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For Immediate Release

CONTINUED RESEARCH FUNDING CRITICAL TO ARRESTING BC'S IMPENDING DIABETES EXPLOSION

Local research will help address epidemic in own backyard

VANCOUVER, BC (Nov. 30, 2010) – A diabetes explosion in BC recently forecast by the Canadian Diabetes Association's BC Diabetes Cost Model report means that advances in research are more vital than ever. Vancouver researcher Dr. Bruce Verchere knows first-hand the critical role continued research funding will play in helping arrest the alarming projections, including a 62 per cent increase in diabetes diagnoses in this province if no action is taken.

"Canadian Diabetes Association-supported researchers are working from coast-to-coast-to-coast to enhance our understanding of diabetes and its prevention, treatment and management," said Michael Cloutier, president and CEO of the Canadian Diabetes Association. "Thanks to their passion and commitment to the search for better treatments and a cure, life is at least getting easier for the rapidly increasing number of people living with diabetes."

Dr. Verchere is a professor in the UBC departments of pathology and laboratory medicine and surgery, head of the diabetes research program at the Child and Family Research Institute, and the Irving K. Barber chair in diabetes research. Funded for the past 12 years by the Canadian Diabetes Association and the Canadian Institute of Health Research (CIHR), Dr. Verchere's research has focused on gaining an understanding of how insulin-producing beta cells in the pancreas work and why they stop working in diabetes and after transplantation.

And as chair of the Canadian Diabetes Association's National Research Council and of the CIHR Diabetes, Obesity and Lipids (DOL) grant review panel, Dr. Verchere plays a deciding role in which researchers get grants.

"The competition for research grants has always been strong. As a result, it is not always possible to fund every excellent research project. The effect trickles down into the next year as those projects that were not funded the previous year have to reapply the following year, and compete against all of the other projects currently in competition," said Dr Verchere. "Despite the competition, this process motivates researchers to consistently bring forward compelling and innovative proposals. However, the need for continued funding is crucial in addressing the escalating diabetes epidemic."

Successful research projects recently conducted in BC

-A recent study showed that high levels of fat in the blood destroy insulin-producing beta cells in the pancreas by reducing a protein called CPE – a process that leads to type 2 diabetes. This is the first study to link the most important diabetes risk factor (obesity) to this important protein (CPE) that controls beta cell function and survival. Understanding the pathway of beta cell death in people with type 2 diabetes, how it is initiated and how it progresses, will lead to the design of new therapies for type 2 diabetes.

-Development and testing of a novel heart-specific drug delivery system that could help protect people with diabetes from heart disease. When a drug is attached to very small magnetic beads,

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the drug will localize specifically to the heart when a magnet is placed directly above it. These results show great promise for new ways to deliver drugs to specific places in the body where the drug is most needed, such as the heart or kidney.

Other research projects underway in BC

- A study of whether environmental factors, such as bacteria and viruses, lead to the development of type 1 diabetes. Following an infection, the body's immune system sometimes inappropriately targets its own cells, such as insulin-secreting beta cells. This research may lead to better treatment approaches and preventative tools for type 1 diabetes.
- An investigation as to whether turning off certain enzymes in the body protects insulin-producing cells from dying. This research may lead to new ways of treating type 2 diabetes.

Advances in diabetes research since the discovery of insulin in 1922

- Development and manufacture of human insulin in the 1980s.
- Development of home blood glucose monitoring devices and continuous improvement in glucose meters revolutionized diabetes management.
- Diabetes Control and Complications Trial (DCCT) involving more than 1,400 type 1 diabetes patients in the 1980s and 1990s was a landmark study that showed that diabetes complications can be reduced by excellent blood sugar control. Prior to the DCCT study, many physicians were skeptical of this fact.
- Advances in pancreas and islet cell transplantations with pancreas transplants now a reality for some patients also receiving kidney transplants.
- Many diabetes complications – such as infections, circulation blockage, and kidney, eye and nerve disease – are now very treatable as a result of great advances in research. Only a few years ago they would have spelled certain death for patients with diabetes.

About the Canadian Diabetes Association

Today, more than nine million Canadians live with diabetes or prediabetes. Across the country, the Canadian Diabetes Association is leading the fight against diabetes by helping people with diabetes live healthy lives while we work to find a cure. Our community-based network of supporters help us provide education and services to people living with diabetes, advocate for our cause, break ground towards a cure and translate research into practical applications. For more information, please visit diabetes.ca or call 1-800-BANTING (226-8464).

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