



Discover & Explore



**Sinai
Health**

Zane Cohen Centre
for Digestive Diseases

Network Newsletter | Fall 2023



Director's Message

This has been a challenging year in the after effects of Covid, but I am very proud of the commitment and productivity that has been achieved in the Zane Cohen Centre by all concerned. Many positive things have occurred this past year in both the IBD and the Inherited Cancer Programs. These, as you know, are our two main programs and I hope that you will have a chance to read this Network Newsletter in some detail.

We have worked on the transition of care for adolescent IBD patients from the Sick Children's Hospital providing a seamless transition for patients "graduating" from The Sick Children's Hospital. We have done this in both our IBD patients as well as our inherited cancer syndrome patients (FAP and Lynch syndrome patients). We have also continued the work towards building an Ontario Best Practice in Research Program and the IBD Support Network has been reinstated after Covid.

We have also continued the GEM program, and are getting much closer to being able to identify patients in families that will develop Crohn's disease. This is probably the most important clinical program in the world, and our hope is to be able to use this information in not only diagnosing Crohn's disease, but also treatment planning.

The Preconception and Pregnancy in IBD Program is expanding exponentially. This is an extremely important program which fits in with the Women's Health Program at Sinai Health. One of the goals within this program is to investigate mental health during pregnancy in people with IBD, and to understand the challenges of accessing said services. We are also very proud of the PACE Program, which promotes access of care to our IBD patients.

The surgical studies have continued in the areas of ulcerative colitis along with collaborative multi-institutional international randomized trials, looking at the functional outcomes, particularly after pelvic pouch surgery, as well as trials in anal Crohn's disease.

Another important area is education for our families. A particular education night for families with Lynch syndrome was hosted by our Centre on June the 13th, 2023. This was exceptionally well attended and updates were disseminated to all. In addition to this education night, we have also reinstated the IBD Support Network to meet on a monthly basis with a guest speaker. This is extremely important for patients with surgery and post-surgical issues, gathering to disseminate ideas of care for our patient population. We also are planning a family advisory group for individuals who have, or have had, ulcerative colitis and/or Crohn's disease. It will include, in our future planning for the "patient experience", a forum for which we can better understand the issues involved with patient care.

In order to take us to the next level of excellence in patient care, education and research, I wish to personally thank all donors and in particular, our major donors who have made this all possible. To maintain and recruit at the highest level, we have had generous contributions from the Hennick family, the Gitlin family and the de Gasperis families. We are completely indebted to their generosity and we hope that we can continue to count on donations to help us achieve our goal of being the best IBD and Inherited Cancer Program in the world. We will push the boundaries to achieve these goals through our research work. I hope that you will have the chance to browse through the Network Newsletter and of course, any comments that you would like to make, are very welcome.

Wishing you all well for the coming year, with peace and compassion and health in your future endeavors.

Sincerely,

Zane Cohen, Director

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Familial GI Cancer Registry (FGICR)

9th Education night for families with Lynch Syndrome

Kara Semotiuk
Genetic Counsellor



On June 13, 2023, we hosted our 9th education night for families with Lynch syndrome. Lynch syndrome is a hereditary cancer predisposition syndrome caused by a mutation in one of five different genes (MLH1, MSH2, MSH6, PMS2, or EPCAM). Lynch syndrome causes an increased risk for mainly colorectal and endometrial (womb) cancer, and to a lesser extent, a risk of other cancers in the digestive tract, ovaries and urinary tract (such as kidney), as well as skin lesions. This year the event was held virtually on Zoom. Although we missed seeing everyone in person, the virtual format made it more accessible to a wider geographic range of attendees. The evening opened with a warm welcome from Dr. Zane Cohen, followed by a diverse scope of highlighted topics, including an

update on colon and stomach screening in Lynch syndrome given by surgeon Dr. Helen Macrae, a lecture on advances in genetic research by geneticist Dr. Raymond Kim, a talk on patient perspectives for uterine and ovarian cancer screening delivered by psychologist Dr. Tae Hart, and a heartfelt talk from one of our dedicated patients and lead of the Lynch syndrome patient support group, Mari Rutka, focusing on patient advocacy and support groups. Feedback from the education night was overwhelmingly positive. Attendees commented that the evening was informative, that the presenters were well received, and that they appreciated the virtual style. We were able to record the evening and you can watch the full video here: <https://www.youtube.com/watch?v=tuuVokaNDNY>

Grant awarded on Improving Patient Survival of PC

Dr. Steven Gallinger
Principal Investigator



In Canada, 6900 people will be diagnosed with pancreatic ductal adenocarcinoma (PC) this year. Of those, only 10% will survive longer than 5 years. Our team is dedicated to improving patient survival through enhanced screening, earlier detection, better understanding of disease biology, and improved treatment selection. We will approach this in four ways.

1. Increased screening of high-risk patients using "liquid biopsy" methods from blood samples. This includes analysis of DNA, RNA, and methylation signatures (used to identify PC, and to measure response to treatment and disease progression).
2. Sequencing of patient samples to identify changes in tumour DNA and RNA. Some changes can be targeted by specific drugs. To complement this, we will generate organoids (cell models that mimic patient tumours). We will use these to screen drug libraries and match patients with specific treatments based on the response detected in the organoid. We will be focusing on locally

advanced pancreas cancer (Stage III), a subgroup of the disease rising in frequency and poorly understood and excluded from many trials.

3. Analysis of the tumour microenvironment (cells that surround the cancer cells) will show how it interacts with the immune system, and how it can sensitize tumours to make them susceptible to treatment with immunotherapy.

4. From data generated in Aims 1-3, we will enhance our Canadian PC clinical trials network, to include clinical trials that meet the specific needs of PC patients.

We will gain a deeper understanding of the biology that drives PC and will identify new treatment strategies to benefit patients. At first, we will introduce the Program in BC, ON and QC. However, it could be extended to other provinces to provide tailored treatment options for PC patients across Canada. We are developing a committee with a PC patient/survivor/caregiver focus. We are working with the Quebec Cancer Consortium and Canadian Clinical Trials Group to recruit new partners to our team.

Transition of Care in Adolescents with Hereditary Polyposis Syndromes

Dr. Carol Durno
Pediatric Gastroenterologist



Transition of care (TOC) in adolescents with chronic gastrointestinal disorders such as patients with inflammatory bowel disease has received increased attention in the scientific literature. Transition of care is the planned movement of adolescents and young adults with chronic physical and medical conditions from child-centered to adult-oriented health care systems. The Pediatric Committee of the American College of Gastroenterology commissioned a report with recommendations of TOC in young people with polyposis syndromes (ACG Clinical Report and Recommendations on Transition of Care in Children and Adolescents With Hereditary Polyposis Syndromes. T Attard, C Burke, W Hyer, C Durno et al. Am J Gastroenterol 2021;116(4):638-646.) The goal of successful TOC is to achieve uninterrupted care and optimal patient outcome. TOC can be challenging for patients with hereditary polyposis syndromes given the rarity of the syndromes and the need for multidisciplinary care. Adolescents may not grasp the seriousness of their disease. Some young people may desire a life free from medical intervention or become disengaged and therefore at risk of being lost to follow up. TOC should be discussed early in adolescence. Patient and family education related to the specific polyp condition is crucial. Genetic counsellors are often in an excellent position to work with the

young person. Information is given in age-appropriate written and verbal form for both the patient and the family. Increasing autonomy for the young person is important including encouraging patients to be seen by themselves for part of the clinic visit. It is important to determine family expectations of the TOC process. Differences between practice in the pediatric and adult centers should be discussed. Its important for the family to be encouraged to give the young patient more responsibility around their care. Teenagers can communicate with the nurse on when to book their surveillance colonoscopies. There also should be some flexibility in the timing of transition. For example, if a patient is undergoing colectomy it may make more sense for the TOC to occur earlier. That way the patient can benefit from continuity of care during a period of intense medical management. The importance of nurturing patient engagement in medical care cannot be overstated. Behavioral patterns common in late adolescence and early adulthood, such as resistance towards disease management may coincide with major changes in health providers which can upset TOC. Its important to understand these potentially challenging factors. By planning for transition early in a proactive and rationally planned manner will result in the smoothest transfer of care.

Research Programs & Activities

OBRI-IBD Initiative



Over the last three years, Dr. Laura Targownik and her team have been working towards building the Ontario Best Practices Research Initiative-Inflammatory Bowel Disease (OBRI-IBD) to improve the collection of cross-sectional and longitudinal patient-centered data on IBD processes and outcomes with high fidelity while also seeking the appropriate approvals to begin enrolling patients into the OBRI-IBD Patient Registry through the efforts of patients, researchers, gastroenterologists, and allied health professionals. The primary mission of the initiative is to become the premier data source for real-world data across multiple diverse practice types. The implementation has successfully undergone the integration of the permission to contact framework which facilitates patient engagement in research by inviting all patients to allow communication for research purposes. The OBRI-IBD Initiative currently involves data capturing within clinical care practices at Mount Sinai Hospital. The process includes ensuring critical key data in clinical care is included in patient charts. As of 2023, we have commenced ground work during in-person clinics and endoscopy visits to enroll patients into the OBRI-IBD



Dr. Laura Targownik
Program Director

Registry. We have had a positive response from patients while engaging with them and look forward to sharing the impact of their involvement. We are continuing to collaborate and engage in discussions with various physicians and clinics to the OBRI-IBD Registry as data becomes available for new research studies to be developed using real-life evidence. We will also begin enrolling patients through virtual forms of communication this year.

Our website for the OBRI-IBD Initiative will be launched this year, allowing patients, researchers, gastroenterologists, and allied health professionals to get an insight into our work.

For more information or questions related to the OBRI-IBD Initiative, don't hesitate to get in touch with us at obri.ibd@sinai-health.ca. We would also like to welcome Ryan Seeto (Clinical Data Scientist), Teresa Choi (Research Coordinator), Hafsa Zaman (Research Coordinator), Saniah Khan (Research Coordinator) and Ausa Afshar (Research Assistant) to the team who have played an integral role in the development thus far.

IBD Support Network update



Treatment of IBD involves more than diagnosis, prescribing medication or undergoing surgery. When confronted with illness, patients seek professional help and advice from their physician, nurse, social worker and also rely on support from family members, peers and fellow patients. Our support groups are an excellent

opportunity for patients and family members and friends to gain information on all aspects of their IBD journey but also provide a safe forum to meet and share on living well with the diseases and receive peer support. We have launched a virtual support group format for our evening IBD support and education meetings this year and will be offering a hybrid format for 2024. Virtual meetings will be taking place on both Monday November 27 and January 29 at 7pm. For March 25 and May 27 2024 we will offer a hybrid format. We have launched the return of our daytime monthly groups meeting in person at the hospital.

Brenda O'Connor
IBD Research Nurse

We are meeting November 29, December 20, January 31, February 28, March 27, April 25, May 29, June 26 from 2-330pm.

If you would like to learn more about our support and education programming, please email or call Brenda (Brenda.oconnor@sinaihealth.ca; 416-586-4800#8349) to be added to our zoom meeting mailing list. For information about the support groups and speakers, please access <http://zane.cohencentre.com/ibd/for-patients/ibd-supportnetwork>. (check if the links work please)

If you are not in the GTA area and would like to become a peer support person or receive peer support, please email Brenda directly.



IBD Biomarkers research programs

Dr. Mark Silverberg
Gastroenterologist



Dr. Silverberg's IBD Biomarkers research program celebrates 21 years! The goals are to identify susceptibility genes and biomarkers for Inflammatory Bowel Disease (IBD) and to understand how these contribute to the cause and clinical course of IBD. To help us do this, we work with your samples: blood, biopsies, saliva & stool.

This research program has been funded mainly by grants from: National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK/NIH), Crohn's and Colitis Canada (CCC), Canadian Institutes of Health Research (CIHR), The International Organization for the Study of Inflammatory Bowel Disease (IOIBD) as well as generous donations which are critical to support the work that we do.

We have **exciting studies** to participate in: *(Please contact us if you would like to help us)*

A full listing of all clinical-translational and clinical trial research projects can be found at: zanecohencentre.com/ibd/research

Diversity Study: Genetics of IBD

Goal: To understand the genetic factors that could contribute to IBD in individuals of **diverse ancestries**.

Involves: One time donation of blood and/or saliva sample & questionnaire

- Identify as: **African American / Afro-Caribbean / Black / Hispanic / Latinx / Indigenous / Native American**

- Diagnosed with Crohn's Disease or Ulcerative Colitis who identify as: African American or Black or Hispanic/Latinx
- Compensation is provided after participation is completed

UC Diet Study

Goal: To understand if a high fiber, low-meat diet can affect the severity of disease activity in UC patients by altering the microbiome.

Involves: The study is 10 weeks in length and food is delivered to patients for 8 weeks.

Patients undergo a flexible sigmoidoscopy with biopsies before starting the study & at the end of the study. Blood, stool & questionnaires collected every 2 weeks over the 10 week period

Prospective Pouch

Goal: To examine the structure and function of the microbiome in patients who undergo pelvic pouch surgery to identify how the microbiome may contribute to the onset of ileal inflammation.

Involves: 6 pouchoscopies with biopsies, blood, stool & questionnaires collected over 2 years

UC Relapse

Goal: To identify gene expression pathways activated during flares to understand mechanisms and aid in predicting future relapses

Involves: UC patients in remission, blood, stool & questionnaires collected every 3 months over a 2 year period, optional colonoscopies can be arranged after 1 year & 2 years from the start of the study

Publication Highlights

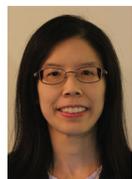
- **Title:** The chromatin and single-cell transcriptional landscapes of CD4 T cells in inflammatory bowel disease link risk loci with a proinflammatory Th17 cell population.
- **Title:** Third and Fourth Vaccine Doses Broaden and Prolong Immunity to SARS-CoV-2 in Adult Patients with Immune-Mediated Inflammatory Diseases.
- **Title:** Genetic coding variant in complement factor B (CFB) is associated with increased risk for perianal Crohn's disease and leads to impaired CFB cleavage and phagocytosis
- **Title:** Geography Influences Susceptibility to SARS-CoV-2 Serological Response in Patients With Inflammatory Bowel Disease: Multinational Analysis From the ICARUS-IBD Consortium.
- **Title:** Identifying high-impact variants and genes in exomes of Ashkenazi Jewish inflammatory bowel disease patients.

For more information on the Silverberg Lab, please visit our lab website at: research.lunenfeld.ca/silverberg

Preconception and Pregnancy in IBD program



Dr. Vivian Huang
Gastroenterologist



The Preconception and Pregnancy in IBD clinical research program continues to expand, welcoming new medical students, internal medicine residents, and student research assistants. Our consultation clinic supports patients and clinicians from all across Ontario with referral numbers doubling annually. We continue our clinical collaboration with our IBD surgery and MFM/OB colleagues at MSH and other U of T hospitals, and with Sick Kids Special Immunization Clinic. Our program aims to find ways to improve care and health outcomes for mothers with IBD and their infants. We continue to study the complex interaction between IBD, IBD therapies, and maternal and neonatal outcomes. In order to achieve these aims we work

with your clinical data, your samples, and responses from patient and physician surveys. Please contact us if you would like to participate in our studies at preg.ibd@sinahealth.ca. For more information on the Preconception and Pregnancy in IBD clinical research program please visit our website at pregnancy.ibdclinic.ca. In 2023, we received a Science of Care Quality Innovation grant from Mount Sinai Hospital/Sinai Health Systems to pilot using proactive disease monitoring and tailored monitoring to improve the quality of life and mental health of people with IBD during pregnancy. For our patient and clinician educational website and clinician access to our Multidisciplinary Care in IBD (MCIBD) continuing medical education program, please visit mcibd.ca.

Mental Health during Pregnancy in People with IBD

Goal: to investigate mental health during pregnancy in people with IBD, and to understand the challenges of accessing said services

Breast Milk IBD study (We are also seeking participation from pregnant people who do not have IBD)

Goal: to study whether and how IBD may affect breast milk composition and whether composition affects infant growth and development

Involves: completion of questionnaires from pregnancy to post partum, collection of breast milk samples at 1 and 3 months

Preconception and Pregnancy in IBD Registry

Goal: to improve care and health outcomes for mothers with IBD and their infants

Involves: completion of online questionnaires and/or providing consent for chart review



The Crohn's and Colitis Canada GEM (Genetics, Environmental and Microbial) Project is now in its 15th year. The GEM Project aims to define biomarkers that will quantify risk and predict who will develop Crohn's disease (CD). To do this, our global team recruited a unique cohort of over 5,000 healthy first-degree relatives of Crohn's patients; many of whom answered questions related to their environment and dietary habits, and provided us with valuable blood, stool, and urine samples. To date, we still follow up with many of these subjects, and since the study's inception in 2008, more than 100 subjects have developed CD. In the past year, the GEM team has continued to make valuable discoveries in the field. Using the samples and information provided by our subjects, we have learned that the composition of bacteria residing in an individual's gut can be used to predict the future onset of CD (Raygoza, et al., Gastroenterology, 2023). Those bacteria were also strongly contributing to increased gut permeability (Leibovitzh et al., Gastroenterology, 2023). We've also uncovered protein signatures in the blood which can be used to predict CD onset and provided insight into the earliest events of CD development (Leibovitzh et al., Gut, 2023). Our team will continue to work with the GEM data to develop a combined prediction model that will determine the risk a person has for developing CD. The identification of the genetic, environmental, or microbial factors that put someone at risk will guide the development of preventative strategies and potentially therapeutic avenues for those with a diagnosis. In addition to the GEM project, we have other exciting on-going studies:

- **PIONIR:** A pilot diet trial examining the impact of the Tasty&Healthy dietary approach on risk factors for developing Crohn's disease among first-degree relatives of Crohn's patients.
- **Weston Diet:** A pilot study examining the impact of various dietary components on risk factors for developing CD in healthy first-degree relatives of CD allowing us to design a personalized approach to dietary intervention.
- **Crohn's and Colitis Canada Grant in Aid:** This study aims to culture and characterize the functional capacity of the gut bacteria from GEM participants who later go on to develop CD with the aim of identifying potential next generation probiotics to prevent or delay CD onset.
- **IOIBD:** This study aims to assess if bile acids contribute to development of Crohn's disease. Results from this project were presented by Dr. Neustaeter during DDW 2023.
- **Weston Germ Free Study:** Aims to determine whether the stool microbiome from Pre-CD patients can induce colitis in germ free mice to help us better understand the role of gut bacteria in

Our research is made possible thanks to funding from Crohn's and Colitis Canada (CCC), The Helmsley Charitable Trust, Canadian Institutes of Health Research (CIHR), National Institute of Diabetes and Digestive and Kidney Disease (NIDDK/NIH), The Weston Family Microbiome Initiative, International Organization for the Study of Inflammatory Bowel Disease, Canadian Cancer Society, and the Ontario research Fund and the Sinai Health Department of Medicine Research Committee. If you're interested in reading our publications or participating in our research efforts, or if you'd like to find links to our recent interviews with CTV News and Crohn's ad Colitis Canada.

Please visit www.gemproject.ca, www.croitorulab.com, or find us on Twitter @The_GEMProject.



■ **Interview with CTV news with Drs. Sun-Ho Lee and Williams Turpin**

The GEM team was asked to present our findings with CTV News, as well as at conferences including CDDW, DDW, and ECCO, OPGE and other invited talks in Seoul (Korea), Boston (USA), Kiel (Germany), Santiago (Chile). In particular, our team presented at a plenary session at DDW on our work showing that serum metabolomics excel at predicting risk of Crohn's disease onset and Mingyue Xu was recently awarded best paper during the TCAIREM conference last week.



Promoting Access and Care through Centres of Excellence (PACE) brings together leading inflammatory bowel disease (IBD) centres to collectively advance best practices and elevate the standards of care for IBD patients. The PACE national initiative continues to be led by Dr. Geoffrey Nguyen while breaking several

milestones this year. Launched in the spring of 2016, the Crohn's and Colitis Canada PACE program is the largest collaboration of its kind in Canada, specifically formed to advance Crohn's and colitis care. The goal of this initiative is to integrate research and patient care to address the biggest healthcare gaps that impact Canadians living with IBD. In Ontario, we piloted the first provincial virtual care program to bridge gaps in access to care. While we are currently completing the last 2 years before evaluating the outcomes of this project, we were able to initiate 5 other provincial programs led by local GI leads, as seen in the map (AB, SK, MB, ON, QC, and NS). For more information, check the website Canvasibd.ca. Under the umbrella of PACE, the Global Rating Scale (IBD-GRS) was developed at McGill to provide all IBD clinics with evidence-based metrics to evaluate quality improvement interventions and healthcare delivery in IBD. IBD-GRS was developed based on expert opinion, IBD quality indicators (patient-informed), and the best available evidence that involved a working group of IBD and GRS experts.

PACE enabled the development of clinical care pathways in Alberta to provide a structured care plan that describes the timing and actions required by IBD providers to standardize care for IBD patients. Lastly, PACE enabled McMaster Centre and McGill to pilot a mobile app (My Gut) to monitor patients between clinic visits and empower Canadians with IBD to be actively involved in their IBD care.

Anxiety and Depression in Patients with Inflammatory Bowel Disease (ADAPT-IBD) Even though anxiety and depression are more prevalent in people with IBD than in the general population, they are frequently misdiagnosed and inadequately managed. Our team is evaluating the effects of web-based Cognitive Behavioural Therapy in an attempt to enhance mental health care for individuals with IBD.

Prevention of Readmissions at IBD Centres of Excellence The aim of this study is to evaluate a nurse led initiative to reduce readmission rates at IBD centres of excellence. As there is a shortage of IBD trained nurses in Canada, we are currently evaluating the impact of IBD nursing staff post discharge and potential impact on IBD-related outcomes. This study also integrated online platform and patient monitoring as another innovative way for nurses to improve the quality of IBD care. With the completion of the study, we hope to evaluate this post discharge nursing intervention as a cost-effective initiative that reduces the risk of readmission to hospital and improves the quality of care for patients with IBD.



■ Map of area serviced by PACE program



■ **GI Group (Left-Right):** Drs. Hilary Steinhart, Geoffrey Nguyen, Adam Weizman, Zane Gallinger, Laura Targownik, Ken Croitoru, Mark Silverbeg, Vivian Huang, Sun-Ho Lee

Elegance UC Study

Dr. Anthony De Buck and Dr. Mantaj Brar
General Surgeons



We continue to lead the 'ELEGANCE UC study' which aims to better understand the impact of ulcerative colitis (UC) on family planning. Women with UC are often diagnosed in their childbearing age. Their diagnosis, therefore, influences women in their family planning, based on their understanding of potential harmful

consequences of UC on maternal and fetal health. In fact, increased involuntary childlessness has been well described in female patients with UC. This study aims to investigate the factors influencing family

FUNCTION Trial *FUNCTION*

The FUNCTION trial is a multicentric international randomized trial looking at the functional outcome of patients receiving pouch surgery. The trial aims to assess the difference in functional outcome between laparoscopic and transanal pouch surgery, a more innovative way of treating UC patients. Multiple large IBD centres in

IBD-SIRQC Initiative

We have successfully applied to participate to the 'Surgical Innovation, Research and Quality Collaborative in IBD' (IBD-SIRQC) initiative. This is a very recent collaborative sponsored by the Crohn's and Colitis Foundation USA to stimulate research in IBD surgery. This project gathers 8 large IBD centres in North-America, with Mount

planning in a very large cohort of patients in North-America. Several large American IBD centres are already collaborating on this project to better understand the reason for childlessness and the safest mode of delivery in patients who received an ileal pouch as part of the surgical treatment of UC. Currently, our team is analyzing population-data to assess the mode of delivery and maternal outcomes. In addition, female patients with UC will soon be recruited to complete a cross-sectional survey designed in collaboration with various experts in the field.

North America and Europe are participating in this effort. Our team has almost completed patient enrolment for this trial, and is actively following up with the participants post-operatively to obtain their longitudinal functional outcomes.

Sinai Hospital being the only Canadian centre to participate. IBD-SIRQC aims to collect clinical data as well as biosamples of 5000 surgical patients to facilitate high-quality research. This is a very unique project that has never been done in IBD surgery and will allow us to obtain a large sample of robust data.

Sarcoma Group: Bridging Clinical and Translational Research

There are 80+ different types and sub-types of sarcoma, and they respond differently to treatments such as chemotherapy, radiation and surgery. The Sarcoma Research Group approaches this challenging disease using a combination of clinical and translational research. Over the past year, the Sarcoma Group's clinical research team, led by Dr. Carol Swallow and Dr. Rebecca Gladdy, has maintained and expanded its participation in clinical research studies with colleagues in Canada and around the world. One of the studies we are particularly excited by is "STRASS 2", an international phase III trial exploring whether chemotherapy before surgery improves patient outcomes in high grade retroperitoneal dedifferentiated liposarcoma (DD LPS) or leiomyosarcoma (LMS). High grade DD LPS and LMS are cancers with a high risk of metastasis

and poor patient outcome. In addition to clinical data, we are collecting tumour samples for translational studies to improve our understanding of the tumour molecular structure. The work could help explain why some tumours are more aggressive, and may help predict which tumours will respond to chemotherapy. In addition to samples biobanked for the STRASS 2 trial, Dr. Gladdy and her lab continue to biobank and analyze tumours for many other collaborative translational research studies aimed at understanding how sarcomas such as rhabdomyosarcoma, liposarcoma, and LMS develop and progress. One of the aims of these studies is to identify signature gene expression profiles that predict disease type, clinical trajectory, and response to treatments.



Announcements

Dr. Sun-Ho Lee joins the Sinai Health team



On February 1st, 2023, I started my position as Assistant Professor and Clinician Scientist at Mount Sinai Hospital, Inflammatory Bowel Disease Centre of Excellence. After my GI training at Asan Medical Center, South Korea, I moved to the Zane Cohen Centre to take on an Advanced IBD Fellowship and also a PhD degree at the Institute of Medical Science at the University of Toronto. My PhD work focused on defining the pre-clinical state of Crohn's disease as a window into pathogenesis leveraging data from a one-of-a-kind large prospective cohort of healthy first-degree relatives of persons with Crohn's disease (The Crohn's Colitis Canada-GEM Project). With the skill set that I have developed during my PhD, I plan to lead the efforts of applying novel high-throughput omics technology in large cohorts of IBD to understand the complex interaction between host genetics, microbial, and immune factors that contribute to inflammation and ultimately development of IBD. I am excited to contribute to the ongoing IBD translational research at ZCC and advance the incredible research environment established by my mentors Drs. Kenneth Croitoru and Mark Silverberg. I was recently awarded The Innovations in IBD

grant from Crohn's Colitis in May 2023, to investigate the host-microbial immune interaction that triggers the development of Ulcerative Colitis (UC) among healthy first-degree relatives of persons with Crohn's disease. Novel technologies such as phage display immunoprecipitation sequencing (PhIP-Seq) and metagenome-assembled-genome (MAG) will be applied to discover novel immunogenic microbial antigens and new microbial strains and functions related to UC development. Finally, as a special milestone personally, I got married to my wife Jenny last April in Seoul, South Korea. It was a wonderful feeling to share this special moment with my Sinai family and friends.



Advanced IBD fellows

We would like to extend a welcome for our newest IBD fellow, Jeongseok Kim (**Korea**), Steven Li Fraine, Sahar Tabatabavakili and wish a great thanks to our departed fellows; Cristian Hernandez-Rocha (**Chile**), Haim Leibovitzh (**Israel**) and wish them the best on their future endeavors.

Engaging people with gene mutations to detect cancer earlier with a blood test



This project brings together a team comprised of leaders in the field of familial cancer syndromes (FCS). People with inherited, or familial, forms of cancer carry genes that place them at a high risk of developing multiple cancers throughout their lifetime, including stomach, esophageal, lung, brain and pancreatic cancers. Because of their high cancer risk, this population is regularly screened for signs of cancer and therefore represents an ideal population for the proposed clinical trials on a blood-based test for cancer, including those that are the focus of the Breakthrough Grants initiative. The research team is building on previous work to develop a genetic blood test that can detect tumour DNA circulating in the blood stream at the same time or earlier than the conventional annual medical exams for people with FCS, when less aggressive therapies can be used, and treatments are more likely to succeed. The results of this project could have wide-reaching implications for the early detection of cancer above and beyond those people living with FCS.

Since 2017, they have been working with more than 130 clinicians, scientists and patient partners from across Canada to develop the foundation for this project. Now, with funding from the Canadian Cancer Society and the Canadian Institutes of Health Research, they are conducting a clinical trial to directly engage patient participants and prove that cancer for people with FCS at risk for high fatality cancers can be detected earlier with a simple blood test than through conventional methods.

The team has members in Canada, the United Kingdom and the United States, including 3 patient partners. If successful, this project has the potential to transform our ability to detect multiple cancers in the very early stages, revolutionizing the outcomes, access to testing and quality of life for cancer patients. Total Amount Awarded over 5 years: \$ 7,497,581.15

Our Wings to Fight

The Zane Cohen Centre team attended the annual gala on **September 27, 2023**. Our Wings to Fight is a non-profit organization raising funds and awareness in Support of IBD Research for The Zane Cohen Centre for Digestive Disease. What started out as a desire for the group to make a difference has become a mission to finding a cure for this debilitating disease. The cheque presentation event will be present at the Zane Cohen Centre. Learn more at: ourwingstofight.com



■ **Our Wings to Fight team:** Mary Cinncinato, Dr. Zane Cohen, Maria Grecco



DELIVERING CARE WITHOUT BOUNDARIES

Working together to provide exceptional care to every person who walks through our doors

**The generous support of our community fuels
all we do from seamless care to scientific discovery**



“Join the dots more quickly” to bring new knowledge into practice for better care for patients and their families. There are many ways to support our work. These include gifts of cash, stocks or existing insurance policies. Legacy gifts to the Zane Cohen Centre can also be designated in a will.

To donate online: www.zanecohencentre.ca/donate

or contact:

Sinai Health Foundation

Phone: 416-586-8203

Toll free: 1-877-565-8555 or

Email: foundation@sinaihealthfoundation.ca

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