

For Immediate Release

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**B.C. researchers discover new target for beta cell attack  
First step for predicting and preventing diabetes in children**

**Vancouver** – Scientists at the BC Research Institute for Children's & Women's Health have identified a specific protein within the pancreas that is attacked by rogue white blood cells in children with type 1 diabetes. This discovery may lead to a simple blood test to distinguish who is at risk of developing type 1 diabetes.

"The immune system of those with type 1 diabetes attacks very specific proteins within the insulin-producing beta cells of their pancreas, to the point where it can no longer produce insulin," said Dr. Dina Panagiotopoulos, Endocrinologist at B.C.'s Children's Hospital.

"In those children with recently diagnosed type 1 diabetes, we observed an increase in the white blood cells attacking the specific protein we have identified. We know now to look for higher levels of these white blood cells in children identified as "at risk" for developing type 1 diabetes," said Panagiotopoulos, who is working with lead investigators Dr. Rusung Tan and Dr. Bruce Verchere of the research institute.

The team first demonstrated in January 2003 that tracking white blood cell levels is an accurate method of predicting diabetes in mice. Identifying the specific human proteins is a major step towards developing a blood test to predict which children will go on to develop diabetes, which will increase the likelihood of an early, effective treatment for diabetes.

"We've already proven this methodology works in mice. This research may eventually open the door to developing a vaccine to prevent type 1 diabetes in those determined to be at high risk," said Panagiotopoulos.

This research is appearing as a Rapid Publication in the November issue of the journal *Diabetes*. This research was made possible with funding from the Canadian Institutes of Health Research.

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