

BBDC

Banting & Best
Diabetes Centre

Annual Report
July 2020 - June 2021



Banting & Best Diabetes Centre
UNIVERSITY OF TORONTO

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Cover photo:
Daria Perevezentsev

Who We Are

The BBDC was established in 1978 as an extra-departmental unit of the Faculty of Medicine, University of Toronto with the primary objective of advancing diabetes research, education, and patient care.

We offer several grants, studentships, fellowships, and other support for qualified individuals involved in diabetes research at the University of Toronto and its affiliated hospitals and research institutes across the city including SickKids, Mount Sinai Hospital, University Health Network, Sunnybrook Health Sciences Centre, St. Michael's Hospital, Women's College Hospital, Centre for Addiction and Mental Health and many other community affiliated sites.

We host scientific conferences to facilitate the exchange of scientific information and ideas, and to assist in the development of collaborative diabetes research activities both locally and internationally. We foster and develop continuing health education and quality improvement initiatives for all members of the diabetes health care team with the aim of providing a tangible impact at the patient level.

Our members are a network of over 200 faculty and health care providers involved in diabetes research, education and care from various departments at the University of Toronto and its affiliated hospitals and research institutes.



Our Vision

As a centre of excellence for innovation in diabetes research, education, and clinical care, we will tangibly impact diabetes prevention and outcomes in Canada and globally.

Our Mission

We bring together researchers and health professionals across multiple University of Toronto affiliated disciplines to:

- Lead discoveries in patient-oriented research, large-scale clinical trials and basic science across affiliated hospitals and research institutes
- Develop novel treatment paths to cure diabetes or prevent its complications
- Identify innovative ways to manage diabetes and improve the lives of those living with the condition

Director's Report

This year has been a challenging one, given the difficulties imposed by the COVID-19 pandemic. However, the BBDC has functioned exceedingly well, continuing almost all of our funding programs, seminar series and educational conferences. Our members have continued to excel scientifically; publishing in high-impact journals, winning prestigious awards, receiving promotions and nominations, and running high-calibre research programs despite the difficulties this year has brought. This is a real testament to the hard work, resilience and fortitude of the BBDC's administrative staff, committees, members and their research teams.

This year has, of course, brought into stark relief the challenges faced by those living with or at risk of developing diabetes. Many, in particular those from marginalized and disadvantaged communities, have suffered disproportionately during this pandemic. This knowledge has shaped our research programs, as we continue our commitment to supporting projects that will improve outcomes for all those who are affected by this disease.

To support our work in all areas of diabetes research, I am pleased to report new sources of funding, an expansion of our seminar series, and successful educational conferences.

In celebration of the 100th anniversary of the discovery of insulin, Novo Nordisk made a \$2 million donation to the BBDC. To honour and recognize the legacy of this research milestone, funds will support fundamental and discovery science and will include research grants, new investigator awards, and postdoctoral fellowships. We are



Gary F. Lewis, MD, FRCPC

Director, Banting & Best Diabetes Centre
Professor, Departments of Medicine and Physiology
Sun Life Financial Chair in Diabetes
Drucker Family Chair in Diabetes Research

extremely grateful that Novo Nordisk has made this commitment to support ongoing diabetes research through our centre. For decades, Novo Nordisk has been supportive of the University and our pursuit of improved treatment and care for those living with diabetes. Funding from Novo Nordisk has already been applied to support and expand existing BBDC programs, starting with our 2021/2022 pilot and feasibility grants and postdoctoral fellowships.

The BBDC and the Department of Medicine at University Health Network (UHN) and Mount Sinai Hospitals are thrilled to be beneficiaries of the newly-established Drucker Family Innovation Fund. This fund, provided in equal parts by the Drucker family, the Temerty Faculty of Medicine and University Health Network provides a \$6 million endowment to support research scientists in Toronto, and fund new biomedical research in diabetes and metabolism, with an emphasis on innovation. The Drucker Family Innovation Fund was created by Dr. Dan Drucker and his family in recognition of the institutes where he has done much of his world-leading research. Drucker, who now holds more than 30 U.S. patents, is widely recognized for his ground-breaking role in the development of new classes of medications, the GLP-1 and GLP-2 agonists, as well as DPP4 inhibitors. We are so pleased that Dr. Drucker has decided to give back to the diabetes research community in Toronto in such a generous way. His commitment to supporting the ongoing work in this field is a testament to his belief in the power of discovery-level science. The first funding awards provided by the Drucker Family Innovation Fund were announced by the BBDC in June 2021.



Banting & Best

While this year's switch to virtual for our events posed some challenges, it also increased opportunities for us to bring in speakers from around the world. The reduction in travel costs meant we were able to host six exceptional speakers, up from our usual four presentations. For some of our students and members, the online format also decreased barriers they may have faced in attending an in-person event. Given this success, we plan to continue the virtual format throughout the current calendar year and will consider a blended model of in-person and virtual seminars as we move into 2022.

In 2021, the University of Toronto hosted a series of events in celebration of the 100th anniversary of the discovery of insulin, including a very successful Scientific Symposium held virtually from January to April, including live presentations on April 15 and 16.

On April 14 the BBDC partnered with Diabetes Action Canada and the University of Toronto's Department of Medicine to host a unique celebration of the 100th anniversary of the discovery of insulin. This event was designed entirely by a team of people living with or caring for someone with diabetes, and was an opportunity to share stories about the ways insulin has changed lives for the better. Each speaker was chosen because they were living with diabetes or doing work that was making a difference in the field.

More than 1,000 people registered for this virtual event, which was attended by people from around the world. Many more continue to view the recorded videos which have been posted online. Throughout the evening, videos were shared from across Canada and around the world. Researchers, health care providers, people living with diabetes and those caring for someone with diabetes all submitted messages to commemorate this anniversary and talk about what insulin means to them. The entire event was truly a celebration—with the chat filled with questions and comments from an international audience who were touched and inspired by the presentations. This event was made possible thanks to a generous donation from Sun Life. Videos from the day are now available for viewing on the Diabetes Action Canada website. [Watch them now!](#)

In February 2021, the BBDC and Peter Munk Cardiac Centre co-hosted a highly successful and well attended third annual Joint Cardiovascular-Diabetes Symposium in Toronto, a two-day online educational event for health care providers.

On October 23, 2020 an external review of the BBDC was held. These reviews are commissioned periodically by the Temerty Faculty of Medicine as part of its commitment to quality assurance. An external review of the BBDC was held on October 23, 2020. The reviewers analyzed the following areas: relationships, research, education, organizational and financial structure, long-range planning challenges, and international comparators. The BBDC would like to thank the reviewers Dr. Jean Schaffer, Harvard Medical School, and Professor Bruce Verchere, University of British Columbia, as well as U of T faculty, trainees and other constituents who participated in the review.

You are invited to view our external review results on our website:

[BBDC self-study for the period July 2016 to May 2020](#)
[External reviewers' report](#)
[Director's response](#)

After eight years and countless successful programs, the BBDC's Diabetes Pharmacists Network (DPN) sadly ended in December 2020 due to financial constraints. The DPN, directed by Dr. Lori MacCallum, had an enormous impact on the education and support of pharmacists across the country, and the care of people with diabetes. This innovative program changed how pharmacists learned about diabetes care and medications, with patients being at the heart of the program. Pharmacists and health care providers who used the program were unanimous in their positive response. Dr. MacCallum recalls getting emails every week from those who had used the DPN to help prepare for exams or work with a patient.

The support of the pharmacy community inspired the DPN team to produce helpful content, like two editions of the BBDC Guidebook on Diabetes Management, a popular resource aimed at pharmacists and other health care providers. Each product the DPN produced and every event they put on had one specific focus: helping people with diabetes by supporting and empowering pharmacists. I know the DPN team was inspired by how engaged pharmacists were around this goal. Many went on to become certified diabetes educators.

The DPN was an exceptional program from its inception. What Dr. MacCallum and her team were able to achieve in terms of supporting improved education on diabetes for pharmacists, and the impact this work had on people living with diabetes is significant. While the BBDC is no longer able to continue the program, I know that those who have used the DPN resources and programming will continue to reap the benefits of what they have learned.

In 2021, BBDC's QUEST program developed three new e-learning modules about quality improvement (QI). These were designed specifically for health care providers working with people living with diabetes, and are accredited by the RCPSC for section three credits. Developed by experts in the science of quality improvement, the modules allow learners to work through a hypothetical QI initiative that aims to improve diabetes foot screening. Users will learn the steps and methodology needed to get a project started and ensure a high likelihood of success. The modules are available on the QUEST website.



My 10-year term as BBDC Director was to end on June 30, 2021 but will be extended for one year in view of the disruptions imposed by the current pandemic, and also to allow continuity of leadership during the year in which we celebrate the 100th anniversary of the discovery of insulin. A search committee for the next BBDC director will be struck in the fall of 2021.

To conclude, I would like to thank the BBDC's outstanding administrative staff, as well as Drs. Tony Lam and Phillip Segal for their dedication and leadership, the members of our hard-working committees, and all BBDC members and trainees for your dedicated efforts.



Committees

EXECUTIVE COMMITTEE

The governance structure of the BBDC consists of a Director and Executive Committee who ensure that the goals of the Centre are appropriately implemented. The Executive Committee provides leadership and representation for the University of Toronto diabetes research, education and care communities.

DIRECTOR AND CHAIR:

Dr. Gary Lewis Department of Medicine, Division of Endocrinology & Metabolism, and Department of Physiology*

Dr. Khosrow Adeli Department of Biochemistry, and Department of Laboratory Medicine & Pathobiology*

Dr. Andrew Advani Department of Medicine, Division of Endocrinology & Metabolism*

Dr. Tony Lam Department of Medicine and Department of Physiology*

Dr. Lorraine Lipscombe Department of Medicine, and Department of Health Policy, Management and Evaluation*

Dr. Bruce Perkins Department of Medicine, Division of Endocrinology & Metabolism*

Dr. Reinhart Reithmeier Interim Vice Dean, Research and Innovation, Faculty of Medicine*

Dr. Phillip Segal Department of Medicine, Division of Endocrinology & Metabolism*

Dr. Minna Woo Department of Medicine, Division of Endocrinology & Metabolism*

QUALITY EDUCATION AND SAFETY (QUEST) COMMITTEE

This committee fosters and develops continuing health education and quality improvement initiatives for all members of the diabetes team with the aim of improving the lives of people living with diabetes.

CHAIR:

Dr. Phillip Segal Department of Medicine, Division of Endocrinology & Metabolism*

Leigh Caplan Certified Diabetes Nurse Educator, Sunnybrook Health Sciences Centre

Sandra Fitzpatrick South Riverdale Community Health Centre

Dr. Julie Anne Gilmour Department of Medicine, Division of Endocrinology & Metabolism*

Dr. Ilana Halperin Department of Medicine, Division of Endocrinology & Metabolism*

Dr. Lori MacCallum BBDC Program Director, Knowledge Translation and Optimizing Care Models; Leslie Dan Faculty of Pharmacy* (to Dec. 2020)

Dr. Geetha Mukerji Department of Medicine, Division of Endocrinology & Metabolism*

Violetta Nikolova Clinical Nurse Specialist, Mount Sinai Hospital

Dr. Monica Parry Associate Professor, Lawrence S. Bloomberg Faculty of Nursing*

Lori Sutton Regional Facilitator, Toronto Diabetes Care Connect, South Riverdale Community Health Centre

Dana Whitham Clinical Leader Manager, Diabetes and Renal Transplant, St. Michael's Hospital

Dr. Rene Wong Department of Medicine, Division of Endocrinology & Metabolism*

TRAINING AND RESEARCH EXCELLENCE COMMITTEE

This committee implements the scientific review of BBDC funding programs, develops the Annual Scientific Day program, and selects speakers for the BBDC Seminar Series.

CHAIR:

Dr. Tony Lam Associate Director of Research, BBDC; Departments of Medicine and Physiology*

Dr. Satya Dash Department of Medicine, Division of Endocrinology & Metabolism*

Dr. Caroline Kramer Department of Medicine*

Dr. Julie Lovshin Department of Medicine, Division of Endocrinology & Metabolism*

Dr. Cynthia Luk Department of Medicine*

Dr. Ian Rogers Department of Obstetrics and Gynecology*

Dr. Hoon-Ki Sung Department of Laboratory Medicine and Pathobiology*

Dr. Xiao Yu (Shirley) Wu Leslie Dan Faculty of Pharmacy*

Dr. Darren Yuen Department of Laboratory Medicine and Pathobiology*

TRAINEE ADVANCEMENT AND DEVELOPMENT COMMITTEE

As a subcommittee of the Training and Research Excellence Committee, this committee implements the scientific review of the Summer Studentships, Annual Trainee Awards, and Trainee Travel Awards funding programs. Members are postdoctoral fellows with diverse expertise and disciplines who are either BBDC or externally funded.

CHAIR:

Dr. Tony Lam Associate Director of Research, BBDC; Departments of Medicine and Physiology*

Dr. Eno Hysi
(Supervisor: Dr. Darren Yuen)

Dr. Evan Lewis
(Supervisor: Dr. Bruce Perkins)

Dr. Adriana Migliorini
(Supervisor: Dr. Cristina Nostro)

Dr. Sandra Pereira
(Supervisor: Dr. Margaret Hahn)

Dr. Priska Stahel
(Supervisor: Dr. Gary Lewis)

Dr. Shirine Usmani
(Supervisor: Dr. Minna Woo)

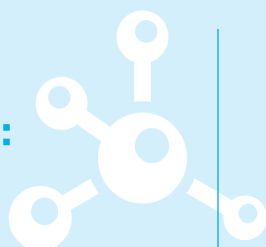
Dr. Chi Kin Wong
(Supervisor: Dr. Daniel Drucker)

Dr. Veera Ganesh Yerra
(Supervisor: Dr. Andrew Advani)

Dr. Song-Yang Zhang
(Supervisor: Dr. Tony Lam)

*University of Toronto

Funding for Trainees Granted:



21	Graduate Studentships	\$369,747
14	Summer Studentships	\$41,895
8	CIHR-INMD/BBDC New Investigator Partnership Prizes (in celebration of the 100th anniversary of the discovery of insulin)	\$12,000
7	Postdoctoral Fellowships	\$290,000
6	Annual Trainee Awards	\$1,200
3	Trainee (Virtual Travel Awards)*	\$448

Funding for Faculty and Health Professionals Granted:

6	Archie Sopman Diabetes Research and Education Awards 2020*	\$1,250
3	Pilot and Feasibility Grants	\$120,000
2	New Investigator Awards	\$135,000
1	BBDC-Novo Nordisk Chair in Incretin Biology	\$160,921

“We fund the next generation of clinical and basic science researchers through every stage of their training from undergraduate summer studentships to graduate scholarships to post-doctoral fellowships.”



TOTAL FUNDING

\$1,132,461

Awarded

71

Individuals
Funded



BBDC By the Numbers 2020/2021

*Due to the COVID-19 pandemic, most international conferences moved to an online format. The BBDC modified this funding program to support those attending virtual conferences. However, few applications were received due to low online conference registration fees.



Funding Programs and Funding Decisions

This section of our annual report provides a brief overview of the significant funding that we provide for the diabetes research, education and care communities at the University of Toronto and its affiliated institutions. Complete details and specific eligibility requirements for each program are outlined on our website bbdc.org.

Funding Programs For Trainees

ANNUAL TRAINEE AWARDS

The Annual Trainee Awards program is intended to showcase the best innovative and novel diabetes research being conducted by trainees at the University of Toronto, and to provide an incentive for BBDC trainees to share their very best work with their colleagues and the BBDC membership. This year, the six prize winners presented their work virtually at a special Annual Trainee Awards Conference in June 2021. The prize winners received eGift cards. The 2020/2021 prize winners are:

Prize	Recipient	Supervisor	Title of Research
1st Prize	Natasha Anita	Dr. Walter Swardfager	Serum soluble epoxide hydrolase-related oxylipins are associated with depression and increased depressive symptom severity in patients with type 2 diabetes
2nd Prize	Sarah Martchenko	Dr. Patricia Brubaker	The L cell clock is required for circadian GLP-1 secretion and maintenance of intestinal homeostasis
3rd Prize	Rosa J. W. Li	Dr. Tony Lam	Nutrient sensing in the dorsal vagal complex regulates hepatic lipid and glucose metabolism in rats
Honourable Mention	Andrea Glenn	Dr. John Sievenpiper	Greater Adherence to the Portfolio Diet is Associated with Lower Incidence of Type 2 Diabetes in the Women's Health Initiative
Honourable Mention	Saad Khan	Dr. Daniel Winer	Gut-Liver B Cells Promote the Development of Obesity-Associated Insulin Resistance and Type 2 Diabetes
Honourable Mention	Song-Yang Zhang	Dr. Tony Lam	FXR in the dorsal vagal complex is sufficient and necessary for upper small intestinal microbiome-mediated changes of TCDCA to alter insulin action in rats

CHARLES HOLLENBERG SUMMER STUDENTSHIP PROGRAM

This program is designed to introduce undergraduate and medical students to the field of diabetes research by providing an opportunity to conduct a full-time summer research project with a BBDC member. Students and their supervisors participate in an online weekly seminar series which include presentations by the summer students describing how their projects fit into the overall goals of their labs. All students present the results of their work at the end of the summer in a workshop format at a half-day online mini-conference. The awards are valued at \$5,985 each (half is provided by the BBDC). The 2021 award recipients are:



Sadia Chowdhury



Felice Iris Si Ching Chun



Anna Gao



Wenyan (Kevin) He



Madhurangi Jayasinghe Arambewela



Hyerin Jeong



Anna Lee



Saba Manzoor



Ednah Negatu



Preya Patel



Phelopater Sedrak



Cimon Song



Jason Tran



Kendra (Yejia) Zhang

Recipient	Supervisor	Title of Research
Sadia Chowdhury	Dr. Jacqueline Beaudry	The role of Acute Corticosterone administration in lipid metabolism in brown adipose tissue
Felice Iris Si Ching Chun	Dr. Minna Woo	The Role of Skeletal Muscle JAK2 in Diabetes and Muscle Function
Anna Gao	Dr. Tony Lam	Small intestinal nutrient sensing and metformin action in energy balance regulation
Wenyan (Kevin) He	Dr. Denise Belsham	Hypothalamic insulin resistance in the context of a high fat diet: the role of TNF α and IL-6 and the molecular mechanism behind the protective effects of oleate
Madhurangi Jayasinghe Arambewela	Dr. Ana Konvalinka	Sex differences in the metabolism of glucose and glutamine: the key to prevent diabetic kidney disease?
Hyerin Jeong	Dr. Patricia Brubaker	Anti-diabetic actions of GLP-1/GLP-2 combination therapy
Anna Lee	Dr. Darren Yuen	The role of prolyl hydroxylase inhibition in attenuating organ fibrosis
Saba Manzoor	Dr. Michael Fralick	Influenza Vaccination Rates Among People Hospitalized with Diabetes Mellitus
Ednah Negatu	Dr. Laura C. Rosella	A population-based risk algorithm for the development of type 2 diabetes: External validation of the Diabetes Population Risk Tool (DPoRT) in the United States

Preya Patel	Dr. Mamatha Bhat	Enteric Dysbiosis Contributes to Development of Post-Transplant Metabolic Disease
Phelopater Sedrak	Dr. Andrew Advani	Using single cell GPCRomics to identify new treatment targets for diabetic kidney disease
Cimon Song	Dr. Bruce Perkins	Optimal Ketone Level Diagnostic Thresholds for Predicting Ketoacidosis Events in Patients Using and Not Using SGLT _i Therapy: A Retrospective Longitudinal Diagnostic Study
Jason Tran	Dr. Johane Allard and Dr. Katherine Schwenger	Effects of fecal microbiota transplant in adults with obesity and insulin resistance: assessing the role of bacterial endotoxins and intestinal microbiome
Kendra (Yejia) Zhang	Dr. Catherine Yu	Impact of the pandemic, social distancing and its socioeconomic ramifications on the experiences of people with diabetes

CIHR-INMD/BBDC NEW INVESTIGATOR PARTNERSHIP PRIZES

In celebration of the 100th anniversary of the discovery of insulin in 2021, a scientific symposium was held in April 2021. Young investigators were invited to submit an abstract on their diabetes research for the opportunity to give a live, oral presentation at the online symposium. A monetary prize of \$1,500 CAD was awarded to each presenter. Funding for the prizes was provided by the Canadian Institutes of Health Research (CIHR)/Institute of Nutrition, Metabolism and Diabetes (INMD). The prize winners are:

Category	Recipient	Title of Abstract
Early Career Investigator – Basic Science	Aida Martinez-Sanchez (London, United Kingdom)	Beta-cell Mir-125b Targets Mitochondrial and Lysosomal Genes to Control Glucose Homeostasis
Early Career Investigator – Basic Science	Steven Millership (London, United Kingdom)	Identification of an Epi-stable Subpopulation of Beta Cells Regulated by Overnutrition
Early Career Investigator – Clinical	Aviroop Biswas (Toronto, Canada)	Combined Associations of Work and Leisure Time Physical Activity on Incident Diabetes Risk
Early Career Investigator – Clinical	Marie Pigeyre (Hamilton, Canada)	Validation of The Classification for Type 2 Diabetes Into Five Subgroups: A Report From the Origin Trial
Postdoctoral Fellow – Basic Science	Yasaman Aghazadeh (Toronto, Canada)	Microvessels Support Engraftment and Functionality of Hesc-derived Pancreatic Progenitors and Human Islets in Diabetes Models
Postdoctoral Fellow – Basic Science	Nida Haider (Boston, United States)	Sex and Insulin Resistance Define a Human Cell Autonomous Supernetwork of Protein Phosphorylation
Postdoctoral Fellow – Clinical	Evan Lewis (Toronto, Canada)	Physical Activity and Nerve Structure and Function In Patients With Longstanding Type 1 Diabetes
Postdoctoral Fellow – Clinical	Klara Klein (Chapel Hill, United States)	The Simplicit1 Study: Hepatoselective Glucokinase Activation Via Ttp399 for the Treatment of Type 1 Diabetes Mellitus

GRADUATE STUDENTSHIPS

BBDC-Novo Nordisk Studentships

A collaboration with Novo Nordisk Canada Inc. was established to provide long-term endowment in support of graduate students who are pursuing a career in diabetes research. As part of the Ontario Student Opportunity Trust Fund program, the support obtained from Novo Nordisk was matched by equal contributions from the University of Toronto and the Government of Ontario. Studentships are valued at up to \$21,000 each. The 2020/2021 award recipients are:

Recipient	Supervisor	Title of Research
Roshanak Asgariroozbehani	Dr. Margaret Hahn	Investigation of Antipsychotic-Induced Impairment of Hypothalamic Leptin Action
Ehab Bakbak	Dr. Subodh Verma and Dr. David Hess	The use of semaglutide in the recovery of regenerative cell exhaustion in individuals with established type 2 diabetes and elevated cardiovascular risk
Andrew Biancolin	Dr. Patricia Brubaker	The Role of Secretagogen in Circadian GLP-1 Secretion, Diabetes and Intestinal Differentiation
Marel Gonzalez Medina	Dr. Adria Giacca	Cell-and pathway-specific role of insulin in an in vivo murine model of restenosis
Deborah Joseph	Dr. Adria Giacca	Mechanism of PKC- δ Action on Hepatic Glucose and Lipid Metabolism: Role of p38 MAPK
Tiffany Kong	Dr. Jayne Danska	The effects of human gut microbial products on mucosal immunity in Type 1 Diabetes
Jennifer Lee	Dr. Mary L'Abbe	Improving Food Purchasing Behaviours of Canadians at-risk for Type 2 Diabetes Using the FoodFlip® Smartphone Application with Front-of-Pack 'High-in' Warning Labels
Sarah Martchenko	Dr. Patricia Brubaker	Elucidating the interactions between circadian GLP-1 secretion and the microbiome in maintaining metabolic and intestinal homeostasis
Nayanan Nathan	Dr. Dana Philpott and Dr. Stephen Girardin	Elucidating the immunological basis of metabolic recovery post-bariatric surgery
Emily Smith	Dr. Margaret Hahn and Dr. Satya Dash	Effect of antipsychotics on brain insulin action and glucose homeostasis in healthy participants
Nicolette Stogios	Dr. Mahavir Agarwal and Dr. Margaret Hahn	Do antipsychotics disrupt brain insulin action? A pilot multi-modality magnetic resonance imaging (MRI) study in healthy controls
Muzammil Syed	Dr. Charles de Mestral and Dr. Mohammed Al-Omran	Characterizing the Burden of Diabetic Foot Ulcers Across Canada
Navikiran Verma	Dr. Hoon-Ki Sung	CD9 in adipose precursor cells regulates adipose tissue fibrosis and glucose homeostasis

BBDC-University Health Network Graduate Awards

These awards were made possible by the partnership between the BBDC and the University Health Network. To be eligible for this award, the student's supervisor must hold a full-time UHN appointment as an active staff physician, or if he/she holds an associate staff position or staff scientist position the supervisor's principal laboratory or clinical research space must be physically located at the UHN. Studentships are valued at up to \$21,000 each. The 2020/2021 award recipients are:

Recipient	Supervisor	Title of Research
Zahra Danaei	Dr. Tony Lam	Impact of gut microbiota and nutrient sensing on glucose control
Martha Ghebreselassie	Dr. Minna Woo	Investigating the Metabolic Role of Hepatic BRCA-1 in Type 2 Diabetes
Saad Khan	Dr. Daniel Winer	Investigating the Role of Hepatic B Cells During Non-Alcoholic Fatty Liver Disease
Jing Wen (Rosa) Li	Dr. Tony Lam	Glucoregulatory impact of gut microbiota on brain nutrient sensing
Yu Zhe Li	Dr. Minna Woo	Investigating the Metabolic Role of PTEN in Parasympathetic Phox2B Neurons

Tamarack Graduate Award in Diabetes Research

This graduate scholarship was made possible by a generous private endowment which was matched by equal funding from the University of Toronto and the Government of Ontario under the Ontario Student Opportunity Trust Fund program. The award is valued at up to \$21,000. The 2020/2021 award recipients are:

Recipient	Supervisor	Title of Research
Hilary Monteith	Dr. Anthony Hanley and Dr. Tracey Galloway	Determinants of Infant and Early Childhood Growth Trajectories Among Indigenous Peoples Living in Northern Ontario, Canada
Che-Yuan Wu	Dr. Walter Swardfager	DPP4 inhibitors as a potential therapeutic agent to prevent memory decline in people with Alzheimer's disease and diabetes

Yow Kam-Yuen Graduate Scholarship in Diabetes Research

This graduate scholarship was made possible by a generous private endowment which was matched by equal funding from the University of Toronto and the Government of Ontario under the Ontario Student Opportunity Trust Fund program. The value of the award varies and is normally between \$12,000 and \$14,000. The 2020/2021 award recipient is:

Recipient	Supervisor	Title of Research
Natasha Anita	Dr. Walter Swardfager	Neuroendocrine and inflammatory mediators of exercise and cognition in Type 2 Diabetes Mellitus

POSTDOCTORAL FELLOWSHIPS

The support of research fellows has been a major priority of the BBDC since the Centre's inception. Each year, the BBDC endeavours to provide as many fellowships as possible to enable individuals holding an MD or PhD to carry out full-time diabetes research at the University of Toronto or one of its affiliated institutions. The objective of these awards is to attract and foster young investigators to initiate and/or continue research training in the field of diabetes. Awards are \$40,000 or \$50,000 depending on the degree held. The 2020/2021 recipients are:

BBDC Postdoctoral Fellowships

Recipient	Supervisor	Title of Research
MD Saifur Rahman Khan	Dr. Michael Wheeler	Mechanism of diminished sphingolipids-induced type 2 diabetes
Amanda Maria Oakie	Dr. Maria Cristina Nostro	The evaluation of enzyme aldehyde dehydrogenase (ALDH) activity during pancreatic beta cell development and functional maturation to insulin-secreting cells
Vikas Srinivasan Sridhar	Dr. David Cherney	Efficacy, mechanisms and safety of SGLT2 inhibitors in kidney transplant recipients
Ziyi Zhang	Dr. Michael Wheeler	The role of imbalanced phospholipids contents in the function of islets and underlying molecular mechanisms

BBDC Fellowship in Diabetes Care (Funded by Eli Lilly)

This fellowship has been made possible by a generous contribution from Eli Lilly.

Recipient	Supervisor	Title of Research
Lucia Andreea Zurbau	Dr. John Sievenpiper	Relation of different food sources of sugars with incident cardiometabolic disease

D.H. Gales Family Charitable Foundation Fellowship

This fellowship has been made possible by a generous contribution from the D. H. Gales Family Charitable Foundation to the UHN Foundation.

Recipient	Supervisor	Title of Research
Chi Kin Wong	Dr. Daniel Drucker	Cellular Targets for the Anti-inflammatory Actions of GLP-1

Sellers Postdoctoral Fellowship

Recipient	Supervisor	Title of Research
Hong Rua	Dr. Hoon-Ki Sung and Dr. Peter Kim	Investigating the role adipose peroxisomes in metabolic homeostasis

TRAINEE (VIRTUAL) TRAVEL AWARDS

Attendance at scientific meetings provide all researchers, trainees and established researchers alike, with an opportunity to hear about cutting edge research in their field, often well before those results are published in scientific journals. Scientific meetings provide an opportunity for trainees to present their research findings to an international audience of their peers and promote networking and the establishment of research collaborations. Awards are available to trainees presenting a first-author abstract directly related to diabetes research which has been accepted for poster or oral presentation at a scientific meeting.

Due to the COVID-19 pandemic, scientific meetings transitioned to online events. Award recipients received reimbursement of between \$25 and \$1,000 for meeting registration fees. The 2020/2021 award recipients are:

Recipient	Supervisor	Title of Research
Natasha Anita	Dr. Walter Swardfager	Serum Soluble Epoxide Hydrolase Related Oxylipins and Depression in Patients With Type 2 Diabetes: An Exploratory Lipidomic Study
Sabrina Ayoub-Charette	Dr. John Sievenpiper	Important food sources of fructose-containing sugars and fasFng serum uric acid levels: a systemaFc review and meta-analysis of controlled feeding trials
Maria Gabriela Tinajero	Dr. Vasanti Malik	Ethnic differences in the association between body mass index and type 2 diabetes risk: a meta-analysis of prospective cohort studies

“As the pace of research accelerates, we are seeing tremendous advances in the treatment of diabetes and ultimately in the quality of life of those living with diabetes”

Funding Programs For Faculty and Health Professionals

ARCHIE SOPMAN DIABETES RESEARCH AND EDUCATION AWARDS 2020

This program is intended to promote continuing diabetes education for health professionals at the University Health Network who do not normally have access to funds to travel to diabetes conferences. Award recipients who attend conferences are encouraged to share their learnings from the conference with their colleagues. Due to travel restrictions as a result of the COVID-19 pandemic, a number of changes were made to the funding program. Awards are now provided for health professionals to attend online diabetes conferences or to attend an online (or in-person) continuing education course in diabetes. Funding for this program is provided by the UHN Foundation Archie Sopman endowment fund. The endowment is held at the University Health Network (UHN) and award payments are made directly to the recipients by the UHN. The 2020 funding recipients are:

Recipient	UHN Department	Amount
Joyce Chan	Pharmacy, Toronto General Hospital	Up to \$1,000 to attend educational course
Lucia Chan	Diabetes Clinic, Toronto Western Hospital	Up to \$1,000 to attend online conference
Tina Cheung	General Department of Medicine, Toronto General Hospital	Up to \$1,000 to attend educational course
Kitty Mak	Endocrine Clinic, Toronto General Hospital	Up to \$1,000 to attend online conference
Stephanie Varriano	Clinical Nutrition, Toronto General Hospital	Up to \$1,000 to attend online conference
Mary Weiland	Diabetes Clinic, Toronto Western Hospital	Up to \$1,000 to attend online conference

BBDC-NOVO NORDISK CHAIR IN INCRETIN BIOLOGY

The research Chair was made possible through a \$3 million gift from Novo Nordisk in appreciation of the innovative diabetes research undertaken by the BBDC. Both Novo Nordisk and the University of Toronto, Faculty of Medicine have a long-standing tradition of diabetes research originally dating back to the discovery of insulin, and most recently focused on the science of incretin biology which holds the potential to have the kind of transformative impact that insulin had in improving the lives of people with diabetes. This Chair will position the University of Toronto as a leader in this area of research. Dr. Daniel J. Drucker is the Chair holder and has been reappointed for a third 5-year term until 2025. Dr. Drucker is a clinician-scientist world-renowned for his ability to translate scientific breakthroughs into clinical treatments for patients.

NEW INVESTIGATOR AWARDS

These awards were established to support new clinician-scientists and basic scientists in the early stages of their careers, which is a particularly challenging and vulnerable time as the researcher transitions from trainee to independent investigator. Faculty are eligible for this funding within five years of their first faculty appointment. Awards are held over a 2-year period. The 2020–2022 award recipients are:

DH Gales Family Charitable Foundation New Investigator Award, and Reuben & Helene Dennis Scholar in Diabetes Research

This award is made possible by a generous contribution from the D. H. Gales Family Charitable Foundation to the UHN Foundation.

Recipient	Title of Research	Amount
Dr. Satya Dash	Investigating the role of NPY4R in resolution of metabolic syndrome and type 2 diabetes post-bariatric surgery in humans	\$55,000 over 2 years

Sun Life Financial New Investigator Award

This award is made possible by a generous contribution from Sun Life Financial to the UHN Foundation.

Recipient	Title of Research	Amount
Dr. Alanna Weisman	Real-World Feasibility of the Hemoglobin A1c Target of $\leq 7.0\%$ in Type 1 Diabetes: A Retrospective, Population-Based Cohort Study	\$80,000 over 2 years

PILOT AND FEASIBILITY GRANTS

New ideas and directions for research involve risk-taking by scientists and funding agencies. Most established funding agencies require considerable evidence of feasibility before they consider funding an application for a new project. Furthermore, researchers who are new to the diabetes field who may wish to adapt their non-diabetes research techniques to a diabetes-related topic of interest are disadvantaged in most funding competitions. The BBDC, therefore, prioritizes pilot and feasibility funding to attract researchers without a pre-existing track record of diabetes research or established diabetes researchers who wish to pilot an innovative research idea or project. The 2020/2021 grant recipients are:

Sun Life Financial Pilot and Feasibility Grants

These grants are made possible by a generous contribution from Sun Life Financial to the UHN Foundation.

Recipient	Title of Research	Amount
Dr. Andrew Advani	Using single cell GPCRomics to identify new treatment targets for diabetic kidney disease	\$40,000
Dr. Tae-Hee Kim	Defining the signaling and transcriptional mechanisms of pancreatic mesenchymal niches for beta cell maturation and function	\$40,000
Dr. Jonathan Rocheleau	Elucidating the alpha cell defects in human type 1 diabetes pancreatic slices using the microfluidic device coupled high spatio-temporal microscopy	\$40,000



Educational Activities



100 Years Of Insulin: Celebrating Its Impact On Our Lives

In celebration of the 100th anniversary of the discovery of insulin at U of T, the Banting & Best Diabetes Centre, Diabetes Action Canada, and the University of Toronto Department of Medicine brought together a diverse group of speakers to share their diabetes stories. Open to everyone, this free, virtual event highlighted the latest advances related to insulin, as well as the stories of those who are alive today because of this discovery.

5:00 pm

Welcome and Opening Remarks –
Drs. Gary Lewis and Jacqueline James

Moderated Session

Insulin then and now

5:10

My Diabetes Story

Living with diabetes gives you a unique perspective on this condition—and makes you in many ways an expert on what it's like to have this disease. Diabetes Action Canada's Patient Partners Chloe Pow and father, Conrad Pow share their stories and explain why they're so invested in playing a role in the development of new research programs.

5:20

How Insulin Was Discovered: Toronto's Gift to the World

When Sir Frederick Banting awoke in the middle of the night with an idea about how to treat diabetes, he had no way of knowing he was on the brink of transforming—and in many cases saving—the lives of millions of people around the world. Join Grant

Maltman, Curator at the Banting House National Historic Site of Canada in London, Ontario, as he shares the unique story of Dr. Banting and how that middle-of-the-night moment changed history.

Special bonus: Watch as Grant unveils Canada Post's newest commemorative stamp to mark the 100th anniversary of the discovery of insulin.



5:40

The Unique Experience and Challenges of Indigenous Canadians Living with Diabetes

The Diabetes Action Canada Indigenous Patient Circle is working to establish research priorities in Indigenous health. Members will share their personal stories of living or supporting loved ones with diabetes and how they are partnering with, and in some cases leading, diabetes research teams.

6:00

Advances in the Treatment of diabetes:

Where have we been and where are we going?

Join Toronto's Dr. Alice Cheng and Dr. Bruce Perkins as they discuss the latest advances in diabetes treatment and care. From do-it-yourself looping to islet transplants, from stem cells to continuous glucose monitors, there have never been more options or opportunities.

6:50

Break and networking

Moderated Session

Patient Partner, Conrad Pow:

Celebrating the lives of those with diabetes in the modern age

7:00

My Diabetes Story

Living with diabetes gives you a unique perspective on this condition—and makes you in many ways an expert on what it's like to have this disease. Diabetes Action Canada's Patient Partners Marley Greenberg and Dana Greenberg share their stories and explain why they're so invested in playing a role in the development of new research programs.

7:10

Living and Thriving with Type 1 Diabetes

From celebrated athletes to health care dynamos and everyone in between, there are a range of people not just living with type 1 diabetes, but also thriving. Jen Hanson, Executive Director of Connected in Motion and a person living with diabetes shares the community perspective of an active life with T1D. Oria James, Volunteer Researcher at World Health Organization & Cofounder of the Canadian College Diabetes Network, who also lives with T1D, brings her perspective on how to excel in post-secondary education while living with diabetes.



Photo: Julia Souda

7:40

Nothing About Us Without Us

Think you can't define a research question or play an active part in planning a study without a PhD? Not so! For decades, research on people with diabetes focused on the patient as the subject, not as an active part of the process itself. In this engaging session, Dr. Holly Witteman, a researcher who lives with T1D, along with her colleague Dr. Maman Joyce Dogba both from Université Laval and Dr. Joseph Cafazzo, a researcher from the University of Toronto discuss how the role of patients in research is shifting. This talk, moderated by Krista Lamb, will leave people with diabetes feeling empowered not only to share their lived experience, but to use it to help find management options that truly fit their needs.

8:00

Closing Remarks and farewell -
Drs. Gary Lewis and Jacqueline James



3rd Annual

Joint Cardiovascular-Diabetes Symposium

From Primary Prevention to Advanced Diabetes Management

PMCC-BBDC Joint Cardiovascular-Diabetes Symposium

On February 19-20, 2021, the Banting & Best Diabetes Centre and Peter Munk Cardiac Centre co-hosted this educational event for healthcare providers. Cardiovascular disease is the leading cause of morbidity and mortality in those living with diabetes. Consequently, it is imperative for healthcare providers to engage, learn, and challenge one another on how to best care for patients at risk, or affected by, both diseases.

DAY 1 – FRIDAY, FEBRUARY 19, 2021

08:25

Welcome & Opening Remarks – Phillip Segal

SESSION 1:

Diabetes Complications (Part 1)

08:30

Nephropathy – Emerging Role of MRAs –
David Cherney

08:55

Diabetes and Congestive Heart Failure –
Kim Connelly

09:20

Top 5 Diabetes Papers of 2020 for the Cardiologist –
Jeremy Gilbert

09:45

Q&A Panel Discussion –
David Cherney, Kim Connelly, Jeremy Gilbert

10:00

Break & Exhibits

SESSION 2:

Diabetes Complications (Part 2)

10:10

Emerging Pharmacotherapy for Obesity – Satya Dash

10:35

Intermittent Fasting in Type 2 Diabetes:
Impact on Glycemic Control and Weight Loss –
Caroline Kramer

11:00

Emerging Insights into the Relationship Between
Dysglycemia and Cardiovascular Outcomes –
Hertzel Gerstein

11:25

Q&A Panel Discussion –
Satya Dash, Caroline Kramer, Hertzel Gerstein

11:40

Lunch & Exhibits

SESSION 3:

Diabetes Therapeutics and Special Situations

12:30

Chemotherapy, Steroids and Diabetes:
Can Anything be Done? – Miranda Boggild

12:55

First Line Diabetes Treatment:
Metformin or Something Else – Ronald Goldenberg

13:20

COVID-19 and Diabetes – Peter Lin

13:45

Q&A Panel Discussion –
Miranda Boggild, Ronald Goldenberg, Peter Lin

14:00

Day 1 Sessions Summary – Peter Lin

14:30

Symposium Adjourns



DAY 2 – SATURDAY, FEBRUARY 20, 2021

08:25

Welcome & Opening Remarks – Sean Balmain

SESSION 4:

Coronary Artery Disease – Primary, Secondary Prevention and Advanced Revascularization

08:30

Icosapent Ethyl – Should We Pay More Attention to Triglycerides? – Peter Lin

08:55

Cochicine and Coronary Events – Can We Teach an Old Medication New Tricks? – Mike Farkouh

09:20

Coronary Angiography in Special Situations/ Advanced Disease – Sanjog Kalra

09:45

Q&A Panel Discussion – Peter Lin, Mike Farkouh, Sanjog Kalra

10:00

Break & Exhibits

SESSION 5:

Heart Failure

10:10

SGLT2 Inhibitors in Heart Failure – The Evidence Continues to Grow – Eileen O'Meara

10:35

Out-Patient Heart Failure Management and Virtual Care – Jeremy Kobulnik

11:00

Cardio-Oncology – Husam Abdel-Qadir

11:25

Q&A Panel Discussion – Eileen O'Meara, Jeremy Kobulnik, Husam Abdel-Qadir

11:40

Lunch & Exhibits

SESSION 6:

Viral Infection and Cardiovascular Disease

12:30

Influenza, Immunization and Impact on Cardiovascular Disease – Jay Udell

12:55

Acute Cardiovascular Presentations of COVID-19 Infection – Patrick Lawler

13:20

“Long COVID” and the Heart – Andrew Morris

13:45

Q&A Panel Discussion – Jay Udell, Patrick Lawler, Andrew Morris

14:00

Day 2 Sessions Summary – Peter Lin

14:30

Symposium Adjourns

BBDC Seminar Series (At City-Wide Endocrine Rounds)

Each year the BBDC invites internationally renowned diabetes researchers to present their work and to interact with BBDC faculty at our Seminar Series. To ensure a broad audience, seminars have been incorporated into the University of Toronto City-wide Endocrine Rounds. This year, the seminars were held virtually which enabled the BBDC to host speakers from around the world.



September 11, 2020

Integrated multi-omics approaches for understanding cardiometabolic disease mechanisms

Christopher Newgard, PhD

Director, Sarah W. Stedman Nutrition and Metabolism Center
Director, Duke Molecular Physiology Institute
W. David and Sarah W. Stedman Distinguished Professor
Duke Medical Alumni Association Distinguished Professor
Duke University Medical Center



October 16, 2020

Regulation of hepatic lipid storage and secretion

Richard Lehner, PhD

Professor, Department of Pediatrics
Director, Group on Molecular and Cell Biology of Lipids
Associate Dean, Research – Facilities and Core
University of Alberta

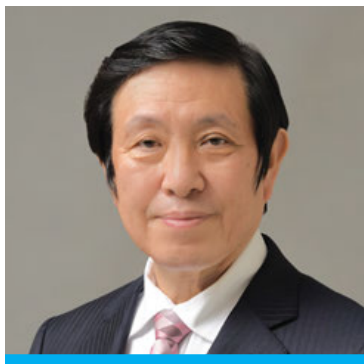


December 4, 2020

Using data to transform diabetes care

Juliana CN Chan, MBChB, MD, FHKAM, FRCP

Professor of Medicine and Therapeutics
Director, Hong Kong Institute of Diabetes and Obesity
Director, International Diabetes Federation Centre of Excellence in Diabetes Care
The Chinese University of Hong Kong
Prince of Wales Hospital
Hong Kong, China



January 22, 2021

Molecular mechanism of type 2 diabetes and insulin resistance

Takashi Kadowaki, MD, PhD

President, Toranomon Hospital
Professor Emeritus, The University of Tokyo



February 5, 2021

ACE2 – from flies to the centre of a pandemic

Josef Penninger, MD

Director, Life Sciences Institute, University of British Columbia
Professor, Department of Medical Genetics, University of British Columbia
Professor of Genetics, University of Vienna
Guest Professor, Medical University of Vienna
Adjunct Professor, Department of Immunology, University of Toronto
Life Sciences Institute; Vancouver Campus



May 14, 2021

COVID-19 and diabetes: what have we learnt?

Stefano Del Prato, MD

President – European Association for the Study of Diabetes
Professor of Endocrinology
Chief – Section of Diabetes and Metabolic Diseases
Dept of Clinical and Experimental Medicine
University of Pisa

In Canada, the costs of treating diabetes has soared from **\$14 billion in 2008** to just under **\$30 billion in 2019.**

Trainee Seminars

In an effort to provide an enhanced training environment for trainees, the BBDC regularly hosts two seminar series: the **Trainee Lab Seminar Series** and the **Clinical Research-in-Progress Rounds**. These seminar series provide postdoctoral fellows, graduate students, residents and junior faculty with an opportunity to present their diabetes research proposals and unpublished basic science research or clinical and population-based research to their peers in a moderated academic setting. The Trainee Lab Seminars are held monthly and the Clinical Research in Progress Rounds are held three to four times per year. Since the COVID-19 pandemic, the seminars have moved to an online format. Attendance is open to all BBDC members, their trainees and U of T endocrine residents.

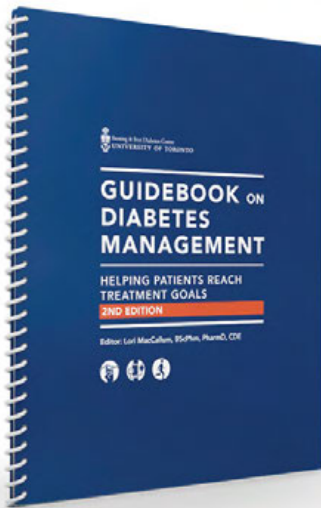
Annual Scientific Day

This annual event provides an opportunity for BBDC members to exchange scientific information and ideas and assists in the development of collaborative diabetes-related research activities. The Scientific Day focuses on the latest diabetes research topics with both clinical and laboratory applications. Each year, an internationally renowned diabetes researcher is selected to deliver the Charles Hollenberg Memorial Lecture. The event also provides an opportunity for BBDC trainees to network and present their research. BBDC postdoctoral fellowship recipients, graduate studentship recipients and other trainees present posters of their work. Ten pre-selected posters are judged by esteemed researchers for the Annual Trainee Awards competition. Registration is free for all BBDC members, their trainees and U of T endocrine residents.

The BBDC did not hold a Scientific Day in 2021 as we focused on the 100th anniversary of the discovery of insulin events which took place in April 2021.



Guidebook On Diabetes Management



At the Banting & Best Diabetes Centre, one of the ways we honour our commitment to improving the lives of people with diabetes is to provide health care teams with resources that are evidence-based, patient-centred, and user-friendly, to help guide them as they work together with people with diabetes to achieve treatment goals.

Our second edition *Guidebook on Diabetes Management* incorporates recommendations from the latest clinical practice guidelines in glycemic management, blood pressure, lipids, antiplatelet agents, nutrition, exercise and smoking cessation, and combines them with expert opinion and practical advice. The guidebook is divided into three main sections: Glycemic Management, Cardiovascular Protection and Lifestyle. Also included is information on over 100 medications, clinical pearls and practical tips.

The guidebook is available for purchase at the [University of Toronto Bookstore](#).

QUEST Website

The BBDC's Quality Education & Safety (QUEST) program provides an educational website where diabetes health care providers can obtain the best diabetes clinical practice resources and learn about local diabetes initiatives. For clinicians and those living with diabetes including patients and their caregivers, QUEST offers valuable tools and information about diabetes as well as opportunities to get involved with diabetes care and research in the community. Providers will find valuable tools and information about the disease and options to get involved with diabetes care and research in their communities. Visit the site at diabetesquest.ca



The BBDC Core Laboratory operates as a specialty laboratory within Mount Sinai Services to provide high quality laboratory assays and services at discounted rates to BBDC members. The lab also provides services to the wider scientific community including external academic and/or industry initiated research. A list of some of the current assays and services provided by the Core Lab is available on the BBDC's [website](#) or by contacting the Core Lab directly:

Senior Manager, Client Service & Operations:

Cheryl Koval, HBS, MASc
Phone: (416) 586-4800 Ext. 7266
Fax: (416) 586-8882
cheryl.koval@sinaihealth.ca or
client.service@mountsinaiservices.com

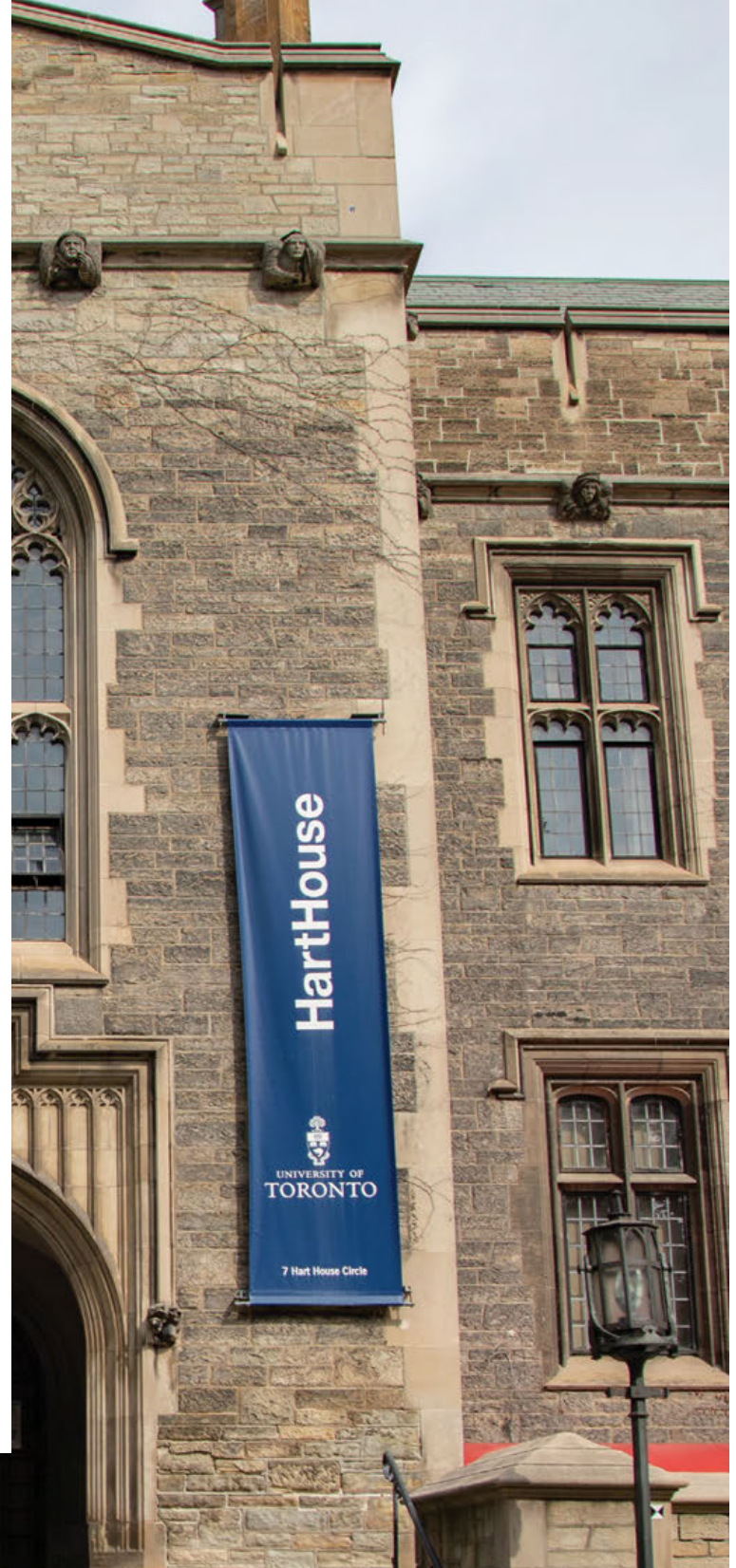
Banting & Best Diabetes Centre Core Laboratory

Operated by Mount Sinai Services
600 University Avenue
6th Floor, Room 6-414
Toronto, Ontario M5G 1X5

Core Laboratory

We would like to express our sincerest gratitude and appreciation to the following individuals and organizations:

- The members of our Executive Committee, Training and Research Excellence Committee, Quality Education and Safety (QUEST) Committee, and Trainee Advancement and Development Committee who volunteer their time to review applications for the Centre's funding programs and implement educational initiatives on behalf of the BBDC. We are especially grateful to them during the COVID-19 pandemic as they continued to serve the BBDC while dealing with the challenges of a pandemic.
- Members of the BBDC and Department of Medicine who provided scientific reviews for the Drucker Family Innovation Fund Grants program.
- Everyone who participated in the 3rd annual annual Joint Cardiovascular-Diabetes Symposium in February 2021 co-hosted by the BBDC and University Health Network's Peter Munk Cardiac Centre.
- Everyone who participated in the celebration of the 100th anniversary of the discovery of insulin events.
- The external reviewers of the BBDC, Drs. Jean Shaffer and Bruce Verchere.
- Our 2021 Charles Hollenberg Summer Studentship program coordinator, Adriana Migliorini.
- Faculty of Medicine Advancement and the UHN Foundation who fund raise on behalf of the BBDC.



Acknowledgements

Photo: Johnny Guatto

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The Drucker Family Innovation Fund
The Estate of Reuben & Helene Dennis
The Estate of Marion Hamilton
The Estate of Miriam Neveren
The Estate of Dr. & Mrs. Edward A. Sellers
The Estate of Mary E. Sharp
The Estate of Archie Sopman (UHN Foundation)
The Estate of Arthur Spoerri
Novo Nordisk
Mr. Stephen Yow Mok Shing

The Centre is also grateful to the following for contributions made in 2020/2021:

Amgen
Bayer
Boehringer-Ingelheim
D.H. Gales Family Charitable Foundation
Eli Lilly
The Estate of John A. Sawyer
HLS Therapeutics
Janssen
Medtronic
Novartis
Novo Nordisk
Pfizer
Servier
UHN Foundation
United Way of Greater Toronto
Individuals who have donated to the Banting & Best Diabetes Centre this past year.

The BBDC gratefully acknowledges the support of our major contributors:



“By supporting the BBDC, you are supporting the current and the next generation of diabetes researchers who are working toward a cure for diabetes and its complications.”



Our Supporters

Contact

200 Elizabeth Street, Eaton Building, 12E248,
Toronto, Ontario, Canada M5G 2C4

Phone: (416) 978-3498

E-mail: diabetes.bbdc@utoronto.ca

Web: bbdc.org



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