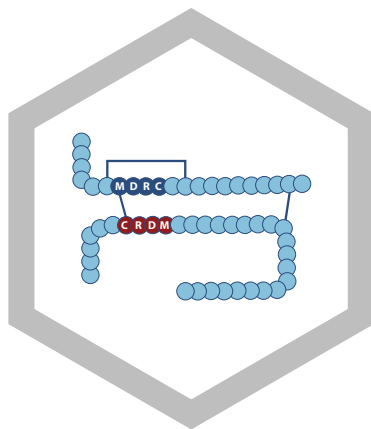


## MONTREAL DIABETES RESEARCH CENTER

*“Understand to prevent and cure”*



**Montreal Diabetes Research Center  
at the Technopôle Angus**

**Website: [www.mdrc.ca](http://www.mdrc.ca)**



# UNIQUENESS & STRENGTHS

- A scientific program that encompasses most aspects of diabetes research, from molecular biology to clinical investigations;
- A partnership in diabetes research between four major Universities (Montréal, McGill, Laval & Ottawa);
- A proven track-record of large-scale collaborative efforts;
- A major focus and expertise on the root causes of diabetes, defective insulin secretion and action;
- State-of-the-art core facilities funded through major CFI infrastructure grants;
- A high rate of success in peer-reviewed funding competitions in North America.

## RESEARCH PROGRAMS

Our research programs seek to integrate type 1 and type 2 Diabetes as well as their complications. They are structured around five major complementary themes:

### 1) Genetics of diabetes

- Type 1 and type 2 diabetes whole genome scans and candidate-gene studies

### 2) $\beta$ -cell growth and differentiation

- Regulation of  $\beta$ -cell proliferation & apoptosis
- $\beta$ -cell replacement and preservation of  $\beta$ -cell mass

### 3) Insulin secretion and action

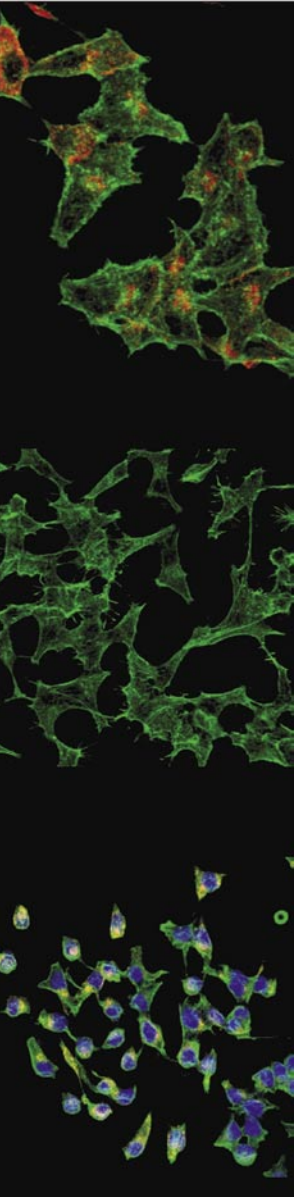
- Regulation of insulin secretion
- Mechanisms of insulin resistance

### 4) Anti-diabetic agents

- To enhance  $\beta$ -cell differentiation and preservation
- To stimulate insulin secretion and action
- Identification of active principles in anti-diabetic plants

### 5) Clinical research

- Large-scale clinical trials



# TRAINING AND DISSEMINATION OF KNOWLEDGE

We share a strong belief in training tomorrow's scientific leaders, actively promoting a wide dissemination of knowledge and encouraging extensive communication amongst the scientific community. As such, we have partnered with the industry leaders GlaxoSmithKline and Merck-Frosst Canada and have organized an outstanding seminar series. We also intend to offer formal courses in diabetes and have strong mentoring and fellowship programs. The Montreal Diabetes Research Center invites students and post-doc to be part of its research teams. Interested candidates should contact the administration at [MDRC@crchum.qc.ca](mailto:MDRC@crchum.qc.ca)



## THE CORE FACILITIES

MDRC seeks to provide researchers with the best resources possible to foster leading-edge research and collaborations. Hence, a number of key activities have been centralized into service cores to optimize the use of collective resources, and maximize the leverage power of our funds. These cores offer services to both MDRC researchers and the scientific community at large. Please contact [MDRC@crchum.qc.ca](mailto:MDRC@crchum.qc.ca) for more information.

### **Rodent Physiology**

- Diabetic rodent models
- Surgeries, organs and tissues collection
- Rodent islet isolation
- In-vivo tests (GTT, ITT clamps)
- Rodent phenotyping
- Organ perfusion (pancreas, heart and liver)

### **Cell Biology/Microscopy**

- Two-photon confocal imaging
- Fluorescence-activated cell sorting
- Ions, metabolites, growth and apoptosis assays

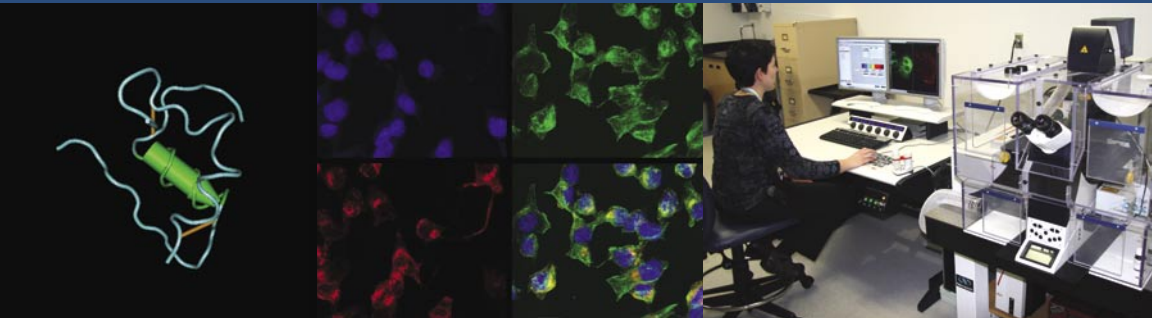
### **Clinical Research**

- Metabolic investigations in humans
- Nutritional interventions
- Lifestyle behavioural research

**SOON AVAILABLE**

### **Metabolomics**

- Metabolite identification and quantification
- HPLC, GC-MS and LC-MS/MS services



**The Montreal Diabetes Research Centre (MDRC)** was created in 2004 through a \$15.5 M infrastructure grant from the Canada Foundation for Innovation (CFI). Directed by Dr Marc Prentki, a leader in the field of pancreatic  $\beta$ -cell function, the MDRC groups more than 30 investigators dedicated to fundamental and clinical research in the fields of type I and type II diabetes (T1D & T2D), the metabolic syndrome, and the complications of diabetes. Their research spans multiple disciplines, from genetics to biochemistry, cell biology, immunology and clinical research.

Our ultimate mission is to improve patient care and clinical outcomes by fostering cutting-edge and multi-disciplinary research collaborations. MDRC provides enabling infrastructure, communication, and administrative support, as well as strategic and scientific leadership.

**For more information, contact us at**

Phone: 1-514-890-8000 x 23609  
or [MDRC@crchum.qc.ca](mailto:MDRC@crchum.qc.ca)

Visit our website at: [www.mdrc.ca](http://www.mdrc.ca)

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Centre de Recherche  
du Diabète de Montréal  
*Comprendre pour prévenir et guérir*



Montreal Diabetes  
Research Center  
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