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The Transplant Transcriptome Project

Status	Current
Competition	Applied Genomics and Proteomics Research in Human Health
Sector	Health
Genome Centre	Genome Alberta
Project Leader	Philip Halloran

Project Description

Developing tests to detect and measure organ transplant rejection

Approximately 200,000 people in the USA and Canada are alive today because of organ transplants. However, despite recent progress in organ transplantation, the immune response to foreign tissue remains an obstacle to success. Powerful drugs are needed to prevent rejection. Also, better methods of detecting and measuring rejection are needed. The goal of the Diagnostic Applications of Microarrays in Organ Transplantation project is to develop tests that can determine when rejection is present and when it is not, so that patients can be managed more effectively, with fewer side effects.

The transplantation researchers work at the University of Alberta and the Capital Health Region, a regional health authority based in Edmonton. The Alberta Transplant Institute will conduct clinical and biological studies in transplant patients, in parallel with experimental studies, that will create new ways of looking at transplant patients to improve outcomes through more precise diagnosis. Their work will also aid in drug development by defining and measuring treatment mechanisms, some of which will be applicable to other organ diseases.

The potential benefits to Canadians resulting from this initiative include improved health for organ transplant recipients, opportunities for investment and patents, and extension of this powerful technology to other health problems involving organ diseases, with a goal of preventing organ failure and reducing the burden of chronic disease.