been a driving force behind the increase in cancer grant submissions and the growing collaborative research network.









- 4. Cancer Research Think Tanks in 2018
- 134 Participants
- 22 Disciplinary backgrounds represented
- Institutions/organizations participating, including hospitals, universities, colleges and industry

CANCER SMART COMMUNITY

09

An important goal for WCRG is to make cancer research more accessible to the public. In 2016, WCRG partnered with the Windsor Cancer Centre Foundation (WCCF) to establish an education program "Cancer Smart" that translates and connects cancer research within our community. We host a community newsletter, Facebook page, twitter, outreach events, educational workshops and public seminars. This 3 year commitment from WCCF is helping WCRG extend it's reach and become an important resource for cancer research in our community.











- Community Newsletters circulated with a readership of over 780 people
- Community events WCRG participated in
- Times WCRG was featured in the media. A few of the top headlines:
 - Region's best minds gather in Windsor in fight against cancer
 - New course at UWindsor connects students with local cancer researchers
 - Three cancer research projects earn Seeds4Hope grants
 - Windsor oncologist receives Human Touch Award for patient advocacy

19 Education tools developed

RESEARCHER SNAPDSHOT



In 2018, snapd Windsor continued their commitment to the Cancer Researcher Snapdshot. Thanks to their generous sponsorship, 4 more cancer researchers were introduced to our community. They share information about their research, what motivates them to do cancer research and how they spend their free time. The goal of this initiative is to raise awareness about the cancer research being done in Windsor-Essex and stimulate new research collaborations. Thank you snapd Windsor for supporting this community initiative!

MARCH

Dr. Indryas Woldie



WCRG RESEARCHER SNAPDSHOT
Dr. Indryas Woldie, MD
Hematologist Oncologist, Department of
Oncology, Windsor Regional Hospital

ill us a little bit about y

I was born and raised in Ethiopia where I completed medical school. I did my residency at Wayne State University/Detroit Medical Center and my Fellowship in hematology oncology at Karmanos Cancer Center, Detroit MI. I currently practice at Windsor Regional Hospital and Karmanos Cancer Center.

What is your research focus?

I am a new comer to the WCRG and I love the environment for collaboration across disciplines I collaborate with Dr. Lisa Porter and her team, to study multiple myeloma, in using various models to test new drug activity. The rest of my research is in Detroit at Karmanos Cancer

What do you do in your spare time?

I like to sing and I actually take music classes to learn piano and guitar. Glad to be promoted to 3rd grade recently!

When do you get your best research ideas?

Usually, ideas come from experiences with patients. They use to say bench to bedside, I will say bedside to bench. I also find that getting together with people at Think Tanks are a perfect way to generate new research ideas.

What advice would you give to students who are interested in cancer research?

I believe the key is identifying the right mentor and be persistent. Research requires time



wcrg@uwindsor.ca 519-996-6105 windsorcancerresearch.ca

MAY Dr. Phillip Karpowicz



WCRG RESEARCHER SNAPDSHOT

Phillip Karpowicz,

Department of Biological Sciences, University of Windsor

What is your research focus?

Our lab studies circadian rhythms, which are 24 hour cycles of daily body activity. The cells in our body have timy 24 hour biological clocks hardwired into them. We are interested in how circadian rhythms influence the growth and

when you mess up circadian rhythms, by doing things like shift work. The idea is that this might worsen illnesses like inflammatory bowel disease and colorectal cancer.

When do you get your best research idea

Anytime. But sadly, I most often get them when I'm bored and my mind starts to wander. So things like washing the dishes, sitting in traffic, or sitting through a boring meeting are actually great times to think about your research.

How did you come to be working on in this field?

During my postical least having dinner with some friends who were working for known'ts. We were talking about research. I mentioned that these furning prizes kept coming up in cur results. One of my friends had done his PM in circadam biology, and he told not bey were all circadian clock genes. I had no dies about circadiam rhythms at the time, and didn't make any sense - with you'dlie body wint not low down healing? So started collaboration, with his former supervisor - at the time this was just a wen'd lifte side project. It eventually became my whole research program.



wcrg@uwindsor.ca 519-996-6105 windsorcancerresearch.ca

AUGUST

Dr. Caroline Hamm



WCRG RESEARCHER SNAPDSHOT
Dr. Caroline Hamm.

MD

Medical Oncologist, Department of Oncology, Windsor Regional Hospital What is your research focus?

What is your research focus?

I am interested in any projects that directly impact
patient care in Windsor. We get our best ideas for
research projects from our patients and everything we
do in an aftering to improve their outcomes. My special
areas of specialization are tiplian negative breast cance
delivery of health care and complex hematology (acute
to the control of the con

What do you do in your spare time? Relax, meditate and kayak at our cottage in Wheatley. Tell us something about you that might surprise us.

I ell us something about you that might surprise us.
I am a farmer's daughler and a farmer's wife.
What is your favorite thing to do when you are not at work?

Be with my family.

What do you hope the impact of your work will be?

How did you come to be working in this field?

I was interested in cancer and research for years before I became a physician. I loved both the science and the art of cancer crease rule decorate research.

What advice would you give to students who are interested in cancer research! Follow your heart.

What is your most notable accomplishment so far?

What motivates you to do what you do? I grew up in this community. Patients are my family and friends, either directly or indirectly. I am so biessed to be able to help people from this area.



wcrg@uwindsor.ca 519-996-6105 windsorcancerresearch.ca

NOVEMBER

Dr. Lisa Porter



WCRG RESEARCHER SNAPDSHOT

Dr. Lisa Porter, PhD Professor, University of Windsor,

Department of Biological Sciences

What is your research focus?

My leb focuses on understanding the mechanics of how cells control their growth and division. Specifically, we look at how specific proteins regulate this process during the development of an organism and what can go wrong in deseases such as cancer. Our goal is to make drugs that can larget these mechanisms for some of the most difficult to text centers including some of the most difficult to text centers including.

How does your research potentially impact the community?

We hope that our work brings novel therapies that will benefit patients here in Windsor-Essec first. We are also very keen to oducate the community about the scope of counter research grings in bottle . There is so much group on oright in our community—Hessing therapies that are being offered to our patients that are not available behaviors—we have a lot to be proud of and we are disclosed to keeping this groups to being hope to are many patients in Windsor-Essec as possible.

What motivates you to do what you do?

Seeing progress being made inclivates me. Even within the time that I've been in the field I've seen tremendous advancements, daugs are more blerable, and more people are being cured. My students motivate me as well, there is nothing better than seeing students excited about science and research and getting to witness their amazing ideas and potential.

What's one thing you would like people knowled

I finish it is important that people know that I am one part of the WCRG train. Windoor is moving amore research forward because of a fugg group of idented research raws of students who are working logother. Continued regress also depends on the support, funding and input from patients, their caregivers and our partners in Windoor Essex, we are so thankful for the amazing community Interviewer. Stude Erein.



wcrg@uwindsor.ca 519-996-6105 windsorcancerresearch.ca

CURES TEAM

Cancer Undergraduate Research and Education Students

WCRG has over **50** undergraduate student volunteers who are vital to our success. In 2018, volunteers played key roles in the following initiatives: Science Rendezvous, WCRG Think Tank Series, WRH Cancer Education Days, Faculty of Science PASS program, Brain Tumour Foundation of Canada Windsor Walk, WCRG Halloween Open House, Let's Talk Cancer, Open Streets Windsor, CTV Cancer Research Series, YMCA FOY Program, A Scientist Like Her, Soapbox Science, Ride for Dad, Cheers to Hope, World Cancer Day and the WCRG 4th Biennial International Cancer Research Conference.



WCRG volunteers develop public education tools, answer questions at events and workshop, and promote awareness of local cancer research projects and resources.



WCRG volunteers convey information about WCRG, cancer research and treatment initiatives in Windsor-Essex to the public in a clear and enthusiastic manner. They are approachable and target information to the needs of the audience.



WCRG volunteers have the opportunity to interact with researchers, peers and the public, which assists them in their own professional development.

INAUGURAL CURE CLASS

<u>Cancer Undergraduate Research Education: Course SCIE 3750</u>

CURE is a third year University of Windsor course created and taught by Dr. Lisa Porter. It was launched in September, 2018 to **43** undergraduate students with the goal of providing a hands on learning experience to students, with their ideas directly contributing to moving cancer research forward in Windsor-Essex. This course formalizes the entry into the WCRG Volunteer CURES team by providing the necessary information, skills and training for students to effectively communicate about cancer research to the public. As part of the learning outcomes, **29 projects** were produced by the class and displayed at a final viewing event. Some of the specific outputs of the course are highlighted below.



11 Educational tools/workshops developed

1 Children's book, 1 pediatric workshop & banner, 6 new outreach activities, 1 manual, 1 App & 1 high school workshop

5 WCRG promotional materials created & shared

WCRG YouTube Channel, CJAM Radio Show on WCRG & 3 promotional/educational videos

What students say about CURE

"Every science student should have this experience!"
"It's the only course of its kind."
"It gives students real opportunities in the community."





On Thursday May 3, 2018, WCRG hosted our second Cheers to Hope a community event to celebrate the advancements in local cancer research and acknowledge the important role our community plays. Over 160 people attended the event and had an opportunity to walk through an interactive research showcase that highlighted local research. Highlights of the evening were a cancer research story told by two researchers and a patient, and recognition for individuals and organizations that support WCRG. The Windsor Cancer Centre Foundation and the Faculty of Science, University of Windsor received a Recognition of Hope award. Dr. Michael Dufresne, University of Windsor retiree, and Jeff Casey, Owner, snapd Windsor, were acknowledged as the first WCRG Ambassadors of Hope.







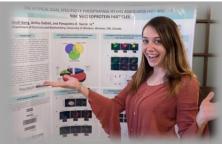




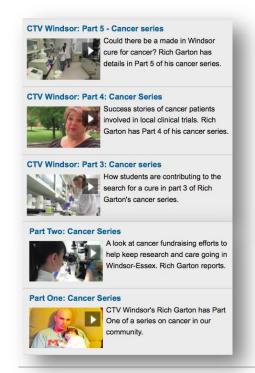








First aired October, 2018



BEHIND THE SCENES







In October, Rich Garton from CTV Windsor created a 5 part series on the collaborative nature of cancer research in our region. He highlighted our strong and growing research network and the importance of working together to ensure patients in Windsor-Essex receive the best care. Rich interviewed the University of Windsor researchers and students, Windsor Regional Hospital medical oncologists, medical students, Clinical Trials Department staff, patients and local fundraising organizations. Thank you to CTV Windsor and especially reporter Rich Garton for showcasing the amazing collaborative team in Windsor-Essex.











Cancer research at its best is a complicated, collaborative endeavour that goes beyond labs, clinics and classrooms. Key to WCRG's growth and impact is the passion and dedication of people in the community that bring the research to life, share the message and commit to action. Impacted personally by cancer, they are the heart of research.

TESTIMONIALS



I came to the University of Windsor as a mid-career faculty member. This has many advantages as I have research experience and a pretty good sense of my role as a faculty member but what I was missing was the depth and breadth of interdisciplinary and community connections that you build over the years. The WCRG researchers and staff, and the Think Tanks in particular, were FABULOUS for networking, rapidly assessing the local research resources, and identifying opportunities for funding and rich research collaborations. I am so grateful to be involved in this group

Jody Ralph, PhD RN

Associate Professor, University of Windsor



Being part of the WCRG team has been one of the most rewarding experiences of my undergraduate career. I have had the opportunity to work alongside many of our community's most celebrated leaders in order to promote and strengthen the link between local health care and research at the University of Windsor. I witnessed first-hand the positive impact that collaboration between researchers and health care professionals has had on our community and it opened my eyes to the strides Windsor is making in research and the importance of this in continually improving our health care.

Vanessa Montemurri

Undergraduate Student, Biological Sciences CURES Lead Volunteer



I have had the pleasure of being involved with WCRG for over a year. I am truly so fortunate to know such an amazing group of individuals who are passionate and energetic about research. As a Clinical Research Associate, I look forward to working with them on many exciting initiatives as the future in Windsor-Essex has so much promise for cancer research!

Jenna Jones

Clinical Research Associate, Windsor Regional Hospital



When I was first introduced to the WCRG, I couldn't believe that we were fortunate enough to have such a wonderful organization right in our own backyard. We are truly blessed to have such passionate researchers striving to make a difference. But it's a collaborative effort. Without our amazing community, the WCRG would not exist. Without the WCRG, research wouldn't happen locally and without research, as a wise man once said...there would be no hope. I am proud to live in a community that strives to give hope to the people that need it most. Kudos to the WCRG for being that big warm hug we all need!!

Houida Kassem

Executive Director, Windsor Cancer Centre Foundation

THANK YOU TO OUR 2018 SUPPORTERS



Today, cancer patients live longer because of advancements stemming from research. WCRG is excited to build and strengthen our current local cancer research program to better serve the patients of the Lake Erie-St. Clair region. The devotion, energy and enthusiasm of our members, our volunteers and all those in the community that have supported us is key to our continued growth and our ability to make a difference in the fight against cancer.

Thank you, we couldn't do it without you!

Personal Donors

Veronica A. Boretsky	Michael J. Dufresne	Heather E. Metcalfe	Marilyn G. Ursulak
John H. Brockenshire	Peter Dunn	Mindee Minos	Zachary M. Stone
Leonard A. Douziech	Vanna Evola	Muhabura T. Ntihinyurwa	Paul S. Taylor

Conference Research Ambassadors

Majid Ahmadi

Jeff Casey

Michael J. Dufresne in memory of Rosemary

Alan Metcalfe
Heather E. Metcalfe
Katelyn Bedard Bone Marrow Association









"Without research, hope is just a word."

Dr. Michael Dufresne

WCRG Ambassador of Hope, former cancer researcher & Seeds4Hope Program Administrator







