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# Thank you

It has been refreshing to see students and faculty return to full in-person learning. Our scholars have been able to fully engage in student life activities, and international events were hosted again on site. Your generosity ensured that we were able to rise to the many challenges we faced over the past several years. Thank you for helping the University remain agile in the face of adversity. We came together stronger, wiser, and further committed to fostering growth.

The impact of philanthropy at McGill is as diverse as the students, researchers, and faculty who learn and work at our campuses. In this stewardship report, you will learn more about

how Canderel Management's support is helping train talented scholars who are ready to advance research initiatives that are changing lives.

With new leadership in place and a learning environment that pushes the boundaries of creativity and innovation, the future of our University is bright. Your partnership will help us to continue supporting the ambitions of the McGill community and we are grateful for your philanthropic spirit.

Thank you for investing in higher education. When we work together, our impact is profound.



# Canderel Graduate Studentship Awards

Established in 1991, the *Canderel Graduate Studentship Awards* are designed to attract talented young people to cancer research at the Rosalind and Morris Goodman Cancer Institute (GCI). The Studentships are awarded to outstanding graduate students undertaking studies at the GCI or in the Gerald Bronfman Department of Oncology.

## 2022-23 recipients

Recipient	Degree	Laboratory	Year of study
Romane Monnet	MSc, Biochemistry	Dr. Josée Dostie	2
Caitlyn Mourcos	PhD, Experimental Medicine	Dr. William Muller	1
Pushkarni Suresh	MSc, Biochemistry	Dr. Jerry Pelletier	2
Rachel Kim	MSc, Experimental Surgery	Dr. Luke McCaffrey	1
Kailyn Wanhella	MSc, Biochemistry	Dr. Jose Teodoro and Dr. Ivan Topisirovic	1

# Research summaries and words of thanks

## Romane Monnet: The long non-coding RNA HOTAIRM1: tumour suppressor or oncogene?

My project focuses on a long non-coding RNA called HOTAIRM1, which has been shown to either prevent cancer (acting as a tumour suppressor) or promote cancer (acting as an oncogene), depending on the cancer type and context. More specifically, I study how a cellular process known as alternative splicing gives rise to versions of HOTAIRM1 of varying lengths, since we believe that these variants may be playing a role in the switch from tumour suppressor to oncogene.

This project is especially exciting to me as it allies cancer research (which I am passionate about due to its real-world impact) to RNA research that has been the focus of my research interests ever since I began working at the Goodman Cancer Institute. The discoveries made as part of this project will shed light on HOTAIRM1's compelling role in cancer and help us better understand cancer pathogenesis to offer better treatment to patients.



Sincerely,  
**Romane Monnet**

Dear Mr. Jonathan Wener,

I am writing to thank you for generously supporting graduate students from the Goodman Cancer Institute such as myself by funding the *Canderel Graduate Studentship Award*. I am delighted to have been awarded this studentship as it will allow me to continue the fascinating research that I am performing in Dr. Josée Dostie's lab.

Once again, I would like to sincerely thank you for supporting the ongoing efforts of the Goodman Cancer Institute. These kinds of studentships are essential to maintaining the high quality of research that we demonstrate at the Institute, as they elevate the research we perform while granting financial stability to graduate students.

Caitlyn Mourcos: Tumour-brain crosstalk in invasive brain metastases

An estimated 20-40% of cancers will spread to the brain and develop into brain metastases (BrM). These tumours come with bleak prognoses for patients, but research efforts to investigate the biology of BrM and develop efficient and innovative therapies against it are ongoing. Recent advances by our group discovered minimally (MI) and highly invasive (HI) BrM. Whereas MI BrM remain limited in area and are easier to surgically remove, HI BrM spread through the brain, and lead to post-resection recurrence in patients. Many studies have discovered that factors released from cancer and brain cells, such as growth factors and immune modulating factors (cytokines), can promote BrM progression.

These factors can act as direct pro-invasion signals for cancer cells and/or alter the cellular landscape surrounding the tumour to its advantage, for instance to escape an anti-tumour immune response. I am interested in contributing to this line of research by investigating secreted factors from tumour and brain cells that characterize and possibly drive HI BrM. This project is important as it will help uncover the cancer-brain crosstalk, which may be exploited therapeutically for HI BrM patients, especially considering the clinical availability of targeted growth-factor signaling inhibitors and cancer immunotherapies.



Dear Mr. Jonathan Wener,

I am writing to thank you for your support through the 2022 *Canderel Graduate Studentship Award*, which will greatly assist my academic pursuits as a graduate student in Experimental Medicine.

I completed my Bachelor of Science in Translational and Molecular Medicine at the University of Ottawa in 2021, where my honours research project focused on cancer cell movement, which contributes to cancer spread or metastasis. This inspired me to continue in the field of cancer research and I leapt at the opportunity to participate in the groundbreaking metastasis research occurring at the GCI at McGill University.

This award will support me in my ongoing graduate studies. I am investigating how metastasized cancer cells communicate with the brain to establish and maintain aggressive brain tumours. Cancer patients that develop brain metastases currently face a bleak prognosis with little hope from the current standards of treatment. Importantly, this project will help elucidate the cancer-brain crosstalk which may be exploited therapeutically.

My personal encounters with heroes and families touched by cancer have motivated me to direct my passion for biomedical sciences toward understanding the fascinating and devastating disease. This award will allow me to continue on this path, where I hope my research will one day inspire the pursuit of innovative therapies and have a positive impact on cancer patients.

Thank you again for your generosity and supporting the next generation of scientists.

Kindest regards,  
Caitlyn Mourcos

Pushkarni Suresh: Targeting deregulated protein synthesis in tumour cells

Protein synthesis in normal cells is highly regulated and in tumour cells, this process becomes deregulated. Our lab has not only identified but also developed new drugs that can specifically interfere with deregulated protein synthesis in tumour cells. These compounds are very potent, selectively targeting tumour cells while leaving normal cells unscathed, show efficacy in preclinical models, and are well-tolerated in mice. The compounds identified by our lab are from a large group of natural products (known as rocaglates). The question is whether members of this family exhibit the same biological activity and which member most potently inhibits protein synthesis. The current proposal seeks to address these issues.

In this project, we hope to better understand the mechanism by which rocaglates inhibit protein synthesis. Better defining their mechanism of action and understanding how they target protein synthesis will enable us to identify the optimal compound for clinical development. These studies will also provide insight into why these compounds are cytotoxic towards tumour cells, yet well-tolerated in mouse preclinical models. Furthermore, with the entry of eFT226 (rocaglate) in clinical development, this study would be highly impactful in aiding the development of other rocaglates as cancer therapeutics.



Dear Mr. Jonathan Wener,

I would like to take this opportunity to thank you for your generosity. I am truly honoured to be a recipient of the *Canderel Graduate Studentship Award*.

Growing up, I discovered my penchant for molecular biology and genetics and went on to pursue a degree in Biotechnology at the University of Queensland, Australia. Realizing my zest to work in the field of healthcare and technology, I worked on the COVID-19 project in India and developed a molecule to target SARS-CoV2. Being a part of a team with several cancer immunologists, I found myself enthusiastic about exploring the field of cancer research.

Currently, I am pursuing a master’s degree in Biochemistry from Dr. Jerry Pelletier’s laboratory. His laboratory has been extensively applying chemical biology and genetic tools to unravel the mechanism behind protein synthesis in eukaryotic cells. The knowledge gained on this has aided in the development of several small molecules with the possibility of efficiently inhibiting protein production in cancer cells.

This studentship will support my project in better defining the molecular mechanism of action of the translation inhibitors and in identifying the optimal compound for clinical development. The study will also provide an insight into why the compounds are cytotoxic toward tumour cells, yet well-tolerated in mouse preclinical models. Every step in my career has helped me refine my goals, to better understand my purpose as a growing scientist and aim to develop therapeutics to achieve a cancer-free community. Your generous award will support me in achieving this with the utmost confidence and help contribute to science and society.

Sincerely,  
Pushkarni Suresh

Rachel Kim: Ductal macrophages in early breast cancer

Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer deaths among women. Widespread screening has improved early detection of cancer precursors, but it is not currently possible to differentiate between stable precursors and those that will progress to breast cancer. Consequently, precursors are treated similarly to advanced breast cancer, which is unnecessary for some patients and leads to concerns about overtreatment. There is a need to understand the mechanisms underlying the development of breast cancer to better distinguish stable from labile precursors.

In breast tissue, immune cells called ductal macrophages (DMs) form a network surrounding breast ducts. We observe that DMs are recruited to sites of cell death in early breast cancer lesions

and their presence correlates with maintenance of normal tissue structure—a barrier to breast cancer development. We hypothesize that DMs are responsible for maintaining healthy ducts and that loss of DMs enables cancer progression.

To better understand the role of DMs in early cancer progression, we will compare the DM number, location, and activity between early and late tumour samples. Using a novel breast cancer model we have developed that allows us to grow fragments of breast ducts with their associated DMs, we will test how DMs respond to injury to the duct and whether depletion of DMs affects tumours growing in the ducts. Finally, we will use mouse models to investigate whether certain alterations prevent DMs from associating with tumours and how their activity affects tumour progression.



Dear Mr. Wener,

My name is Rachel, and I am a first-year master’s student with the Division of Experimental Medicine at McGill University. I have been selected as one of the recipients of the 2022 *Canderel Graduate Studentship Award*, and I am writing to express my gratitude for this honour.

My project with the McCaffrey Lab investigates immunological changes associated with breast cancer progression. Specifically, I am describing the behaviour of a type of immune cell called macrophages at tumour sites and investigating how this behaviour changes as breast tumours progress from benign to invasive. We hope that a more thorough characterization of macrophages could eventually be used to inform patient treatment.

Although I did not have much research experience prior to starting my master’s degree, I was excited by the prospect of pursuing self-directed learning through graduate studies. Over the past year, I have discovered a passion for research and become inspired by the opportunities offered in the McCaffrey Lab. In fact, I have recently decided to undertake a PhD with the Lab. The Canderel studentship enables me to continue my research in this field, and I am truly grateful for your generosity.

Sincerely,  
Rachel Kim

Kailyn Wanhella: APC4 and mTOR interaction

The anaphase promoting complex/cyclosome (APC/C) is a key regulator in the eukaryotic cell cycle, governing the metaphase-to-anaphase transition. Meanwhile, mammalian target of rapamycin (mTOR) is a master regulator of the Phosphatidylinositol3-kinase signaling pathway. Recent investigations have shown that one of the APC/C subunits, anaphase-promoting complex 4 (APC4), contains a putative conserved TOS motif, and its phosphorylation responds to mTOR inhibitors. We hypothesize that APC4 and mTOR interact to regulate the cell cycle. This is an intriguing project as it has the potential to unveil a new layer of cell cycle regulation and brings two large complexes together that were previously not thought to interact. This may also have cancer

implications, as checkpoint regulation becomes distorted in such circumstances. The molecular mechanism by which mTOR regulates the APC/C is not currently understood and is the major question this project aims to answer. This will involve immuno-precipitation experiments to confirm that APC4 and mTOR associate, and that this binding is TOS motif-dependent. Another aim is to determine at which stage of the cell cycle this interaction occurs. Additionally, in future experiments we hope to use mouse models to model TOS-motif mutations in the APC4 protein. By studying how and why this interaction occurs may unearth novel information regarding cell cycle regulation as well as possible cancer implications.



Dear Mr. Jonathan Wener,

I would like to earnestly thank you for your donation to the GCI. I am honoured to receive the *Canderel Graduate Studentship Award* for 2022-23. I began my master’s degree in Biochemistry under the supervision of Dr. Jose Teodoro and Dr. Ivan Topisirovic in September 2021. My project came to be after various investigations showed evidence of changes in APC4 phosphorylation in the context of the mTOR pathway, as well as observations that APC4 contains a putative conserved TOR Signaling (TOS) motif, which responds to mTOR inhibitors. Because of this, I am studying how the APC4 and mTOR interact to affect cell cycle regulation.

Currently, I am studying mutations of the TOS motif and observing if they lead to mTOR no longer being able to associate with APC4. If this is found to be correct, our lab hopes to pursue mouse studies modeling this mutation so we can understand the in vivo effects. We also aim to determine if the APC4-mTOR interaction is the result of direct kinase activity, and at which stage of the cell cycle that the APC/C-mTOR interaction occurs. These studies will hopefully uncover when this interaction occurs and unveil novel information about the mTOR signaling pathway and how and why the APC4 protein is involved.

Thank you again for your generosity. It is support such as this that allows cancer research to continue and progress. With your help, we will be able to purchase high-quality reagents and use the best technology available for future experiments. This award marks a milestone in my research and will have a monumental impact on my career.

Kind regards,  
Kailyn Wanhella





# Canderel Conference Travel Awards

The *Canderel Conference Travel Awards* were created in 1995 as an acknowledgement that the most meaningful learning experiences often take place outside the traditional classroom, and that cancer research is a fundamentally collaborative effort. Attending these conferences gives students the opportunity to improve their presentation skills, broaden their scientific knowledge, and establish new research partnerships with leading professionals in their fields.

## 2022-23 recipients

Recipient	Degree	Laboratory	Year of study
Maxime Bellefeuille	MSc, Biochemistry	Dr. Thomas Duchaine	2
Jakub Bunk	PhD, Biochemistry	Dr. Lawrence Kazak	2
Hailey Dall-Proud	PhD, Biochemistry	Dr. William Muller	1
Rima Ezzeddine	PhD, Biochemistry	Dr. Peter Siegel	5
Tianxu Fang	PhD, Biological and Biomedical Engineering	Dr. Guojun Chen	3
Marina Fukano	PhD, Biochemistry	Dr. Morag Park	2
Faiz Hussain	PhD, Biochemistry	Dr. Lawrence Kazak	2
Ting Li	PDF, General Medicine	Dr. Vincent Giguère	1
Simon Milette	PhD, Experimental Medicine	Dr. Daniela Quail	6
Charlotte Scholtes	PhD, General Medicine	Dr. Vincent Giguère	1
Cynthia Tseng	PDF, General Medicine	Dr. Thomas Duchaine	4
Elva Vidya	PhD, Biochemistry	Dr. Thomas Duchaine	3



# Conference learning experience



## Charlotte Scholtes

I participated in the "A 20/20 vision of the future of nuclear receptors" conference. It was divided in six sessions:

1. What changes in the genome during disease progression;
2. Advances in methods for understanding nuclear receptor function;
3. Cellular plasticity in response to extracellular stimuli;
4. Contemporary systems for studying important nuclear receptor processes;
5. Nuclear receptor gene regulation in metabolism and cancer;
6. Global approaches for deconvoluting nuclear receptor function.

Thanks to this conference, I had the opportunity to listen to high-quality talks from renowned researchers in the field. For example, lots of talks were about the roles of nuclear receptors in different cancers. The overall proportion of novel/unpublished results were very good, and we discovered lots of new data. In particular, Dr. Bert O'Malley did the keynote lecture about how a mutation in the Src3 gene, a gene coding for a coactivator of nuclear receptor, in Treg cells can create a 'vaccine' against cancer. Indeed, injection of knockout Treg cells for Src3 gene prevent the development of many types of cancer (prostate, breast, or pancreas cancers). Mechanisms are not still clear, but they showed an increase of  $INF\gamma$  inside tumours, not in serum and IL2 is altered in tumour environments.

Moreover, the sessions' posters were very informative and allowed me to speak about my current project with researchers in the field. I spoke with Dr. David Mangelsdorf, Dr. Mitchell Lazar and Prof. Eckardt Treuter. They highlighted interesting questions about how to validate interactions between  $ERR\alpha$  and HCFC1, the new interactor that I discovered. They were pretty enthusiastic.

I also had the opportunity to considerably increase my network during time allowed to meet and network with other participants/speakers. My goal next year is to find a principal investigator position in France. I acquired useful career contacts/ collaborations. I spoke about the principal investigator position in France with several participants, notably one principal investigator in Strasbourg, Dr. Isabelle Billas. She answered a lot of my questions about the competition to become a principal investigator in France. She also gave me advice for funding, managing a lab and useful tips when opening a lab in France.

In conclusion, this meeting was a very good opportunity on several levels: (i) science, for my project I had lots of new ideas and hypotheses to test; (ii) career, I met very important researchers for the next stage of my scientific career and potential collaborators for now and in the future; (iii) mental health.

It was very nice to go back to an in-person conference, it really gave me a boost of motivation and it is much better to speak directly with people!



## Cynthia Tseng

"The complex life of RNA" conference covered a variety of subjects, with a particular focus on RNA modifications, transcriptionally coupled processing, decay, as well as translational and co-translational assembly and processes. While there were few talks and posters on my particular topic of interest, alternative polyadenylation, the exposure to topics outside of my own project was part of the goal for attending the meeting. I had the opportunity to speak with experts in different fields, share their passion for the work, and learn from their topics and techniques. I received feedback for my poster presentation and communicated my published work to the relevant audience.

One memorable poster by Martin Mikl showcased his lab's strategy for studying 3'UTR regulation of RNA localization, stability, and translatability. He employed a library of 3'UTR segments tiled from an endogenous gene and expressed the

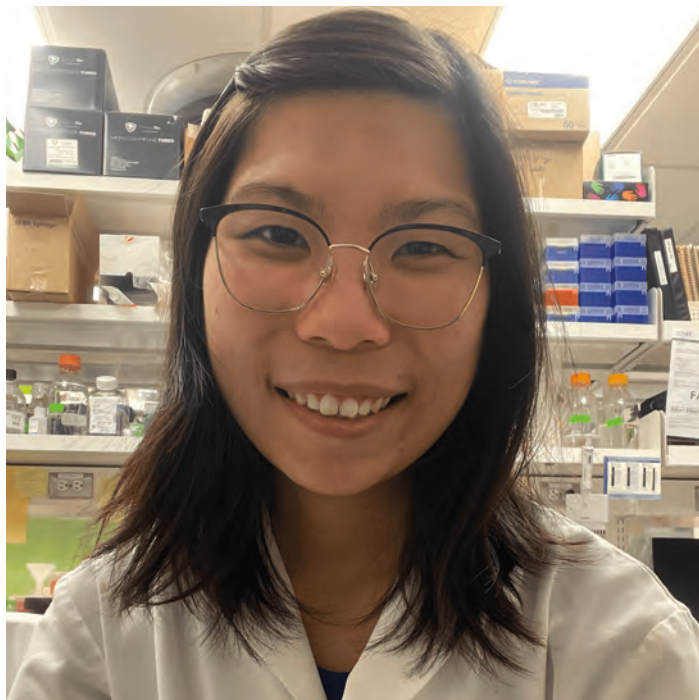
library in neurons to isolate out the products that localize to the cell body as opposed to the neurites. For translatability, he used MCP coupled with MS2 on the same transcript as surrogate for translation efficiency. For stability, a similar strategy to my ongoing project was used. I also was able to get some idea and feedback on the specific analysis of RNA decay-seq. On the same topic, I had also learned about SLAM-seq strategy that had become a popular method to study RNA stability and discussed the pros and cons of different strategies with Martin.

The talks overwhelmingly featured m<sup>6</sup>A modification for translation, RNA compaction, chromatin formation, and even its role in HCV infection. The field seems to be still diverging, with divergent results obtained from different methods to sequence m<sup>6</sup>A modifications. Some scientists are yet to dive in on the validity of the wide-ranging impact some claim this modification can have. There are efforts to converge the results, but they are still under development.

Some other memorable talks included the idea and evidence of decoupling mRNA deadenylation from decay by Cosmin Saveanu; RNP compaction by ALYREF binding to EJC and finally recruiting TREX complex presented by Clemens Plaschka; codon optimality mechanisms by Olivia Rissland; and co-translational protein assembly by Bernd Bukau.

Overall, I learned a great deal attending this international conference as my first in-person conference, and I appreciate the financial support that made it possible.

*"I had the opportunity to speak with experts in different fields, share their passion for the work, and learn from their topics and techniques. I received feedback for my poster presentation and communicated my published work to the relevant audience."*



## Elva Vidya

On July 24-28, I attended the "24th International C. elegans Conference" in Glasgow, which was organized by the Genetics Society of America. This meeting hosted approximately 1,400 scientists working with the model organism C. elegans to address a wide variety of fundamental questions in biology.

In keeping with my research interest, I focused my participation on sessions covering gene regulation and their impacts on animal development and disease. From many fascinating talks that I attended, one of the most exciting and memorable presentations was given by Dr. Julie Ahringer (Cambridge University) whose lab detailed gene reprogramming during embryonic development using genomic and single cell sequencing techniques. I also attended several technical workshops from which I learned current tools and cutting-edge technologies, such as expansion

microscopy and volume electron microscopy to study subcellular structures, and a newly developed tool called RNALysis to aide analyses of RNA sequencing datasets. I strongly sensed the collaborative ethos of the C. elegans research community from the open sharing of information, ideas, and protocols throughout the conference.

On the third day, I presented a poster of my PhD research. I was very pleased with the interest and enthusiasm surrounding my poster. I gained lots of feedback, experimental suggestions, and new ways of interpreting my data. It felt special to gain visits and excitement from scientists whose work I have followed and greatly admired throughout the years. A definite highlight was a visit and discussion with Dr. Geraldine Seydoux (Johns Hopkins) who has been at the forefront in studying the roles of RNA condensates in embryonic development. I am also grateful that my poster was awarded an honourable mention in the Gene Regulation and Genomics category.

In addition to the science, I am grateful for the connection and friendships that I made at the conference. I had some great conversations and got thoughtful career advice from people I met during the social events. Overall, this was one of the most enriching and memorable conferences I've attended so far. I wish to thank the Défi Canderel for providing me with this generous travel award to attend this conference to promote my research and career development.

*"I had some great conversations and got thoughtful career advice from people I met during the social events. Overall, this was one of the most enriching and memorable conferences I've attended so far."*



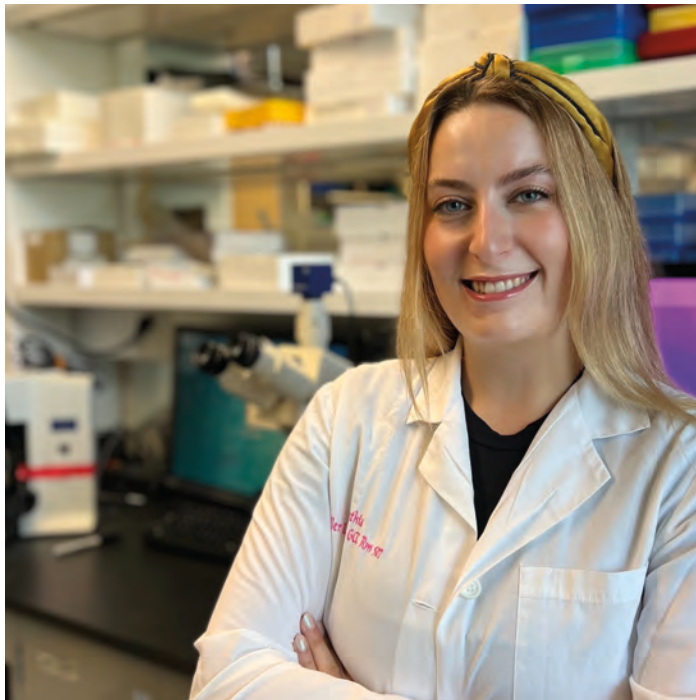
## Faiz Hussain

A major theme and topic of discussion at the 2023 Keystone Symposia, "Keystone's Adipose Tissue: Energizing Good Fat" (January 15 -19) focused on how fat tissue remodels and becomes dysfunctional in the context of obesity. This shift to a state of metabolic disorder leads to decreased insulin sensitivity and inflammation. Importantly, groups such as Dr. Patrick Seale's from the University of Pennsylvania presented their work showing that a high-fat diet feeding in mice leads to white adipose tissue remodeling and metabolic alterations, such as increased TGF- $\beta$  and SOX4, which resulted in increased cancer-associated fibroblasts (CAFs). These CAFs are subsequently key factors in driving tumour occurrence and progression, and many groups stressed the importance in determining what key factors control the early development of adipose tissue dysfunctional remodeling so that it may be prevented to avoid these downstream complications.

In addition to the talks on fat tissue remodeling, which delineated how white fat can be problematic in disease progression, another group of talks at the conference focused on the therapeutic potential of brown fat and how activating its energy burning capabilities can resolve obesity. Furthermore, to drive this energy burning, brown fat serves as a metabolic sink which readily takes up glucose and other metabolites, thus reducing potential fuel that can be used for cancer progression. A crucial focus here was on elucidating newly discovered mechanisms by which brown fat dissipates macronutrient energy as heat. Recently, novel thermogenic metabolic pathways have been proposed but largely their underlying key effector proteins, physiological role, or maximum therapeutic potential is unknown. On Monday evening, I presented my thesis research on the thermogenic regulation of one such pathway, the futile creatine cycle.

Many professors, such as Dr. Bruce Spiegelman also presented new findings on this pathway and their results helped me refine my research model. Another talk on this pathway was given by Dr. Chelsea Hepler from Northwestern University, who presented her work on the role of futile creatine cycling in time-restricted feeding mitigation of obesity. Her experiments showed that creatine metabolism was highly altered at certain times of the day and drove energy dissipation in mice that were subjected to time-restricted feeding. Attending these talks and discussing new research on this pathway helped me deepen my understanding of its therapeutic potential, and I was able to establish new collaborations, which will further the depth and impact of my project. These contacts will help me in my current studies and when looking for postdoctoral fellowships. I would like to continue research in this field to find therapies that combat obesity in the hopes of preventing its related diseases, such as metabolic syndrome and cancer.





**Hailey Dall-Proud**

The Gordon Research Conference (GRC) and affiliated Gordon Research Seminar (GRS) bring together an international breast cancer research community for an agenda spanning the mammary gland research spectrum. This is an ideal opportunity for researchers, trainees, and clinicians to hear the latest developments in breast cancer research and network across disciplines.

This year, as a participant in both the GRC as well as the student-led GRS I was fortunate to attend presentations spanning different facets of mammary gland biology (normal development as well as early and late-stage cancer progression) while attending over 50 talks and spending another two days interacting with researchers during poster-presentation sessions. There were ample opportunities for networking, and I was able

to speak to research groups from around the globe including research institutes in Spain, Italy, the US, and Canada.

As a poster presenter at the GRS, I was able to translate my current work to the research community, which is invaluable as I hone my presentation abilities and background knowledge. I was able to engage with other participants and learn interesting new techniques outside of the scope of my research and expand my knowledge on not only breast cancer but on mammary gland biology. This experience was incredibly useful as I transition into the PhD program and prepare to complete my General Advisory Committee meeting in the spring of 2023, as confidently and calmly fielding questions is an important skill to have while continuing to broaden my understanding in the field.

Participation in this conference allowed me to meet other researchers in the breast cancer field, exchange knowledge, and form connections with other institutes. These professional relationships are important as I complete my research project and they open the door for future collaborations.

Engaging in this conference was partly made possible through the travel grant funded by Canderel, which covered a portion of the registration fees. I would like to sincerely thank all those involved in providing this funding, and for the impact they have made on my current research and presentation skills. This conference was a fantastic experience and has helped me feel confident when presenting my research to a highly skilled audience. I hope to continue building these skills in the future and am hopeful to attend this conference again.



**Jakub Bunk**

From January 15 to 19, 2023 I had the pleasure to attend the conference “Adipose Tissue: Energizing Good Fat,” taking place in Colorado, USA. Here, I summarize the key information I obtained during my stay at the conference.

It was the first scientific conference I had a chance to attend in my life. The topic of Adipose Biology as well as global body metabolism was the main focus of all the talks and workshops given by the most renowned scientist in the field. I had the chance to share my opinion as well as ask for advice from professionals like Professor Bruce Spiegelman, who was a mentor of my own PI at Harvard University in the past.

One of the most interesting talks that I especially enjoyed was the one given by Professor Farnaz Shamsi from New York University entitled “Axon Guidance Molecule Slit3 is Essential

for Cold-induced Remodeling of BAT Neurovasculature and Thermogenesis.” In her talk, Professor Shamsi presented her unpublished data regarding the way in which the secreted factors provoke the formation of innervation and vasculature network within adipose tissue. I had the pleasure to later talk with Professor Shamsi during my poster presentation. I was able to conclude that this phenomenon could potentially be involved in the progression of breast cancer that is residing in tissue rich in adipocytes within the breast. This was an extremely inspiring conversation that additionally allowed my presented work to be subjected to critique by not only Professor Shamsi but other PIs. I got great feedback on my work as well as a few tips and suggestions I will use in my studies in the Kazak Lab this year. One of the best suggestions I received was to allow the virus I designed to incubate within the mice for an extended period to observe the impact on the onset of obesity and following comorbidities.

Attending this conference has given me a great perspective of the broad spectrum of approaches that my field uses to answer biological questions. I am highly inspired and motivated to continue my studies and to improve my research quality, even more than I was before.

I would like to officially thank the *Canderel Conference Travel Awards* Committee for making this trip financially possible for me. This experience is one that I am sure I will not forget for the rest of my life. I hope in the future I will be able to also give a talk at such a conference and proudly represent my lab as well as the whole University.



### Marina Fukano

I want to thank Canderel for supporting me in participating in the "2023 Gordon Research Conference on Cancer Genetics and Epigenetics" held May 21- 26 in Italy.

This conference was an international-scale, high-standard meeting, which allowed me to network with many exceptional and leading cancer researchers worldwide. Furthermore, there were talks on various research topics, ranging from bioinformatics and cutting-edge technologies to epigenetics and immunology.

By attending this conference, I learned about the latest ongoing research. I significantly furthered my knowledge of cancer research, particularly in different aspects of epigenetic reprogramming in cancers. For example, I gained a greater understanding of histone mutations, 3D chromatin structure, enhancer/silencer contributing to tumour progression, and

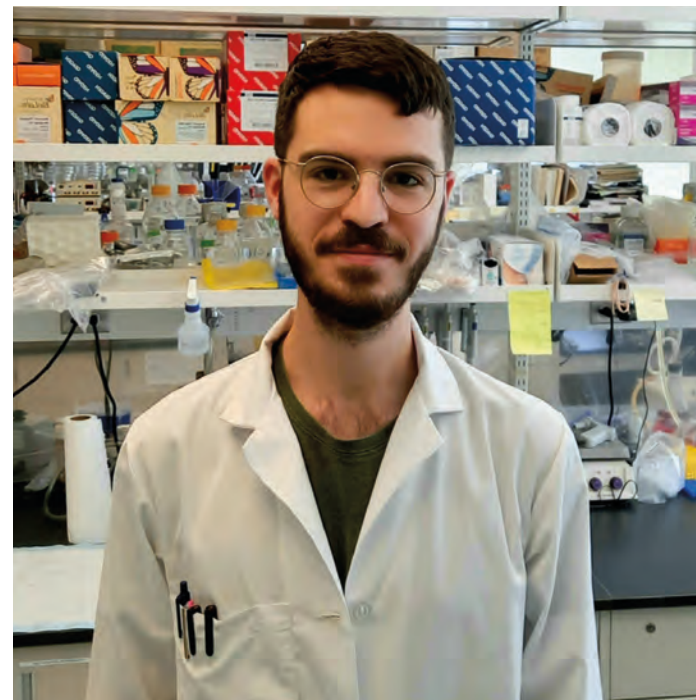
the potential role of transposable elements in enhancing pro-tumorigenic immune response. This knowledge will hugely help me finalize my ongoing PhD project that focuses on targeting epigenetic reprogramming to prevent the growth of triple-negative breast cancer.

Importantly, I also gave a poster presentation at this conference. I received great feedback and many questions during my presentation. I had an opportunity to present my work to several editors from different publishing journals. I connected with the editors and received instrumental comments, which will be critical and valuable for my next steps.

This conference provided me with new knowledge, perspectives and connections with scientists and editors, which will further improve my current work and help me pursue my career as a young scientist. Hence, your support profoundly contributes to my academic success. This conference was a wonderful learning experience.

Again, I am delighted to receive your travel award. Thank you very much for your generosity.

*"By attending this conference, I learned about the latest ongoing research. I significantly furthered my knowledge of cancer research, particularly in different aspects of epigenetic reprogramming in cancers."*



### Maxime Bellefeuille

I participated in the international conference "The Complex Life of RNA" organized by the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany. I was selected to present my project through a scientific poster among over 200 selected presenters. Being my first poster and conference, I learned quite a lot about the process of presenting a project. While sharing my story, I identified flaws in both my poster and in my presentation. After many rounds of presentation, I understood more clearly what makes for clear narration. In addition to the presentation itself, I got a lot of feedback on our project, which we are getting ready to publish. It was the perfect opportunity to get suggestions and questions from the scientific community. I was lucky to have many people visit my poster and have the opportunity to speak directly to a wide range of scientists. I was suggested key experiments to explore missing pieces in our story, which could help us conclude the paper.

Additionally, I met with a scientist at Aarhus University in Denmark who identified our protein of interest SFPQ in co-immunoprecipitation mass spectroscopy experiments with an RNA degradation complex. After discussion, we agreed on a possible collaboration using these data. This is very useful because it could uncover a new role in the mechanism of our protein. I met with many other presenters that displayed similar scientific interests. I got feedback on the novel and innovative techniques that we were interested in trying. I also got opinions on ways to improve our approaches through alternative methods, especially on studying RNA stability at the genome-wide level.

The other main part of the conference included presentations from an impressive set of speakers with labs around the world. The subjects ranged from RNA transcription to RNA translation and decay looking into every step of RNA biology. I identified many techniques and approaches that could be directly applied in our lab and on presenting complex data. We learned about the current state of research in RNA transport, maturation, and silencing, and how they are related to diseases like cancer and neurodegenerative diseases through models. Many talks were about m6A RNA modification, with which I was unfamiliar. Leaving this conference, I now know the basics of this modification and related proteins, but also the current debates around it. I was able to listen to interesting talks related to my current projects and my other interests. Alexandra Chivu from the John Lis lab at Cornell presented her PhD project on RNA polymerase II pausing in transcription initiation, which was one of the highlights in my opinion. She described very clearly how the NELF complex, only found in organisms which have that transcriptional feature, directed the pausing and release of the polymerase. From her talk, I got the idea to look at gene features she mentioned in our sequencing datasets. Additionally, Olivia Rissland had a clear and thorough presentation about RNA stability and codon optimization. I was not aware of the extent of the consequences of codon optimization in translation. I learned how important it was to optimize codons for expression in different organisms or translation systems. Overall, I was lucky to actively participate in this conference with scientists at the leading-edge of research. The conference directly helped us for our story through feedback, questions, and collaboration.





### Rima Ezzedine

Thank you for awarding me a *Canderel Conference Travel Award* that helped offset the costs of attending the Keystone Symposia Conference on Protein-RNA Interactions.

Since RNA binding proteins are a new field of research in the Siegel Lab, attending such meetings is of paramount importance for me to gain exposure to the RNA field. This conference was part of the Keystone Symposia on Molecular and Cellular Biology. The sessions addressed topics from the basic and translational life science including imagining protein-RNA interactions, using cryo-EM and other techniques, as an evolving topic in biology. In addition, some talks tackled the potential of key protein-RNA interactions serving as drug and therapeutic targets. Moreover, the conference was joint with a concurrent meeting on bio-condensates. This gave me the opportunity to learn more and

understand the concepts of both phase separation and biological condensates, which are two hot topics gaining much attention nowadays and are the focus of a lot of ongoing research in the RNA field. Furthermore, I got to learn about the techniques used to study protein-RNA interactions such as CLIP and RIP.

The Keystone Symposia attract renowned researchers from all over the world. The meeting attendees came not only from an academic background, but some also came from industry. Thus, attending this conference gave me the chance to present a poster about my PhD work thus far and gain valuable feedback from fellow graduate students, postdocs and principal investigators. Therefore, being at the meeting enabled me to network with the global RNA community. I got to meet people from Canada, the USA and Europe. This improved my presentation and my social skills. In addition, the meeting organizers hosted a career roundtable in which both PIs and people from industry shared their experiences and struggles with the younger generation of RNA researchers.

I, once again, thank you for your generosity. The Protein-RNA Interactions conference was a great educational experience for me. This opportunity was a boost to my confidence and an expansion of my knowledge, network, and communication skills.



### Simon Milette

Thanks to the 2022 *Canderel Conference Travel Award*, I was able to attend the "Cell Symposia: Hallmarks of Cancer" conference in San Diego (USA) organized by Cell Press (Elsevier). This conference is one of the most popular and longest-lasting conference series of Cell Press. It brings together the international cancer research community for an agenda spanning basic biomedical sciences to clinical research.

While attending the conference, I had the opportunity to network with scientists, trainees, clinicians, decision-makers, and patients to share my latest academic findings and hear about the latest developments in oncological sciences. These discussions gave me a new perspective on my thesis and gave me new ideas about the future directions and cutting-edge technologies to use to strengthen my understanding of my

research themes. Specifically, I learned about potential biochemical mechanisms involved in the disease I study. My exposure to high-quality science allowed me to better plan the next experiments, which are going to be critical to the timely completion of my thesis.

Once again, I would like to thank Canderel for this award and the travel opportunities it provided.

*"These discussions gave me a new perspective on my thesis and gave me new ideas about the future directions and cutting-edge technologies to use to strengthen my understanding of my research themes."*



## Tianxu Fang

My name is Tianxu Fang, and I am a PhD student at the Rosalind and Morris Goodman Cancer Institute in the Department of Biomedical Engineering, under the supervision of Dr. Guojun Chen. I'm very happy that I attended the Controlled Release Society (CRS) 2022 Annual Meeting with the generous support of the *Canderel Conference Travel Award*.

I gave two poster presentations at the meeting:

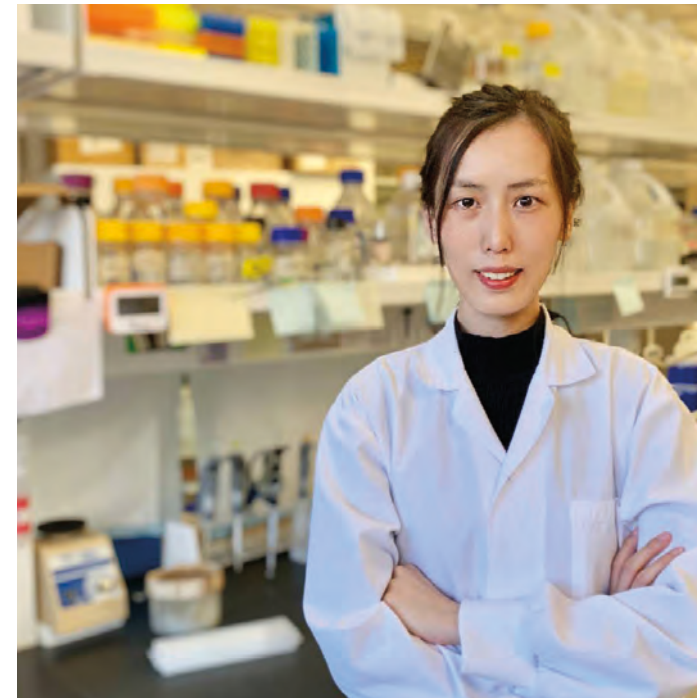
1. Transdermal cold atmospheric plasma-mediated immune checkpoint blockade therapy;
2. Portable air-fed cold atmospheric plasma device for post-surgical cancer treatment.

I introduced the rationales and results of these two projects to those who were interested in our work, answered their

questions, and discussed some related topics. I also went to see many other posters and consulted the presenters to know more about their interesting work in the poster hub.

I attended all four plenaries presented by Dr. Kinam Park (Biodegradable polymers: from drug delivery to everyday plastics), Dr. Puja Sapara (Advances in antibody-based therapies for oncology applications), Dr. Ijeoma Uchegbu (Controlling in vivo drug transport with pharmaceutical nanotechnology), and Dr. Y. James Kang (Target-specific controlled release of copper promotes myocardial regeneration in monkey model of ischemic heart disease), respectively. Additionally, I attended four tech sessions on the topics of bioinspired and biomimetic delivery, nanomedicine and nanoscale delivery, immuno delivery, and gene delivery.

This was my first in-person conference meeting in Canada. I felt really excited to have the chance to meet many young researchers from all over the world, to know the current advances in controlled delivery systems, and to share ideas with my peers. I believe that this conference was a really valuable experience for me, and what I learned will give me much inspiration for my future research work.



## Ting Li

The conference I participated in was about signalling in normal and cancer cells. It was divided into four sessions:

1. Signalling in the Tumour Microenvironment;
2. Cell Cycle and Genome Stability;
3. Signalling in Normal and Cancer Cells;
4. Kinases and Ras proteins.

In addition, the conference also held lightning talks and a poster session.

Thanks to this conference, I had the opportunity to listen to high-quality presentations by renowned researchers in the field. Much of the discussion was about newly discovered signals or novel roles of discovered signals in different cancers, including much new/unpublished data. For example, Dr. André Veillette and

his senior postdoctoral researcher focused on novel immune checkpoints in anti-tumour immunity, showing how the novel immune checkpoint slamf7 associates with CD47, a protein that may become a promising cancer therapy. The interaction between slamf7 and CD47 was in cis in the same tumour cell, rather than in the well-known trans interaction between Sirpa and CD47 in immune cells and cancer cells. Furthermore, Dr. Anne-Claude Gingras described a protein called TMEM127, which recruits membrane kinases translocation (e.g. EGFR, RET) and regulates cell proliferation. These stories provided inspiration for my current project.

The conference lightning talks and posters were very informative and allowed me to talk about my current project with well-known researchers in the field. I spoke to Dr. Anne-Claude Gingras, Dr. Daniel Schramek, Dr. Silvia Penuela, and trainees from BC Cancer and the University of Toronto. They were very enthusiastic and highlighted interesting questions about applying PDX or PDO models to further emphasize my story of how ERR $\gamma$ -mediated RET contributes to NEPC development.

I just found a job and am about to start my career at the University of Macau. Thank you once again for giving me the opportunity to meet and network with other attendees and speakers during the conference. It was really motivating, and it was great to talk to people directly! Not only did I gain useful career connections and collaborations, but I also got some advice from some new PIs on funding, managing a lab, and useful tips to consider when starting a lab.

Overall, the conference provided a great opportunity to:

- > expand my knowledge, which gave me valuable new ideas and hypotheses to test my projects;
- > communicate with potential collaborators for my now and next career;
- > get back to face-to-face meetings, bringing people together in a pleasant and intimate way.



# Canderel Rising Star Summer Internship Awards

For many years, the CIHR/FRQS training program provided funding for undergraduate students to participate in summer internships at the Rosalind and Morris Goodman Cancer Institute (GCI). When this funding ended in 2016, the GCI was able to continue offering this successful program thanks to the Défi Canderel. To recognize this change in funding, the program has been named the *Canderel Rising Star Summer Internship Awards*. The internship offers a partial stipend of \$2,000 to students joining a GCI researcher’s laboratory for the summer.





## 17 undergraduate students

benefitted from this award in 2022-23

## 2022-23 recipients

Recipient	Degree	Project title	Year of study
Liam Wilson	BSc, Physiology	Understanding The Developmental Trajectories of Monocyte-Derived Macrophages in Glioblastoma	3
Ella Morales	BSc, Biochemistry	DICER1-Associated Sarcomas	1
Huanyi Zhang	BSc, Biochemistry	Structure Function Analysis of MYC Protein	3
Sara Chaer	BSc, Anatomy and Cell Biology	Osteopontin-mediated rescue from tumor dormancy	2
Emma Pleynet	BSc, Anatomy and Cell Biology	Transcriptional control of hepatic metabolism by the HCF-1/ERRa complex	1
Philippe Aumont	BSc, Microbiology and Immunology	Role of TC-PTP (PTPN2) in B cell development and IFN-γ response.	2
Hajar Diouri	BEng, Chemical Engineering	Vaccine based on the "Antigen presenting factory" gel	2
Maximilian Crosby	BSc, Microbiology and Immunology	A comparative analysis of viral anaphase promoting complex inhibitor proteins on mitotic arrest and apoptosis in cancer cells	2
Michael Mouradian	BSc, Pharmacology	Investigating stem cell behaviour in the skin epidermis following UV exposure	3
Anastasija Piric	BSc, Biochemistry	Investigate Potential Combination Therapies for Treating Triple-Negative Breast Cancer	2
Isabella Pecora	BSc, Pharmacology	Deregulation of the Met Receptor Tyrosine Kinase in Cancer	3
Kristen Hoang	BSc, Biology	Tracking Cell Dynamics During the Transition from Normal to Malignant Phenotypes	2
Diya Patel	BSc, Biochemistry	Engineering Higher Fidelity T7 RNA Polymerases	1
Selina Zhao	BSc, Microbiology and Immunology	Generation of cancer models with peripheral tolerance against the defined TSA using JEDI anti-GFP T-cell mice	2
Sam Sakthivel	BSc, Biochemistry	Investigating NF1 Regulation of Melanoma-Immune Interactions	2
Jonathan Cheng	BSc, Biochemistry	How is thermogenesis by brown adipose tissue determined through allosteric and covalent modification of CKB and TNAP?	2
Muhammad Shahzad	BSc, Immunology (Interdepartmental)	Characterizing the Circulating Immune Landscape to Predict Response to Immunotherapy in Operable Lung Cancer	2



# Excerpts from the 2023 Rising Star Summer Internship recipients' reports



## Philippe Aumont

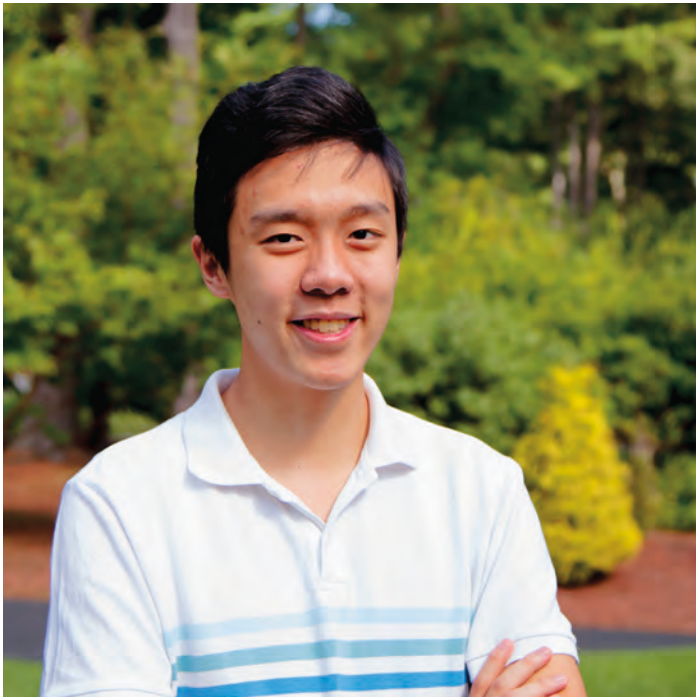
During my summer internship in the Tremblay lab, I worked mostly with Ana, a PhD student. I gained greater knowledge about molecular biology techniques such as western blot, ELISA, flow cytometry, and handling of genetically modified mouse models. I have additionally learned how to genotype mice to use in an experiment using PCR and electrophoresis. I have gained greater insights on the inner workings of a laboratory, how research is conducted, and how scientific writing is performed. With Ana, I have learned to value and practice good laboratory practices, such as note taking, patience and precision.

I finished this internship with renewed interest for academia and scientific research. Dr. Tremblay and the members of his lab helped me throughout my internship, and I am thankful for their help and welcoming attitude.



## Sara Chaer

I am extremely thankful for the time I spent in Dr. Muller's lab thanks to the *Canderel Rising Star Summer Internship Award*. I was able to learn and practice doing new, fundamental experiments such as western blots, qPCRs, protein extraction, and establishing a cell line. My original project did not pan out as expected; however, this presented me with a valuable opportunity to navigate the intricacies of scientific inquiry and to acquire skills to adapt effectively. This first-hand experience provided a realistic understanding of the complexities of conducting scientific research, but also of the sense of accomplishment that accompanies hard work. I would like to sincerely thank Canderel for granting me this prestigious research award. It has been an invaluable opportunity for personal growth, and I am deeply appreciative of the knowledge I have gained.



## Jonathan Cheng

I found my summer experience in the Kazak lab to be very valuable. I learned many wet lab techniques and learned about experimental design, such as being meticulous with controls to be certain that the observed effect is due to the independent variable. I also found value in the mentorship I received from my graduate student supervisor, Dr. Kazak. I felt I could approach him for any advice I needed during my research and anticipate I can approach him in the future.

This experience was made possible through Mr. Jonathan Wener's generous support and I thank him for providing me with such an enriching experience.



## Maximilian Crosby

Over the summer, I worked on two projects: the viral APC inhibitor proteins project and the lab's adenovirus CNNM3 project. I am glad that I was able to learn from all of the members of the Teodoro lab. I am satisfied with the research acumen and technical knowledge I built over the summer. I am looking forward to continuing my work on both projects next semester, through the Department of Microbiology & Immunology honours program and a BIOC 396 research elective.

I would like to thank Mr. Jonathan Wener for the support in conducting this experimental plan.





### Diya Patel

My experience at the Pelletier lab was a intellectually stimulating journey which provided me with valuable insight and hands-on experience. From the moment I stepped into the lab, I was welcomed by enthusiastic graduate students and research assistants. One of the most significant aspects of my experience was witnessing the real-world application of biochemistry; from understanding how to isolate, purify, and analyze proteins to how they interact with other components of the cell.

I consider myself very lucky for being the recipient of the *Canderel Rising Star Summer Internship Award*. Receiving this award encourages me to persistently seek excellence in my studies and research. I am motivated to contribute positively to the field of biochemistry.



### Kristen Hoang

My time in Dr. Luke McCaffrey's laboratory has been a journey of growth and discovery. I am deeply grateful to Dr. McCaffrey for his guidance and mentorship. This experience not only honed my practical skills but also deepened my understanding of research, making every day in the lab an adventure filled with learning and camaraderie.

I am profoundly grateful to Mr. Jonathan Wener for his unparalleled commitment to fostering the next generation of scientific minds. Thanks to this award he has enabled undergraduates like myself to immerse in groundbreaking research. The experiences and insights I gained during the 2023 *Canderel Rising Star Summer Internship* were invaluable.

*Mr. Wener, your belief in young researchers not only fuels our aspirations but also paves the way for promising discoveries. Thank you for this monumental opportunity.*



### Ella Morales

This summer internship has helped me develop a solid foundation in cancer research and I am very thankful to Mr. Jonathan Wener for being so dedicated to such a meaningful cause. Dr. Huang's lab was my first professional experience working in a laboratory. I worked full time from May to August, and learned countless lab techniques. These technical laboratory experiences have solidified my in-class learnings and understanding of functional genomics. I will continue to contribute to Dr. Huang's lab throughout my undergraduate studies.

My experience this summer would not have been possible without the *Canderel Rising Star Summer Internship Award*. I am grateful for this opportunity and hope to use my experience to make a difference in the lives of those affected by cancer.



### Michael Mouradian

My experience at Dr. Katie Cockburn's lab this past summer has been nothing short of enriching and meaningful. I would like to express my appreciation to Dr. Cockburn for allowing me to perform research in her lab and for her continued guidance throughout the summer. During my time, I had the opportunity to optimize our epidermal wholemount preparations and develop a reproducible set up for UV exposure in the lab.

I would also like to thank and extend my appreciation to Mr. Jonathan Wener, without whose support this experience would have not been possible.





### Isabella Pecora

I am very grateful to have been awarded the *Canderel Rising Star Summer Internship Award*, made possible by the generous contribution of Mr. Jonathan Wener. This summer's internship in Dr. Morag Park's lab was an invaluable learning experience for me. Over the course of 12 weeks, I learned many new techniques that will be crucial for my upcoming graduate studies in the lab. In addition, I contributed to the design and optimization of new assays in the lab. This experience not only enriched my skill set, but also allowed me to feel better prepared and more confident to begin my master's program in September in Dr. Park's lab.



### Anastasija Piric

I am a hard-working and motivated biochemistry student in my third year at McGill University with a keen interest in biochemistry and drug development. It has truly been a privilege to work in Dr. Sonenberg's lab over the summer and investigate a topic in the cancer research field for which I have a longstanding interest. Not only did I learn a great deal, but had the opportunity to meet incredible individuals who inspired me and taught me how to approach inevitable stumbling blocks in scientific research. In particular, I would like to thank my mentor Qiyun Deng for her unwavering support and kindness. Additionally, I would like to acknowledge and thank Mr. Jonathan Wener for his support through the *Canderel Rising Star Summer Internship Award* and for helping shape my future aspirations as a scientific researcher.



### Emma Pleyner

I would like to formally thank you for the *Canderel Rising Star Summer Internship Award*. I am honoured and delighted to have been selected and grateful for the amazing opportunity to explore research as a novice researcher in Dr. Vincent Giguère's lab.

This award supported me over the summer researching obesity and its role as a cancer risk. It has ignited my passion for research and strengthened my understanding and interest in cancer research. I learned a lot of new biological techniques and methods that are crucial to investigating and making discoveries.

Once again, I would like to thank Mr. Jonathan Wener for this invaluable experience. It has allowed me to grow as a scientist by expanding my knowledge about the field of research and teaching me how to think critically and solve problems.



### Sam Sakthivel

Dr. Ian Watson's lab was a very welcoming and an open learning environment. Under the supervision of Diana Berry, I was able to learn many essential and fundamental wet lab skills and techniques like: mouse training, virus room training, cell culture (transfection, seeding, etc), lysis, immunoprecipitation, western blotting, midi prep, RNA isolation, flow cytometry, ELISA, bacterial culture and glycerol stock preparation, qPCR, slide staining, T-cell co-culture, and more.

I sincerely appreciate the contribution from Mr. Wener, which allowed me to have this opportunity to pursue my passion towards cancer research and to gain valuable experience in Dr. Ian Watson's lab. It will be helpful for years to come in my master's and PhD studies.





### Liam Wilson

My experience over the summer has been amazing. I learned a lot through my experiments as well as through the help of more experienced graduate students and my supervisor. This award has also given me the opportunity to participate in my first scientific conference, the Canadian Society for Immunology Annual Conference. I presented my work through a poster presentation, which was very important for my professional development. This summer has cemented my interest in pursuing a career in biomedical research.

I would like to thank Mr. Jonathan Wener for his generous donations that have allowed me to pursue my work over this summer.



### Selina Zhao

I had a wonderful time performing experiments for this project, a lot of which were new to me. For the first time, I dissected mouse oviducts and got to use a 3D confocal microscope. The *Canderel Rising Star Summer Internship Award* gave me a taste of real scientific research, and I learned a lot of techniques and analytical skills in the hope of becoming a better researcher.

I would like to thank the donor of the *Canderel Rising Star Summer Internship Award*, Mr. Jonathan Wener, for this opportunity to contribute to ongoing scientific research and experimenting with modern scientific techniques to analyze raw scientific data. I am also grateful to the GCI's Histology Facility, McGill's Advanced BiImaging Facility, and the McGill Integrated Core for Animal Modeling for all the technical support. In addition, I extend my thanks to Dr. Yojiro Yamanaka, PhD candidate Keerthana Harwalkar, and members of the Yamanaka lab for providing guidance and suggestions throughout the internship.





# Canderel Fellowship Awards

The *Canderel Fellowship Awards* have been an essential component of the Défi’s funding for Rosalind and Morris Goodman Cancer Institute trainees since 1991. By offering a partial stipend of \$25,000 per year to incoming postdoctoral fellows, this Fellowship allows the GCI to attract outstanding young cancer researchers.



## 2022-23 recipients

**Charlotte Girondel, PhD,**  
Medicine, Year 2 (Laboratory of Dr. Peter Siegel)

**Damien Marc Lagarde, PhD,**  
Biochemistry, Year 2 (Laboratory of Dr. Lawrence Kazak)

# Words of thanks

Dear Mr. Jonathan Wener,

I would like to sincerely thank you for the 2022 *Canderel Fellowship Award* I have just received.

This award will have an enormous impact, not only on the current research project I am working on in the laboratory of Dr. Peter Siegel (understanding how liver metastases fulfill their bioenergetic needs to reveal therapeutic vulnerabilities that can be exploited to better manage colorectal cancer patients), but also on my professional career. My current postdoctoral research project at the GCI and the 2022 *Canderel Fellowship Award* represent the stepping stones to my future career goals to become a principal investigator of my own laboratory as well as an international participant and leader in the colorectal cancer and liver metastasis field.

Thank you again, I sincerely appreciate the fellowship assistance.

Best regards,  
**Charlotte Girondel**

Dear Mr. Jonathan Wener,

I am writing to thank you for the generous \$30,000 I received following the obtention of the 2022 *Canderel Fellowship Award*. I am very pleased and grateful to learn that the project I am working on has been selected and will proceed.

I obtained my PhD in Biology, with an emphasis in physiology, from the University of Toulouse, France, and came to Montreal a year ago to pursue my research and career under the direction and mentorship of Dr. Lawrence Kazak in the excellent environment of the Goodman Cancer Institute at McGill University.

Obtaining this funding will allow me to fully concentrate on the realization of my research project, which focuses on the link between two major pathologies of our century: cancer and obesity. Indeed, many studies show that there is a close link between these two diseases. The project I am working on seeks to identify the mechanisms by which tumour cells benefit from the metabolic status of obese people to increase their aggressiveness leading to more severe diseases. Understanding the metabolic mechanisms that regulate cancer progression is critical for the development of new therapies that may be leveraged to minimize cancer progression.

Your generosity is inspiring to the community, and I hope that one day I will be able to contribute to the realization of ambitious projects as you have done for me.

Sincerely,  
**Damien Lagarde**



# Canderel Entry Studentship Awards

The *Canderel Entry Studentship Awards* are given to first-year graduate students who have been recruited through the Student Recruitment Days process. Recipients are selected based on academic excellence, leadership capacity, and interest in research.



**2022-23 recipients**


**Michael Bellucci, MSc,**  
Biochemistry, Year 1 (Laboratory of Dr. Nahum Sonenberg)

**Alyssa Cristea, MSc,**  
Experimental Medicine, Year 1 (Laboratory of Dr. Daniela Quail)

**Sarah-Slim Diwan, MSc,**  
Biochemistry, Year 1 (Laboratory of Dr. Thomas Duchaine)

**Shirley Li, MSc, Biochemistry,**  
Year 1 (Laboratory of Drs. Natasha Chang and Sidong Huang.)

# Words of thanks



Dear Mr. Wener,

My name is Michael Bellucci and I am an incoming master's student in the Department of Biochemistry at McGill University. As a recipient of the *Canderel Entry Studentship Award*, I am writing this letter to express my deepest gratitude to you for your support of my research endeavours.

After completing my Bachelor of Science here at McGill, I knew that I was meant to be in research. In the last half of my undergraduate degree, I devoted much of my time to engaging in multidisciplinary research. This has spanned areas such as nucleic acid chemistry, cancer drug discovery, and viral infection. Scientific research has not only provided a chance for me to be involved in bettering our shared human condition, but it has also allowed me to challenge myself intellectually.

The aim of my research is to understand the role of protein synthesis (mRNA translation) in breast cancer, specifically in the hard-to-treat subtype of Triple Negative Breast Cancer (TNBC). In doing so, I hope to identify novel targets that may open the door to new cancer therapies based on this level of translational control. Given the beautiful nature of science, I am beyond certain that this research will also uncover surprising findings along the way, potentially down paths I had not even sought to follow in the first place.

As with all complicated and arduous endeavours, funding remains a key challenge to ensuring young researchers have the support they need to pursue their work. It is because of the generosity of individual donors, their families, and various charitable groups such as Défi Canderel that the whole enterprise of science can thrive and continue to trek forward.

I am incredibly grateful for your kindness, as it has ensured my work can be funded and supported. My commitment to you is that I will constantly strive to work as hard as I can, push forward even in the face of failure, and remember that every experiment done will be one step closer to a new treatment, a new cure, or a new discovery. I wish you and your family happiness, good health, and all the success in your future endeavours.

With sincere gratitude,  
**Michael Bellucci**



Dear Mr. Wener,

I wanted to extend to you my deepest gratitude for your involvement in the research community, which has allowed me and many others to pursue various avenues of research. Thanks to you, I can pursue my MSc degree in Experimental Medicine while working under the supervision of Dr. Daniela Quail at the Rosalind and Morris Goodman Cancer Institute.

My project focuses on assessing the contribution and role that monocytes have on colorectal cancer metastasizing to the liver (CRCLM) in the context of obesity. Previously, members of the Quail Lab have shown that CRCLM is consistently enhanced in diet-induced mouse models of obesity. High-parameter immunoprofiling revealed an increase in myeloid cells and a decrease in lymphoid cells within CRCLM from obese versus lean hosts. Cell depletion experiments suggest that monocytes reduce the quantity and quality of T cells within the tumour microenvironment of obese hosts, whereby T cells are excluded at the tumour margin and exhibit an exhausted phenotype. However, the functional contribution of these associations on liver metastasis – the main cause of death in CRC patients – remains unknown. My objective is to define how obesity changes the composition of the liver immune microenvironment to enhance CRCLM. To do so, I will be testing the functional contribution of monocytes to obesity-associated CRCLM and characterizing the influence of monocytes on T cell activation in the context of obesity.

Being a first-generation graduate student in my family, it means a lot to have my hard work recognized and for others to see my potential in research. Thanks to this award, I can continue this hard work to help advance the field of cancer research.

Thank you again for your incredible generosity and for supporting important research, which will inevitably change the lives of many.

Sincerely,  
**Alyssa Cristea**



Dear Mr. Wener,

As a recipient of the 2022-23 *Canderel Entry Studentship Award*, I want to thank you for your generous donation that made this scholarship possible. I recently completed my bachelor's degree in Biochemistry and Molecular Medicine at the *Université de Montréal* and am starting my master's degree in Biochemistry at McGill University. I decided to pursue my graduate studies at the GCI, since in addition to being a leader in cancer research, the GCI offers me the tools and training to develop a strong and competitive background. During my undergraduate studies, I developed an interest in RNA research; hence, I am pleased to

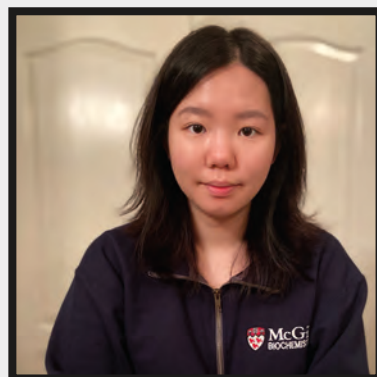
pursue my studies in Dr. Thomas Duchaine's laboratory, which focuses on microRNA research. During my graduate studies, I will look into the early steps of the biogenesis of the let-7 microRNA family, a tumour suppressor microRNA. I want to understand how biogenesis regulates the microRNA's expression level in normal cells versus lung cancer cells.

I am honoured to receive a scholarship to pursue my studies in one of Canada's highest-rated institutions. This certainly motivates me to continue working tirelessly towards my aspiration to become a university professor. By financing my first year of graduate studies, this scholarship allows me to contribute to the pool of knowledge on cancer and help millions of people around the world affected by this disease. Furthermore, your scholarship strengthens my background, which will enhance my opportunities to pursue research on cancer and will allow me to reach new heights in my future career.

I would also like to thank you and the team of the Défi Canderel for making an impact in the fight against cancer. It is thanks to your initiative and dedication that cancer researchers in Montreal can make a difference in the lives of people. Students like me are truly grateful for your contribution to the education of tomorrow's generation of scientists. I genuinely hope that in the future I will also be able to give back to my academic institution and help students reach their educational goals.

Sincerely,  
**Sarah-Slim Diwan**





Dear Mr. Wener,

I am writing to express my sincerest gratitude to you for making the 2022 *Canderel Entry Studentship Award* possible. I am thrilled and honoured to be the recipient for this prestigious award, and I am deeply appreciative of your support.

I am a first year master's student in the Department of Biochemistry at McGill in the laboratory of Dr. Natasha Chang and Dr. Sidong Huang. This award will support my research in studying the effect of differential gene expressions in Rhabdomyosarcoma, a soft-tissue cancer often affecting children. Under the co-supervision of Dr. Chang and Dr. Huang,

my project will give more insight to how dysregulated activation and suppression of various muscle-related genes contribute to the diseased phenotype of Rhabdomyosarcoma. Moreover, my thesis will allow for the utilization of novel therapeutic treatments for Rhabdomyosarcoma.


Your generous studentship will further my research by funding my project for the next year and allow me to seek more challenging opportunities in cancer research. Thank you again for making this studentship possible. I am grateful for your involvement and contribution to cancer research.

Sincerely,  
Shirley Li



# Marilyn Wener Excellence Award

In 2012, the *Marilyn Wener Excellence Award* was established by Jonathan Wener in honour of his mother, Mrs. Marilyn Wener, BA'48. This award is given annually to one Rosalind and Morris Goodman Cancer Institute trainee in recognition of their dedication to cancer research and engagement in activities, which promote and strengthen the GCI's principles.



**2022-23 recipient**

Matthew Ryan Dankner,  
MDCM'23, Medical Resident,  
Internal Medicine (Laboratory of  
Dr. Peter Siegel)

# Words of thanks



Dear Mr. Wener,

I am extremely grateful for having been selected as the recipient for the *Marilyn Wener Excellence Award* for 2023. I've been an active member of the Goodman Cancer Institute committee since 2014 when I joined the laboratory of Peter Siegel as an undergraduate student. I have remained a presence at the Institute as an MD-PhD Student (2015-23) and now as a medical resident and postdoctoral researcher. I greatly appreciate all the work that goes into the Défi Canderel, and I see every year, first-hand, how this support makes a difference for both trainees and the GCI as a whole.

I take pride in having my commitment to the GCI be recognized with this prestigious honour, and I hope to continue to make your organization proud of my progress as a developing physician-scientist. I look forward to continuing my participation in the Défi Canderel and collaborating with the Wener family in future endeavours.

Sincerely,  
**Matthew Dankner, MD PhD**  
Internal Medicine Resident, McGill University  
Postdoctoral Fellow, GCI





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**JAMES MCGILL CIRCLE**

We are very grateful for the generous support of James McGill Circle donors. Should you have any questions about this impact report, please contact Domenica Gear at [domenica.gear@mcgill.ca](mailto:domenica.gear@mcgill.ca) or 514.398.2078.