



January 2018



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MARK YOUR CALENDAR

- 29th Annual Scientific Day
May 11, 2018
Old Mill, Toronto
- 5th BBDC-Joslin-UCPH Conference
Prevention of Beta Cell
Dysfunction in Type 1 and Type 2
Diabetes: Role of Inter-organ
Communication
October 26-27, 2018
Copenhagen, Denmark

BBDC News is distributed by e-mail in September, January and June of each year. Those who wish to advertise diabetes-related events or programs can contact us at diabetes.bbdc@utoronto.ca.

Sir Frederick Banting Legacy Foundation Travel Awards

Thanks to an annual contribution from the Sir Frederick Banting Legacy Foundation, the BBDC will be awarding additional trainee travel awards annually. As part of the BBDC's Trainee Travel Awards competition, two Sir Frederick Banting Legacy Foundation Travel Awards will be available each year to trainees travelling to a national or international meeting between January and June to present a first-author abstract. The collaboration between the BBDC and the Foundation is a testament to how organizations can work together toward a common goal of advancing diabetes research, education and care. We are grateful to the Foundation for their support.

Upcoming BBDC Events

5th BBDC-Joslin Diabetes Center-University of Copenhagen Conference Prevention of Beta Cell Dysfunction in Type 1 and Type 2 Diabetes: Role of Inter-organ Communication

October 26-27, 2018
Copenhagen, Denmark

Save the date! We are pleased to announce that the University of Copenhagen together with the BBDC and Joslin Diabetes Center will be hosting the 5th annual diabetes symposium on October 26 and 27, 2018 in Copenhagen. This event will bring together researchers of the Joslin Diabetes Center, the BBDC, the University of Copenhagen and other international research organizations to address the role of inter-organ communication in the prevention of beta cell dysfunction in Type 1 and Type 2 diabetes. These three organizations have long been at the heart of global diabetes research, and this meeting seeks to build on that storied tradition to bring together prominent researchers from across the globe and foster greater cross-institutional research in the field of diabetes. Information about the event will be provided in the coming months.

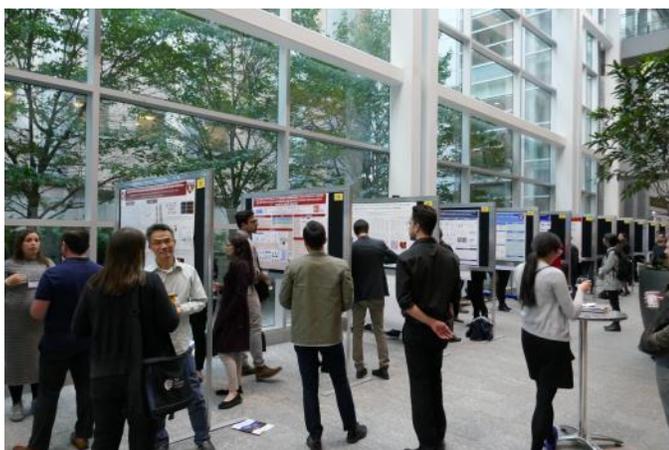
The BBDC would like to thank everyone who participated in the 4th Annual BBDC-Joslin-UCPH Conference as well as the Training Day Diabetes Challenge in Toronto in October 2017. Below are photos from the event. See our [Facebook](#) page for more photos.



Training Day hosted by the Danish Diabetes Academy



Dr. Gary Lewis welcomes all to the 4th annual conference



Trainees present their research during the poster session



Participants mingle at the conference dinner

BBDC Seminar Series

The BBDC will be hosting the following diabetes-related seminars which are held in conjunction with City-wide Endocrine Rounds. The seminars are held from 8 to 9 a.m. at the Mount Sinai Hospital, Lebovic Building, 60 Murray Street, 3rd floor conference room.

January 19, 2018 *Thermogenic Fat Metabolism in Mice and Humans*
Yu-Hua Tseng, PhD
 Associate Professor, Harvard Medical School
 Senior Investigator, Joslin Diabetes Center

March 23, 2018 *Chemical Approaches to Metabolic Diseases*
Pere Puigserver, PhD
 Professor of Cell Biology
 Dana-Farber Cancer Institute
 Harvard Medical School

Faculty who wish to meet with any of the speakers should contact Chris Sargent at chris.sargent@utoronto.ca. Graduate students and postdoctoral fellows will also have the opportunity to meet with visiting speakers in one-hour, informal group meetings specifically for trainees to discuss research and career-related topics. Attendance is open to graduate students and postdoctoral fellows whose supervisor is a member of the BBDC. The meetings will be held in the BBDC conference room. An invitation to meet with the speakers will be emailed to BBDC trainees (and their supervisors) approximately six weeks prior to each speaker's visit, and registrations will be accepted at that time.

Trainee Lab Seminar Series

This monthly seminar series is intended to provide trainees (residents, fellows and graduate students) and junior faculty with an opportunity to present their proposals and unpublished basic science research. Each month's seminar highlights a different BBDC-associated lab, with presenters selected from among each supervisor's trainees. Attendance is open to all BBDC members, their trainees, and U of T endocrine residents. Lunch will be provided. All seminars will be held in the Physiology Seminar Room A at the U of T Medical Sciences Building, 1 King's College Circle, room 3227. The schedule of speakers will be updated on the [BBDC website](#) as they become known.

Friday, January 26, 2018 12:00 – 1:00 p.m.	Wheeler Lab Presenter to be announced
Friday, February 23, 2018 12:00 – 1:00 p.m.	Hanley Lab Presenter to be announced
Friday, April 27, 2018 12:00 – 1:00 p.m.	Screaton Lab Presenter to be announced
Friday, May 25, 2018 12:00 – 1:00 p.m.	Adeli Lab Presenter to be announced
Friday, June 29, 2018 12:00 – 1:00 p.m.	Lam Lab Presenter to be announced

Clinical Research-in-Progress Rounds

This quarterly seminar series is intended to provide trainees (residents, fellows and graduate students) and junior faculty with an opportunity to present their proposals and unpublished **clinical and population-based diabetes research**. Attendance is open to all BBDC members, their trainees, and U of T endocrine residents. Lunch will be provided. All seminars will be held at Women's College Hospital, first floor, room 1441. Presentation titles will be updated on the [BBDC website](#) as they become known. Those interested in presenting their clinical research should contact Christina Yu, assistant to Dr. Lorraine Lipscombe, at christina.yu@wchospital.ca. Upcoming presenters include:

Friday, March 23, 2018 12:00 – 1:00 p.m.	Dr. Julie Lovshin Dr. Caroline Kramer
Friday, June 8, 2018 12:00 – 1:00 p.m.	Dr. Ilana Lega Dr. Yuliya Lytvyn (supervisor: Dr. David Cherney)

Other Upcoming Events

International Congress of Neuroendocrinology

July 15-18, 2018
Toronto, Canada

Join us for the International Congress of Neuroendocrinology at the Toronto Westin Harbour Castle July 15 - 18, 2018. The conference has a strong focus on metabolism and obesity, as well as stress, reproduction, timing, and behaviour. Some of our 14 plenary speakers include Drs. Jeffrey Friedman (leptin), Richard Palmiter (feeding), Masamitsu Nakazato (ghrelin/obesity therapeutics), Vincent Prevot (metabolism), and many more. The congress also includes 88 symposium speakers, as well as



opportunities for trainee presentations and professional development. Take advantage of the reduced early registration fee until April 6, 2018. Abstract submission is now open until January 26, 2018. Please visit the congress website at www.ICN2018.org for more information or contact Dr. Denise Belsham, LOC Chair at d.belsham@utoronto.ca.

Funding Opportunities

Annual Trainee Awards Competition 2017/2018

The BBDC invites graduate, undergraduate and medical students, postdoctoral and clinical fellows, and medical residents to submit an abstract of their diabetes-related research for this competition. The BBDC Training and Research Excellence Committee will screen all abstracts submitted. The top ten will be invited to present a poster at the BBDC Annual Scientific Day to be held on May 11, 2018. The ten posters will be co-judged by **Dr. Martin Myers, Jr., Editor-in-Chief of Diabetes** and a U of T faculty member (to be announced). The prize winners will be announced and prizes will be awarded at the end of the Scientific Day.

All 2017/2018 BBDC graduate studentship and postdoctoral fellowship recipients are expected to submit an abstract of their work for this competition. Trainees not funded by the BBDC are also invited to submit an abstract.

To be eligible, the trainee must be first author and the content of the abstract must be clearly and directly relevant to diabetes. The trainee must be either:

- a registered University of Toronto graduate, undergraduate or medical student
- a postdoctoral fellow having received a PhD within the last 5 years
- a medical resident or clinical fellow having received an MD within the last 9 years

The trainee's supervisor must hold a faculty appointment with the University of Toronto at the level of Associate, Assistant or Full Professor. The trainee's supervisor must be a registered member* of the BBDC at the time of abstract submission. **Applications must be received by 5 p.m., January 16, 2018.** For complete award details and application instructions, please see [our website](#).

Charles Hollenberg Summer Studentship Program 2018

Fourteen summer studentships are available for undergraduate and medical students to carry out summer research in diabetes under the supervision of a member of the Banting & Best Diabetes Centre. The goal of the program is to introduce undergraduate and medical students to the field of diabetes research and to encourage research in diabetes and its complications as a career. Students will be required to work full-time for a minimum of 12 weeks between May 1 and August 31, 2018. To be eligible, the proposed supervisor must hold a full-time faculty appointment with the University of Toronto at the level of Associate, Assistant or Full Professor and must be conducting diabetes research. The proposed supervisor must also be a registered member* of the BBDC at the time of application submission.

A list of supervisors who potentially have one or more positions available for a summer student is available on the [BBDC's web site](#). Students may also directly contact other faculty not on this list with whom they are interested in working to discuss the possibility of a summer position. Research profiles of BBDC members [can be found here](#). **Applications must be received by 5 p.m., January 23, 2018.** For complete award details and application instructions, please see [our website](#).

Postdoctoral Fellowships 2018/2019

BBDC Postdoctoral Fellowships

Hugh Sellers Postdoctoral Fellowship

BBDC Fellowships in Diabetes Care (Funded By Eli Lilly & Boehringer Ingelheim)

The Banting & Best Diabetes Centre will be awarding a number of postdoctoral fellowships to candidates at the post-PhD or post-MD degree stages. The one-year fellowships normally commencing on July 1, 2018 (and no later than September 1, 2018) are for full-time research training in diabetes. To be eligible, the candidate's proposed supervisor must be conducting diabetes research and must hold a faculty appointment with the University of Toronto at the level of Assistant, Associate, or Full Professor. The proposed supervisor must be employed by the University of Toronto or a University of Toronto-affiliated institution, and must be a registered member* of the BBDC at the time of application submission. Candidates must have received a doctoral degree (PhD) after July 2014, or a medical degree (MD) after July 2009 **and** must be within their first four years of postgraduate research training as of July 1, 2018.

Applications must be received by 5 p.m., February 13, 2018. For complete award details and application instructions, please see [our website](#).

Archie Sopman Diabetes Research and Education Awards 2018

(For University Health Network Employees)

This funding program is only open to University Health Network (UHN) staff physicians, dietitians, nurses, social workers, pharmacists, and scientists whose major job description involves diabetes research, diabetes education, or diabetes clinical care. Funding is available for travel to one diabetes-specific meeting occurring in the year 2018, or to support a visiting lecturer in diabetes or metabolic disorders visiting in the year 2018. To be eligible to apply, applicants must be employed by the UHN on a full-time or part-time basis. The principal applicant must also be a registered member* of the BBDC at the time of application submission. **Applications must be received by 5p.m., March 27, 2018.** For complete award details and application instructions, please see [our website](#).

Graduate Studentships 2018/2019

The Banting & Best Diabetes Centre is now accepting applications for the following graduate studentships:

- BBDC-Novo Nordisk Studentships
- Yow Kam-Yuen Graduate Scholarship in Diabetes Research
- Tamarack Graduate Award in Diabetes Research
- BBDC-University Health Network Graduate Awards

To be eligible, the applicant must be a registered full-time graduate student in the Faculty of Medicine or the Institute of Health Policy, Management and Evaluation, University of Toronto by August 31, 2018 and must be carrying out studies in diabetes research. The applicant must demonstrate financial need and must be either a Canadian citizen or have Permanent Residence status in Ontario by August 31, 2018. The student's primary supervisor must hold a faculty appointment with the University of Toronto at the level of Assistant, Associate, or Full Professor. The primary supervisor must also be a registered member* of the BBDC at the time of application submission. **Applications must be received by 5 p.m., March 27, 2018.** For complete details of each award and application instructions, please see [our website](#). Students need only submit one application to be considered for all awards.

Trainee Travel Awards 2017/2018 (Period 2) and Sir Frederick Banting Legacy Foundation Travel Awards

Awards of up to \$1,000 (Canadian) are available to trainees who will be traveling to a national or international meeting between January 1 and June 30, 2018 to present a first-author abstract. The content of the abstract must be directly relevant to diabetes. At the time of abstract submission to the meeting, the applicant must be either a:

- Registered University of Toronto graduate, undergraduate or medical student
- Post-doctoral fellow having received a PhD within the last 5 years

- Medical resident or clinical fellow having received an MD within the last 9 years

The applicant's supervisor must hold a faculty appointment with the University of Toronto at the level of Assistant, Associate or Full Professor and must also be a registered member* of the BBDC at the time of application submission. **Applications must be received by 5 p.m., April 17, 2018.** For complete award details and application instructions, please see [our website](#).

*Those who are new to the field of diabetes research, education or care and are not members of the BBDC can request free membership prior to submitting an application. For more information about BBDC Membership, please view the [Membership](#) section of our web site.

Funding Decisions**

4th BBDC-Joslin-UCPH Conference Abstract Competition

The following were selected to participate in the Danish Diabetes Academy Training Day Diabetes Challenge held in Toronto on October 19, 2017, and to present a poster at the 4th BBDC-Joslin-UCPH Conference on October 20-21.

Trainee	Supervisor	Title of Research
Scott Frendo-Cumbo	Dr. Amira Klip and Dr. John Brumell	Deletion of specific autophagy-related genes induces insulin resistance
Queenie Hu	Dr. Robert Sreaton	Identification of novel regulators of human pancreatic beta-cell proliferation using high-content functional RNAi screens
Javier Jaldin-Fincati	Dr. Amira Klip	Insulin signalling and insulin uptake into microvascular and lymphatic endothelial cells
Sareh Keshavarzi	Dr. Andrew Paterson	Meta Genome-Wide Association Study of Cardiovascular Disease in People with Type 1 Diabetes
Evan Lewis	Dr. Bruce Perkins	1-year of omega-3 supplementation stops the progression of diabetic sensorimotor polyneuropathy: results from a phase 2 trial
Lilia Magomedova	Dr. Carolyn Cummins	Hepatic ablation of the nuclear receptor coactivator ARGLU1, is protective against the development of type 2 diabetes and fatty liver in vivo
Zhila Semnani-Azad	Dr. Anthony Hanley	Longitudinal Associations of Soluble CD163 with Insulin Sensitivity and β -Cell Function: The Prospective Metabolism and Islet Cell Evaluation (PROMISE) Cohort
Priska Stahel	Dr. Gary Lewis	Evaluation of intranasal insulin effects on the regulation of lipoprotein production in healthy men
Elodie Varin	Dr. Daniel Drucker	Is DPP4 an hepatokine or an adipokine critical for the regulation of glucose homeostasis?
Julie Anh Dung Van	Dr. James Scholey	Dysregulated proteolytic processing of uromodulin reflects early tubular response to chronic hyperglycemia

The following were selected to present a poster at the 4th BBDC-Joslin-UCPH Conference on October 20-21, 2017 in Toronto.

Trainee	Supervisor	Title of Research
Battsetseg Batchuluun	Dr. Michael Wheeler	Elevated Medium Chain Acylcarnitines are Associated with Prediabetes and Induce Pancreatic β Cell Dysfunction
Cindy Bui	Dr. Jonathan Rocheleau	Imaging ApoB=NADP ⁺ to track NADPH dynamics in pancreatic β cells
William Cameron	Dr. Jonathan Rocheleau	Mitochondrial Targeting of ApoB-NADP ⁺ reveals that Palmitate-induced Toxicity in Beta-Cells Involves a Drop in Mitochondrial NADPH/NADP ⁺ Redox State
Sergi Clotet Feixas	Dr. Ana Konvalinka and Dr. James Scholey	Silac-based proteomics of Primary Human Renal Cells Reveals a Novel Link Between Male Sex Hormones and Impaired Energy Metabolism in Diabetic Kidney Disease
Jia-Xu Li	Dr. Carolyn Cummins	The potential role of LXR β antagonism in protecting brown adipose tissue from the chronic effects of glucocorticoid exposure
Yuliya Lytvyn	Dr. David Cherney	Plasma Uric Acid and Renal Function in Adolescents Compared to Adults with T1D for \geq 50 Years
Cigdem Sahin	Dr. Carolyn Cummins	The Novel PPAR Pan-Active Antagonist Derived from Cashew Nut Shell Liquid Ameliorates Dyslipidemia and Insulin Resistance in Diet-Induced Obese Mice
Sanja Visekruna	Dr. Linda McGillis and Dr. Monica Parry	A Preliminary Analysis of Parents' Perceptions of Cost Burden of Type 1 Diabetes Health Technologies
Alanna Weisman	Dr. Bruce Perkins	Effect of artificial pancreas systems on glycaemic control in patients with type 1 diabetes: a systematic review and meta-analysis of outpatient randomised controlled trials
Lucy Shu Nga Yeung	Dr. Adria Giacca and Dr. Jonathan Rocheleau	NOD1 Mediates Insulin Resistance in Response to Circulating Free Fatty Acid

**Trainee Travel Awards 2017/2018 (Period 1)
For Travel Occurring Between July 1 and December 31, 2017**

Recipient	Supervisor	Title of Research
Dana Al Rijjal	Dr. Michael Wheeler	Identifying Putative Bioactive Molecules in Fish Oil Supplements
Danielle Alvares	Dr. Khosrow Adeli	Neuregulin 4 (Nrg4) regulation of Hepatic Lipid and Lipoprotein Metabolism in the Hamster Model
Sergi Clotet Freixas	Dr. Ana Konvalinka	Proteomics and Systems Biology Analysis of Human Kidney Cells Reveals a Link Between Androgen-Induced Alterations in Renal Cell Metabolism and Circulating Metabolite Levels in Chronic Kidney Disease
Sareh Keshavarzi	Dr. Andrew Paterson and Dr. Angelo Canty	A Meta Genome-wide Association Study Identifies a Novel Locus for Cardiovascular Disease in Type 1 Diabetes

Alanna Rigobon	Dr. Catherine Yu	Impact of the Diabetes Canada Guidelines Dissemination Strategy on the Prescription of Vascular Protective Medications in Canada
Delnaz Roshandel	Dr. Andrew Paterson	A meta-genome-wide association study identifies multiple loci in the MHC region and a locus on chromosome 1 for serum C-peptide in type 1 diabetes
Zhila Semnani-Azad	Dr. Anthony Hanley	Determinants of Longitudinal Change in sCD163, a Biomarker of Adipose Tissue Macrophage Activation
Christopher Tait	Dr. Laura Rosella	The role of obesity in explaining the relationship between food security and incident type 2 diabetes: A population based study
Alanna Weisman	Dr. Bruce Perkins	Artificial pancreas compared to insulin pump therapy to glucose control in type 1 diabetes: a systematic review and meta-analysis of outpatient randomized controlled trials
Lucy Shu Nga Yeung	Dr. Adria Giacca and Dr. Jonathan Rocheleau	NOD1 Mediates Insulin Resistance in Response to Circulating Free Fatty Acid

****An essential condition of all BBDC programs is the acknowledgement of BBDC support, where appropriate, in all publications, presentations and communications relevant to the BBDC-supported research program. Failure to appropriately acknowledge the BBDC in relevant publications, presentations and communications will be considered grounds for suspending future eligibility for BBDC funding programs.**

BBDC Member Profile



Cynthia Luk, MD, PhD, FRCPC

Dr. Cynthia Luk is excited to join St. Michael's Hospital as a clinician scientist and staff endocrinologist. She is an Assistant Professor with the Department of Medicine, University of Toronto, and a Scientist with the Keenan Research Centre for Biomedical Science. Her research focuses on identifying novel links between obesity and diabetes, and determining the role of adipose tissue in metabolic syndrome, helping us better understand these conditions.

Dr. Luk grew up in Edmonton, Alberta and obtained her M.D. at the University of Alberta. She decided to diversify her clinical training by completing her internal medicine residency at McGill University in Montreal, Quebec. Then she came to the University of Toronto to complete her endocrinology and metabolism fellowship, and pursue diabetes and metabolism research.

Dr. Luk joined Dr. Minna Woo's lab to learn advanced approaches and techniques for the study of diabetes pathogenesis, and completed a PhD with the Institute of Medical Science. She also joined the University of Toronto Clinician Investigator Program and Eliot Phillipson Clinician Scientist Program. She was supported by BBDC Postdoctoral Fellowships and a Diabetes Canada Postdoctoral Fellowship.

Her thesis focuses on the role of focal adhesion kinase (FAK) and related cell survival signaling in adipocytes and in obesity and diabetes. FAK is thought to be important for tumor growth in the setting of cancer, but Dr. Luk showed that FAK increases in adipose tissue with obesity and insulin resistance, and disruption of FAK in fat results in insulin resistance via decreased cell survival and increased inflammation.

Dr. Luk's work will build on her expertise studying diabetes pathogenesis and adipose tissue to identify the novel role of signaling pathways in fat and their implications for diabetes and metabolic syndrome. She will study cell survival and fibrosis signaling pathways in fat and how they influence the diabetes development, helping us to better understand and potentially treat obesity and diabetes. She uses advanced mouse models of obesity and diabetes to better understand the role of molecular pathways in whole body physiology. Her clinical work focuses on the care of complex patients with diabetes.

On occasions when she's not thinking about diabetes, Cynthia loves to eat, travel, read books people have recommended and listen to CBC radio. She also tries to keep up with her four-month old son, Malcolm and husband, Boon (particularly when it comes to eating). She has occasionally been known to help the family cat, King Tut, with his Facebook page.

Director: Gary F. Lewis, MD, FRCPC

Banting & Best Diabetes Centre

Faculty of Medicine, University of Toronto

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

Phone: (416) 978-4656 • diabetes.bbdc@utoronto.ca • www.bbdc.org