

# Banting & Best Diabetes Centre

**25**  
**26**



Banting & Best Diabetes Centre  
UNIVERSITY OF TORONTO

# BBDC

**Annual Report** July 2025 to June 2026

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DEFY  
GRAVITY

# 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 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 Hospital for Sick Children, Sinai Health, University Health Network, Sunnybrook Health Sciences Centre, Unity Health Toronto, Women's College Hospital, Centre for Addiction and Mental Health and many other community affiliated sites.

We host seminars and scientific conferences to facilitate the exchange of scientific information and ideas. We 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.

Our members are a network of over 175 faculty and health care providers involved in diabetes research, education and care from various faculties and departments at the University of Toronto and its affiliated hospitals and research institutes.

## Vision

Our vision is to improve diabetes-related health globally.

## Mission

We are the nexus for diabetes research and education across the University of Toronto and its affiliate institutes. We

- Nurture world-class talent
- Fund research
- Convene research and clinical communities to catalyze innovation and communicate knowledge
- Strategically address emerging issues of global significance



# Director's Message



**Minna Woo, MD, FRCPC, PhD**

Director, Banting & Best Diabetes Centre  
Professor, Departments of Medicine,  
Pharmacology & Toxicology, and Immunology  
University of Toronto

As I enter into my fifth year as Director of the Centre, I continue to reflect and appreciate the incredible value the BBDC has to offer to the University of Toronto diabetes research and clinical community at large.

As we were reminded most recently by the challenges around the COVID-19 pandemic, advances in science happen with people at the core. At the end of the day, this is what the BBDC is about. We are not a building or within the confines of a department. Rather, we are people who have been brought together with the purpose of advancing knowledge that will ultimately help people living with diabetes locally and globally. This is a unique treasure in the world.

We've had another productive year with several opportunities to showcase our BBDC community. Our annual BBDC Scientific Day held at the beautiful Old Mill is always a joy. We spent the day reconnecting with colleagues and friends and highlighting the incredible scientific ecosystem that the University of Toronto offers. This year we had an inspiring Charles Hollenberg Memorial Lecture by Dr. Mitchell Lazar on

the latest knowledge on nuclear receptors in diabetes pathogenesis.

There are few academic fields without connection to diabetes, from cell engineering to population studies around the world. Diabetes research is truly all-encompassing. The depth and breadth of the amazing work that is supported by the BBDC is immense. To know that the next exciting discovery or revolutionary treatment for diabetes may be ignited through a Drucker Family Innovation Fund Grant, one of many BBDC funding competitions, is truly thrilling.

This connection of vast numbers of academic fields to diabetes research was again illustrated by the invited speakers for our Seminar Series, who this year covered topics from exercise to neuroscience to devices for glucose monitoring to the latest state-of-the-art knowledge in adipose biology. Their small-group sessions with BBDC trainees following their presentations were especially appreciated.

Our Quality Education and Safety Committee is working hard to improve the health outcomes of people living with diabetes. In 2025/26, they again honoured a superb team of allied health care workers who are using innovative methods to improve diabetes care. The Committee is also showing leadership by providing practical educational materials that can be shared with people living with diabetes.

All of these exciting offerings by the BBDC are only possible through our ongoing endowed funds and generosity of new donors who share our sense of urgency in fulfilling our mission. Discovery through research is always a resource-intense enterprise and there is no shortage of ideas and talent in our BBDC community.

I am always grateful for the generous time and effort of our committees, who ensure our resources are used wisely and via a transparent process. All BBDC decisions are made with the wise input of our committee members, and it is always nice to hear their many viewpoints before arriving especially at major decisions.

Last, but certainly not least, we are truly marking the end of an era at the BBDC, as Rose LaBarbera has decided to retire after an incredible 26 years as

Business Manager of the Centre. Rose has supported three directors over her career, and I know we would unanimously agree that Rose IS the BBDC. I have not met anyone who cares more about the BBDC than Rose, who has truly been the glue that holds together the fabric of the Centre with her integrity and professionalism. It is thanks to her stewardship that the BBDC has been rock solid in our operations, ensuring maximum budget efficiency and maintaining meticulous oversight of our programs after much thought and deliberation. She has left us with much to be proud of and ensures us that her replacement (if that can be possible) will be excellent. It is with gratitude and respect that we'll remember Rose for all her dedication and hard work.

Sincerely,  
Minna Woo

“All of these exciting offerings by the BBDC are only possible through our ongoing endowed funds and generosity of new donors who share our sense of urgency in fulfilling our mission.”

# 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: Minna Woo

Department of Medicine, Division of Endocrinology & Metabolism\*, and Departments of Pharmacology, Immunology and Institute of Medical Sciences\*

Andrew Advani | Department of Medicine, Division of Endocrinology & Metabolism\*

Carolyn Cummins | Faculty of Pharmacy\*

Tony Lam | Departments of Medicine and Physiology\*

Lorraine Lipscombe | Department of Medicine, Division of Endocrinology & Metabolism\*, and Institute of Health Policy, Management and Evaluation\*

Justin Nodwell | Vice Dean, Research and Health Sciences Education, Temerty Faculty of Medicine\*

Bruce Perkins | Department of Medicine, Division of Endocrinology & Metabolism\*

Phillip Segal | Department of Medicine, Division of Endocrinology & Metabolism\*

Baiju Shah | Department of Medicine, Division of Endocrinology & Metabolism\*, Institute of Health Policy, Management and Evaluation\*

Diane Wherrett | Department of Paediatrics\*

## Quality Education and Safety (QUEST) Committee

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

### Chair: Phillip Segal

Department of Medicine, Division of Endocrinology & Metabolism\*

Leigh Caplan | Certified Diabetes Nurse Educator, Sunnybrook Health Sciences Centre

Sandra Fitzpatrick | Regional Facilitator, Toronto Diabetes Care Connect, South Riverdale Community Health Centre

Julie Anne Gilmour | Department of Medicine, Division of Endocrinology & Metabolism\*

Geetha Mukerji | Department of Medicine, Division of Endocrinology & Metabolism\*

Violetta Nikolova | Clinical Nurse Specialist, Mount Sinai Hospital

Monica Parry | Lawrence S. Bloomberg Faculty of Nursing\*

Judy Qiang | Department of Medicine, Division of Endocrinology & Metabolism\*

Rene Wong | Department of Medicine, Division of Endocrinology & Metabolism\*

\*University of Toronto

## Research Excellence Committee

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

### Chair: Tony Lam

Associate Director of Research, BBDC;  
Departments of Medicine and Physiology\*

Mahavir Agarwal | Department of Psychiatry\*

Jacqueline Beaudry | Department of Nutritional Sciences\*

Jason Fish | Department of Laboratory Medicine & Pathobiology\*

Eno Hysi | Department of Medical Biophysics\*

Tara MacDonald | Department of Physiology\*

Caitlin Maikawa | Institute of Biomedical Engineering\*

Kacey Prentice | Department of Physiology\*

Walter Swardfager | Department of Pharmacology & Toxicology\*

Sara Nunes Vasconcelos | Institute of Biomaterials and Biomedical Engineering\*; Department of Laboratory of Medicine and Pathobiology\*

## Trainee Advancement and Development Committee

As a subcommittee of the 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.

### Chair: Tony Lam

Associate Director of Research, BBDC;  
Departments of Medicine and Physiology\*

Sulayman Lyons | (Supervisor: Jacqueline Beaudry)

Aditya Mandapati | (Supervisor: Darren Yuen)

Massimo Nardone | (Supervisor: David Cherney)

Amanda Oakie | (Supervisor: Cristina Nostro)

Rui Shang | (Supervisor: Daniel Drucker)

Nicolette Stogios | (Supervisor: Mahavir Agarwal)

Majid Mufaqam Syed Abdul |  
(Supervisor: Gary Lewis)

Zeyu Yang | (Supervisor: Tony Lam)

\*University of Toronto

# Funding Programs and Decisions

This section of our annual report provides a brief overview of the funding that we provide for 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](https://bbdc.org)**



# BBDC By the Numbers

**25**  
**26**

**TOTAL Number of  
Individuals Funded**

**81**

**TOTAL Amount  
Awarded**

**\$1,580,837**

## **Trainee Funding** Granted in 2025/2026

**20**

**Graduate  
Studentships**

totalling

**\$425,139**

**6**

**Patricia L. Brubaker  
Trainee Awards**

totalling

**\$1,800**

**8**

**Postdoctoral  
Fellowships**

totalling

**\$400,000**

**14**

**Summer  
Studentships**

totalling

**\$51,744**

**23**

**Trainee Travel  
Awards**

totalling

**\$21,748**

## **Faculty and Health Professionals Funding** Granted in 2025/2026

**2**

**Archie Sopman  
Diabetes Research and  
Education Awards**

totalling

**\$5,300**

**1**

**BBDC-Novo  
Nordisk Chair in  
Incretin Biology**

totalling

**\$205,106**

**4**

**Drucker Family  
Innovation Fund  
Grants**

totalling

**\$300,000**

**1**

**Novo Nordisk-BBDC  
New Investigator Award**

totalling

**\$90,000**

**2**

**Novo Nordisk-BBDC  
Pilot and Feasibility Grants**

totalling

**\$80,000**

# Trainee Funding

## 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 scientist. Students and their supervisors participate in a 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 or expected results of their work at the end of the summer at a poster day. The awards are valued at \$7,392 each (half is provided by the BBDC). The 2026 award recipients are:

| Recipient                      | Supervisor(s)                     | Title of Research                                                                                                                                                                             |
|--------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jenny Ahn                      | Hoon-Ki Sung                      | Intermittent intervention of GLP-1RA strategy to sustain metabolic health through healthy adipose remodeling after treatment discontinuation                                                  |
| Ravinya Athukoralage           | Sheldon Tobe                      | Diabetic Nephropathy Prevention Program – Changing Practice Behaviour                                                                                                                         |
| Kyle Chung                     | Mahavir Agarwal                   | Do antipsychotics block insulin action in the brain: is it a class effect?                                                                                                                    |
| Isabella Colalillo             | Laura Chiavaroli                  | Towards an inclusive mobile health app translating guidelines on low glycemic index diets: engaging diverse communities to guide design of a diabetes intervention                            |
| Brooke D’Mello                 | Calvin Ke                         | Ancestral Differences in the Association Between Body Mass Index and Type 2 Diabetes Prevalence: A Cross-Sectional Study using the UK BioBank and Canadian Partnership with Tomorrow’s Health |
| Lauren Daunt                   | David Cherney                     | Relationship between weight loss, blood pressure, and proteinuria with GLP-1 receptor agonists and emerging multi-hormone receptor modulators in patients with overweight or obesity          |
| Lucas Makhlouf                 | Alanna Weisman                    | Equitable Uptake and Appropriate Use of Technologies for Adults with Type 1 Diabetes (EQUAT1D): Co-Design of a Complex Intervention                                                           |
| Aryen Muravvej                 | Kacey Prentice                    | Identifying the isoform-specific roles of NDPK in beta cells                                                                                                                                  |
| Quan Quach                     | Jacqueline Beaudry and Kafi Ealey | Gene sequencing in human adipose tissue in individuals with hyperglycemia                                                                                                                     |
| Rishikanth Ruthiran Loganathan | Mamatha Bhat                      | Identifying Multimodal Signatures of Post-Transplant MASH and Fibrosis Progression in Patients with and without Type 2 Diabetes                                                               |
| Hyunchae Seo                   | Alberto Martin                    | Regulation of insulin signaling and mitophagy by skeletal muscle DUPD1                                                                                                                        |
| Elena Sohrabzadeh              | Carolyn Cummins                   | Determining the role of liver vs. adipose LXRbeta in promoting glucocorticoid-induced diabetes and obesity                                                                                    |
| Mokshita Venkatesh             | Kevin Klatt                       | Maternofetal Choline Transport in Gestational Diabetes: A Pilot Investigation Employing Stable Isotopes                                                                                       |
| Robert Wong-Lorentz            | Michael Wheeler                   | Investigating possible causes of GDM: Effects of ceramide synthase 2 deficiency on pancreatic beta-cell function and membrane fluidity                                                        |



2026 summer studentship recipients with program coordinator, Nicolette Stogios (left)

## 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 \$25,000 each. The 2025/2026 award recipients are:

| Recipient     | Supervisor(s)                         | Title of Research                                                                                                                                   |
|---------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Fallon Dennis | Subodh Verma and David Hess           | Functional Investigation of Endothelial Function and Regenerative Cell Exhaustion in Type 2 Diabetes (FIERCE)                                       |
| Susanna Fang  | Daniel Drucker                        | Delineating the role of the neuronal, astrocyte, and pericyte GLP-1R/GIPR in metabolism and inflammation                                            |
| Frances Ford  | Ian Rogers                            | Investigating the use of ex vivo pancreas perfusion to determine the mechanism of Harmine using triple-transgenic reporter mice                     |
| Samrin Kagdi  | Jacqueline Beaudry                    | Regulation of Lipid Breakdown, Lipid Uptake and Lipid Oxidation in Brown and White Adipose Tissue with Glucose-Dependent Insulinotropic Polypeptide |
| Justin Lin    | Cristina Nostro                       | Investigating the role of transcription factor FEV in human islet and enterochromaffin cell development using human pluripotent stem cells          |
| Tin Heng Mak  | Margaret Hahn                         | Ketones for the Prevention of Antipsychotic-Induced Impairments in Glucose Metabolism                                                               |
| Brighid McKay | Laura Chiavaroli and John Sievenpiper | Examining the impact of weight and non-weight-based approaches to diabetes remission                                                                |

| Recipient               | Supervisor(s)                    | Title of Research                                                                                                                                                        |
|-------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soumya Amit Mishra      | Mahavir Agarwal and Yona Lunskey | Metformin for Antipsychotic-induced Weight Gain in Adults with Intellectual Disability: A Double-Blind Randomized Control Trial                                          |
| Mithusha Peragerasingam | Robert Screaton                  | Investigating the Role of ROMO1 in Restoring Mitochondrial SRC in Pancreatic Beta-Cells                                                                                  |
| Sofia Perfetto          | Walter Swardfager                | Type 2 diabetes mellitus, cognitive impairment, and incident dementia; identifying pathways and biomarkers from the plasma proteome                                      |
| Si Won Ryoo             | Walter Swardfager                | Examining the interplay between oxidative stress and cytochrome P450-soluble epoxide-derived oxylipins on neurovascular health and cognition in type 2 diabetes mellitus |
| Serena Trang            | Margaret Hahn                    | Semaglutide in comorbid schizophrenia spectrum illness and obesity for metformin non-responders: a single-blind randomized control trial                                 |
| Melissa Wang            | Tony Lam                         | The impact of brain GIP action on feeding regulation                                                                                                                     |
| Annie Yew               | Hoon-Ki Sung                     | Investigating Homoharringtonine's Effect on Skeletal Muscle As A Target for Diabetes Therapy                                                                             |
| Sabrina Ziai            | Jacqueline Beaudry               | Association of Fatty Acids, Oxylipins, and Inflammatory Markers Across Adipose Tissue Depots in Metabolically Unhealthy Obesity                                          |

### 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 \$25,000 each. The 2025/2026 award recipients are:

| Recipient      | Supervisor | Title of Research                                                          |
|----------------|------------|----------------------------------------------------------------------------|
| Kyla Bruce     | Tony Lam   | The glucoregulatory role of bile acid receptor TGR5 in the brain           |
| Stephalie Chau | Minna Woo  | Determining the role of MEG3 in skeletal muscle metabolism and diabetes    |
| Rishabh Johri  | Minna Woo  | Investigating the effect of vagal insulin signaling on glucose homeostasis |



### 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 \$25,000. The 2025/2026 award recipient is:

| Recipient | Supervisor | Title of Research                                                                                       |
|-----------|------------|---------------------------------------------------------------------------------------------------------|
| Cori Lau  | Jason Fish | Targeting the microvasculature to treat diabetes-induced heart failure with preserved ejection fraction |

### 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 award is valued at up to \$16,000. The 2025/2026 award recipient is:

| Recipient       | Supervisor(s)                         | Title of Research                                                                                                                                   |
|-----------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Dayana El Chaar | Laura Chiavaroli and John Sievenpiper | Assessment of the Implementation of a Plant-based Intensive Lifestyle Intervention with Integrated Behaviour Change Theories for Diabetes Remission |

## Patricia L. Brubaker Trainee Awards

The Patricia L. Brubaker Trainee Awards were established to honour Dr. Patricia Brubaker, a world-leading expert on GLP-1 and GLP-2 whose work has contributed to breakthroughs in therapies for type 2 diabetes and short bowel syndrome. The awards are intended to showcase the best innovative and novel diabetes research being conducted by trainees at the University of Toronto, and for BBDC trainees to share their work with their colleagues in the BBDC community. The top ten abstracts are selected for poster presentations at the BBDC's Annual Scientific Day. This year's posters were co-judged by Dr. Jonathan Schertzer, Professor of Biochemistry and Biomedical Sciences at McMaster University, and Dr. Tara MacDonald, Assistant Professor of Physiology at the University of Toronto. The 2025/2026 prize winners are:

| Prize                      | Recipient            | Supervisor         | Title of Research                                                                                                     |
|----------------------------|----------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| 1st Prize (\$500)          | Rishabh Johri        | Minna Woo          | Autonomic Regulation of Bone Marrow Adiposity and Hematopoiesis in Type 2 Diabetes                                    |
| 2nd Prize (\$400)          | Carmen Chan          | Cynthia Luk        | Caspase-8 but not RIPK3 promotes adiposity                                                                            |
| 3rd Prize (\$300)          | Yihan Luo            | Kacey Prentice     | Investigating the Role of NDPK in Beta Cell Function and the Pathogenesis of Type 1 Diabetes                          |
| Honourable Mention (\$200) | Emily Hashimoto-Roth | Hannes Rost        | A Metabolomics Approach to Characterize the Transition to Type 2 Diabetes After Gestational Diabetes Mellitus         |
| Honourable Mention (\$200) | Samrin Kagdi         | Jacqueline Beaudry | GIP Regulates Adipose Tissue Lipolysis in a Depot- and Nutrient-Specific Manner                                       |
| Honourable Mention (\$200) | Sabrina Ziai         | Jacqueline Beaudry | Adults with Obesity and Hyperglycemia Have Higher Arachidonic and Docosahexaenoic Acid in Subcutaneous Adipose Tissue |

## 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 \$50,000. The 2025/2026 recipients are:

### BBDC Postdoctoral Fellowships

| Recipient         | Supervisor    | Title of Research                                                                                                 |
|-------------------|---------------|-------------------------------------------------------------------------------------------------------------------|
| Farhan Ullah Khan | Daniel Winer  | Deciphering Sex-Specific Intestinal Immune Mechanisms Underlying Obesity-Related Insulin Resistance               |
| Zeyu Yang         | Tony Lam      | Evaluating Gut-Brain Mechanisms of Small Intestine Metformin-Protein Interaction in Feeding Regulation            |
| Tae Won Yi        | David Cherney | Assessing the Risk of Diabetic Ketoacidosis and Severe Hypoglycemia in Type 1 Diabetes and Chronic Kidney Disease |

### D.H. Gales Family Charitable Foundation Fellowships

These fellowships have been made possible by a generous contribution from the D. H. Gales Family Charitable Foundation to the UHN Foundation.

| Recipient            | Supervisor             | Title of Research                                                                                                                                                                |
|----------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Saurav Roy Choudhury | Alberto Martin         | Understanding the Role of Skeletal Muscle DUPD1 Phosphatase in Mitochondrial Biology Implicated in Metabolic Disease                                                             |
| Kasinan Suthiwanich  | Sara Nunes Vasconcelos | Vascularization of hPSC-derived $\beta$ -like Cell Aggregates with hPSC-derived Microvessels During Co-transplantation to Regenerate Insulin Production in Diabetic Mouse Models |

### Edwards Charitable Foundation Fellowship

This fellowship has been made possible by a generous contribution from the Edwards Charitable Foundation.

| Recipient               | Supervisor         | Title of Research                                                                                                                      |
|-------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Mihir Pravinbhai Parikh | Jacqueline Beaudry | Mechanisms of Glucose-dependent Insulinotropic Polypeptide Receptor Agonist-mediated Improvement in Adipose Tissue Insulin Sensitivity |

### Novo Nordisk-BBDC Postdoctoral Fellowship

This fellowship has been made possible by a generous contribution from Novo Nordisk.

| Recipient  | Supervisor     | Title of Research                                                                                     |
|------------|----------------|-------------------------------------------------------------------------------------------------------|
| Wenran Ren | Daniel Drucker | Mechanisms of Central Glucagon-Like Peptide 1 Receptor Signalling in Regulating Systemic Inflammation |

### Sellers Postdoctoral Fellowship

| Recipient      | Supervisor            | Title of Research                                                                                                              |
|----------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Giacomo Furlan | Miguel Ramalho-Santos | Dissecting Epigenetic Mechanisms by which Malnutrition During Pregnancy Programs Metabolic Disorders in Subsequent Generations |

## Trainee Travel Awards

Attendance at scientific meetings provides all researchers, trainees and established researchers alike with an opportunity to hear about and share 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-authored abstract directly related to diabetes research which has been accepted for poster or oral presentation at a scientific meeting. Award recipients received reimbursement of up to \$1,000 to present at an in-person or online meeting. The 2025/2026 award recipients are:

| Recipient             | Supervisor(s)                         | Title of Research                                                                                                                                                                                |
|-----------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aliya Allahwala       | Farid H. Mahmud                       | Patterns of Point of Care Ketone Testing in Adolescents with Type 1 Diabetes using Dapagliflozin as Adjunct-to-Insulin Therapy as part of the ATTEMPT Study                                      |
| Nan Chen              | Daniel Winer                          | An intestinal IL-33-ILC2 axis regulates sexual dimorphism in diet-induced obesity-related insulin resistance                                                                                     |
| Brooke D'Mello        | Calvin Ke                             | Associations of Clonal Hematopoiesis with Type 2 Diabetes and Cardiovascular Disease                                                                                                             |
| Dayana El Chaar       | Laura Chiavaroli                      | The Development of a Logic Model Integrating Behaviour Change Theories, Techniques, and Adherence Outcomes in a Plant-Based Intensive Lifestyle Intervention for Type 2 Diabetes Remission       |
| Madeline Erlich       | John Sievenpiper                      | Effect of a sugars-sweetened beverages reduction strategy using soymilk versus cow's milk on liver fat: The Soy Treatment Evaluation for Metabolic health (STEM) randomized trial                |
| Alexa Govette         | Jenna B. Gillen                       | The Effect of Low-Carbohydrate Greek Yogurt vs. an Iso-Energetic High-Carbohydrate Snack on Glycemia and Insulin Resistance Following Exercise in Women Living with Obesity                      |
| Zeinab Houshialsadat  | John Sievenpiper and Laura Chiavaroli | Replacement of Animal with Plant Protein Foods Reduces Blood Pressure in Individuals with Prehypertension or Hypertension: A Systematic Review and Meta-Analysis of Randomized Controlled Trials |
| Yumnah Jafri          | Vasanti Malik                         | Assessing a community gardening intervention to lower type 2 diabetes risk                                                                                                                       |
| Rishabh Johri         | Minna Woo                             | Autonomic Regulation of Bone Marrow Adiposity and Hematopoiesis in Type 2 Diabetes                                                                                                               |
| Luxcia Kugathasan     | David Cherney                         | Bioenergetic Shifts in Plasma Amino Acids and Related Metabolites in Response to SGLT2 Inhibition and Hyperglycemia in Type 1 Diabetes                                                           |
| Cori Lau              | Jason Fish                            | Empagliflozin Treatment Restores Angiogenic Gene Regulatory Pathways in Cardiac Microvasculature in a Model of Diabetes-induced Heart Failure with Preserved Ejection Fraction                   |
| Sulayman Lyons        | Jacqueline Beaudry                    | Loss of Pericyte GIPR Signalling Leads to Increased Body Weight in Male Obese Mice                                                                                                               |
| Kateryna Maksyutynska | Mahavir Agarwal and Margaret Hahn     | Is Brain Insulin Action Implicated in the Biology of Depression? A Pilot Neuroimaging Study in Adolescents                                                                                       |
| Alfred Min            | Amy Kirkham                           | Acute Glycemic Responses to Alternative Physical Activity Strategies among Breast Cancer Survivors Receiving Aromatase Inhibitors                                                                |

| Recipient                | Supervisor(s)                      | Title of Research                                                                                                                                             |
|--------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dorsa Moslemian          | Tony Lam                           | TGR5 Agonism in the Nucleus of the Solitary Tract Enhances Insulin Action                                                                                     |
| Sofia Erica Perfetto     | Walter Swardfager                  | Type 2 Diabetes Mellitus, Cognitive Performance, and Incident Dementia; Identifying Mediating Pathways and Biomarkers from the Plasma Proteome                |
| Vikas Srinivasan Sridhar | David Cherney                      | Cardiovascular Risk Prediction Modelling with Sotagliflozin in Type 1 Diabetes: Analysis of in Tandem 1-3 Trials                                              |
| Katelyn Sushko           | Lorraine Lipscombe                 | Mapping gestational diabetes care to Valentijn's integrative functions of primary care: A qualitative descriptive study of primary care provider perspectives |
| Majid Mufaqam Syed Abdul | Gary Lewis                         | Serotonin, a Downstream Effector of GLP-2, Enhances Lacteal Contractility and Lymph flow                                                                      |
| Melissa Wang             | Tony Lam                           | NTS GIPR agonism fails to additively reduce food intake with leptin co-infusion                                                                               |
| Quin Xie                 | Jayne Danska                       | Association of immune responses to gut microbes in pregnancy to type 1 diabetes risk                                                                          |
| Zeyu Yang                | Tony Lam                           | Metformin Restores Upper Small Intestinal Protein Sensing via a PepT1–GLP-1–dependent Pathway to Lower Food Intake                                            |
| Vivian Yin               | Vasanti Malik and Laura Chiavaroli | Evaluating the acceptability of the Portfolio Diet nutrition education e-module curriculum for type 2 diabetes and cardiovascular risk factor reduction       |

## Faculty and Health Professionals Funding

### Archie Sopman Diabetes Research and Education Awards

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 or attend continuing education courses in diabetes. Award recipients who attend educational events are encouraged to share their learnings from the event with their colleagues. Funding for this program is provided by the UHN Foundation Archie Sopman endowment fund. The endowment is held at the University Health Network and award payments are made directly to the recipients by the UHN. The 2025 funding recipients are:

| Recipient               | UHN Department                          | Amount  |
|-------------------------|-----------------------------------------|---------|
| Karen Blekaitis         | Toronto General Hospital, Endocrinology | \$1,000 |
| Tina Cheung             | Toronto General Hospital, Endocrinology | \$1,000 |
| Sio Khuan (Sharon) Khoo | Toronto General Hospital, Endocrinology | \$1,000 |
| Yee Lee                 | Toronto General Hospital, Endocrinology | \$1,000 |
| Kelly Matheson          | Toronto Western Hospital, Endocrinology | \$1,000 |
| Primrose Mharapara      | Toronto General Hospital, Endocrinology | \$1,000 |

## 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's Temerty 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 fourth 5-year term until 2030. Dr. Drucker is a clinician scientist world-renowned for his ability to translate scientific breakthroughs into therapies for people living with diabetes.

## Diabetes Team of the Year Award

Each year the BBDC presents one award to a team that has demonstrated outstanding efforts and achievements in their roles as diabetes educators. The award is meant to recognize a team that demonstrates leadership and accomplishments in innovations in patient education or diabetes care delivery, and/or education and professional development of healthcare trainees and clinicians, and/or advocacy for patients and best clinical practices.

The 2025 award was presented to Langs Community Health Centre, Diabetes Education Program Team. The team members are:

Jennifer Strome | Director,  
Chronic Disease and Diabetes

Jacque Bull | RD, CDE

Ashley Granville | RN, CDE

Bethany Deml | SW

Cindy Mather | RPN, CDE

Emily Houat-Heng | RN, CDE

Gwendolyn Simms | RD, CDE

Hafsah Samad | RD, CDE

Paige Bear | RN, CDE

Katie Fair | RKIN

Kristi MacMillan | RD, CDE

Sonia Khurmi | RD, CDE

Yumna Khan | RD, CDE

Christine Paquin | RN, CDE

Hilary Borg | RD, CDE

Kyla Paulter | RKIN, CDE

Gavina Indar | DEP Medical  
Administrative Assistant

Apoorva Narang | DEP Medical  
Administrative Assistant

Tracy Guitar | Program  
DEP Medical  
Administrative Assistant

Christina Churchill | Diabetes  
Administrative Assistant





## Drucker Family Innovation Fund Grants

This is a joint funding program between the BBDC and the Department of Medicine at University Health Network/ Mount Sinai Hospital. The grants enable eligible investigators to explore innovative research that may change the paradigm and orient the field in a new direction. The grants are intended to support high-risk innovative proposals focused on diabetes and metabolism research; however, in the absence of meritorious applications in the area of diabetes and metabolism, submissions related to other areas of biomedical research are considered. The 2025/2026 grant recipients are:

| Recipient                                           | Title of Research                                                                                                                                    | Amount   |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Herbert Gaisano and<br>R. J. Dwyane Miller          | Picosecond Infrared Laser (PIRL)-Based Spatially Imaging Mass Spectrometry (Proteomics) and Transcriptomics for the Type-1 Diabetes Pancreatic Islet | \$75,000 |
| Caroline Kramer and<br>Philip Britz-McKibbin        | Impact of Time-restricted Eating on the Gut Microbiota-derived Metabolite Trimethylamine-N-oxide in Overweight Individuals with Type 2 Diabetes      | \$75,000 |
| Alberto Martin<br>Saurav Roy Chowdhury<br>Minna Woo | Characterizing the Role of Skeletal Muscle DUPD1 in Obesity and Diabetes                                                                             | \$75,000 |
| Kacey Prentice and<br>Andras Nagy                   | Feasibility of Cell-Mediated Passive Immunization Against Diabetes                                                                                   | \$75,000 |

## Novo Nordisk-BBDC New Investigator Award

This award was established to support an independent scientist or clinician-scientist in the early stage of their career, 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 academic or research appointment. The 2025-2027 award recipient is:

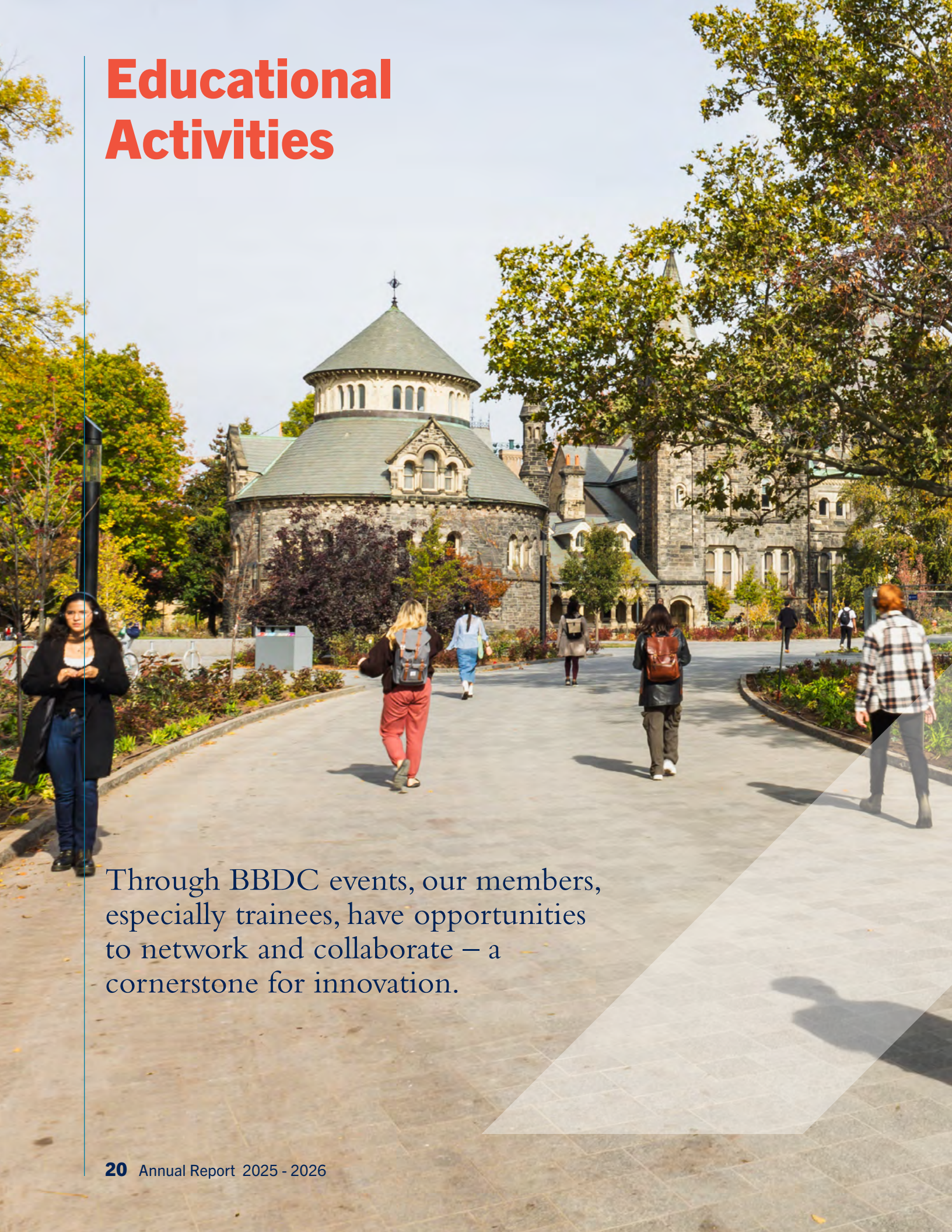
| Recipient      | Title of Research                                                                                  | Amount   |
|----------------|----------------------------------------------------------------------------------------------------|----------|
| Kacey Prentice | Determining the role of Nucleoside Diphosphate Kinase (NDPK) in the development of Type 1 Diabetes | \$90,000 |

## Novo Nordisk-BBDC 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 2025/2026 grant recipients are:

| Recipient                          | Title of Research                                                                                                                  | Amount   |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------|
| Cynthia Luk                        | The anatomy of adipose tissue and alterations with cardiometabolic disease                                                         | \$40,000 |
| Tara MacDonald<br>Sara Vasconcelos | Developing a novel multi organ-on-a-chip device to study muscle-adipose crosstalk in health, T2D-like and exercise states in vitro | \$40,000 |

# Educational Activities



Through BBDC events, our members, especially trainees, have opportunities to network and collaborate – a cornerstone for innovation.

# Annual Scientific Day

This annual event provides an opportunity for BBDC members and their trainees to exchange scientific information and ideas to promote collaborative diabetes-related research activities. It also provides a valuable opportunity for BBDC trainees to network and present their research.

BBDC postdoctoral fellowship and graduate studentship recipients and select Patricia L. Brubaker Trainee Awards abstract submitters present posters of their work. This year's Charles Hollenberg Memorial Lecture was delivered by Mitchell A. Lazar, University of Pennsylvania. Jonathan Schertzer from McMaster University, and BBDC member Tara MacDonald co-judged selected posters for the Patricia L. Brubaker Trainee Awards competition. The event focuses on the latest diabetes research topics with both clinical and laboratory applications. Attendance is free for all BBDC members, their trainees and U of T endocrine residents.





## 35th Annual Scientific Day | Friday, May 8, 2026 | Old Mill, Toronto

### SESSION 1 Chair: Nicolette Stogios

- 8:40 Welcome and Opening Remarks: Tony Lam
- 8:45 Skeletal muscle DUPD1/DUSP29- a central mediator in obesity-associated metabolic diseases and colitis | Saurav Roy Choudhury (Supervisor: Alberto Martin)
- 9:00 Diabetes and vascular complications | Jason Fish
- 9:30 Dual incretin receptor signaling regulates inflammation and atherosclerosis | Rui Shang (Supervisor: Daniel Drucker)
- 9:45 Refreshments, poster presentations, and Patricia L. Brubaker Trainee Awards Competition poster judging by Jonathan Schertzer and Tara MacDonald

### SESSION 2 Chair: Amanda Oakie

- 11:00 Dissecting Epigenetic Mechanisms by which Undernutrition during Pregnancy Programs Metabolic Disorders in Subsequent Generations | Giacomo Furlan (Supervisor: Miguel Ramalho-Santos)

- 11:15 Preconception Lifestyle Intervention to Prevent Gestational Diabetes: The Healthy Life Trajectories Initiative (HeLTI) Trials | Ravi Retnakaran
- 11:45 Endothelial Organotypic Specification in Pancreatic Islet Cell Grafts | Sara Nunes Vasconcelos
- 12:15 BBDC Director's Report | Minna Woo
- 12:30 Lunch

### SESSION 3 Chair: Tony Lam

- 1:30 CHARLES HOLLENBERG MEMORIAL LECTURESHIP: Nuclear Receptor Regulation of Circadian Rhythms and Metabolism | Mitchell A. Lazar
- 2:30 Patricia L. Brubaker Trainee Awards presentations 2025/26 | Jonathan Schertzer and Tara MacDonald
- 2:40 Adjournment

## Advances in Diabetes Care



The Banting & Best Diabetes Centre hosts this educational conference every two years for primary and specialty physicians, allied care providers and health care trainees involved in diabetes education and management. The program focuses on the latest therapies, screens, and devices that are transforming diabetes care, and includes

engaging plenary lectures and small case-based breakout sessions by international and local experts. Since this is a biennial event, there was no conference in 2026. The next conference will be held in March 2027.

# BBDC Seminar Series

Each year the BBDC invites internationally renowned diabetes researchers to present their work at our Seminar Series. The seminars promote interaction and collaboration with BBDC researchers and trainees. Attendance is free and open to faculty, staff, students, and trainees at the University of Toronto and University of Toronto-affiliated institutions.

## Trainee-Speaker Meetings

Immediately after each seminar, trainees have the opportunity to meet with the visiting speakers for an hour in a small group setting. These informal meetings, led by a member of the BBDC Trainee Advancement and Development Committee, provide an excellent opportunity for trainees to interact with a leader in the field, build networks, gain insight into international research programs and different career trajectories, and engage with the speakers about their own research.

Our 2025/2026 guest speakers included:



### Novel Technologies and Treatments for Type 1 Diabetes

Ahmad Haidar, Ph.D.

Associate Professor, Department of Biomedical Engineering | McGill University



### CNS Regulation of Feeding Behaviors

Allison W. Xu, Ph.D.

Professor, Diabetes Center and the Department of Anatomy | Joseph and Vera

Long Foundation Endowed Professor in Diabetes and Obesity Research |

University of California, San Francisco



### Charting the molecular terrain of exercise – towards the goal of precision exercise health

Malene Lindholm, Ph.D.

Senior Research Engineer | Director, Human Molecular Athlete

Moonshot, Wu Tsai Human Performance Alliance | Stanford University

# Special Seminar — Mikael Rydén

In August 2025, we welcomed Dr. Mikael Rydén from the Karolinska Institute to Toronto to give a special seminar.



## Everything You Want to Know About Human Adipose Tissue

Mikael Rydén, M.D., Ph.D.

Professor, Clinical and Experimental Adipose Tissue Research | Director,  
Center for Clinical Metabolic Research in Diabetes | Head, Endocrinology Unit,  
Karolinska Institute | Senior Consultant, Endocrinology and Diabetology,  
Karolinska University Hospital

## Trainee Lab Seminars

In an effort to provide an enhanced training environment for trainees, the BBDC regularly hosts the *Trainee Lab Seminar Series*. The seminar series provides postdoctoral fellows, graduate students and residents with an opportunity to present their diabetes research to their peers in a moderated academic setting. The seminars are held in-person three times per year and focus on fundamental research. Each seminar includes presentations on a wide variety of topics to broaden trainees' exposure to different aspects of diabetes research. Attendance is free and open to all BBDC members, their trainees and U of T endocrine residents.



# Core Laboratory Services

25  
26

Mount Sinai Services provides high-quality laboratory assays and services at exclusive discounted rates to BBDC members. Under our current agreement, BBDC members receive preferential rates for laboratory services depending on the volume of samples processed. A partial list of assays and services provided by Mount Sinai Services is available on the BBDC's website or by contacting Mount Sinai Services directly:

## **Mount Sinai Services (MSS)**

Phone: (416) 586-4800 Ext. 8797

Fax: (416) 586-8589

Email: [client.service@mountsinaiservices.com](mailto:client.service@mountsinaiservices.com)

600 University Avenue  
6th Floor, Room 6-502  
Toronto, Ontario M5G 1X5



# Acknowledgements

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

- The dedicated members of our Executive Committee, 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
- Members of the BBDC and Department of Medicine who provided scientific reviews for the Drucker Family Innovation Fund Grants program this past year: Dana Philpott (Chair), Denise Belsham, Susan George, Rupert Kaul, Ana Konvalinka, and Warren Lee
- Everyone who participated in and supported our 35th Annual Scientific Day in May 2026
- Our 2026 Charles Hollenberg Summer Studentship program coordinator, Nicolette Stogios
- Author and science communicator, Krista Lamb
- Temerty Faculty of Medicine Advancement and UHN Foundation

## Our Supporters

The Banting & Best Diabetes Centre gratefully acknowledges endowed financial support from the following:

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

The Centre is also grateful to the following for contributions made in 2025/2026:

- Dexcom
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- Edwards Charitable Foundation
- The Estate of Pamela Anne Matthewson
- Lilly
- Novo Nordisk
- Sanofi
- UHN Foundation
- UHN Research Institute
- Individuals who have donated to the Banting & Best Diabetes Centre this past year.

The BBDC gratefully acknowledges the support of our major contributor:





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