

Dr. Ravi Retnakaran



CURE | CLINICAL RESEARCH

Project: Markers of Reversibility and Stabilization in Type 2 Diabetes

Thank you for your generosity. Diabetes Canada is grateful to our donors for supporting critical research that will end diabetes.

Through your support, Dr. Ravi Retnakaran, Professor of Medicine at the University of Toronto, endocrinologist and clinician-scientist at Mount Sinai Hospital, and the Boehringer Ingelheim Chair in Beta-Cell Preservation, Function and Regeneration is bringing us one step closer to helping people put their type 2 diabetes into remission.

In healthy individuals, blood sugars are controlled by a hormone called insulin, which lowers blood sugar levels. Insulin is produced by cells in the pancreas called beta cells. For people with type 2 diabetes, their beta cells can no longer produce enough insulin to control their blood sugars, which can lead to health complications. In people with type 2 diabetes, beta cell function gets worse over time, leading to the need for more and more diabetes medication.

Currently, there are no simple method to monitor beta cell function or dysfunction, despite its central role in diabetes. This barrier is particularly relevant for people who are interested in the possibility of diabetes remission – when through intensive intervention a person's long-term blood sugars are lowered below diabetic levels and stay lowered without continued need for medication for at least three months.

Dr. Retnakaran and his team are developing biomarkers as a method to measure beta cell function and whether dysfunction is reversible in type 2 diabetes. The team recently completed a large clinical trial involving remission in people with type 2 diabetes, and will use the data from this trial to identify proteins that can serve as biomarkers.

These biomarkers can inform decisions in the clinical management of early type 2 diabetes, including whether it is feasible for patients to target remission.