

## Normothermic Ex-Vivo Perfusion of Human Pancreases RESEARCH PROFILE

<b>Background</b>
<b>Brief Description of Program:</b> To assess the feasibility of utilizing normothermic ex vivo machine perfusion for the preservation of pancreas grafts and islet cell isolation. The goal of the research will be to optimize their conditions for graft and islet isolation with the goal of increasing organ utilization and improving transplant outcomes. A total of 40 grafts will be required.
<b>Program:</b> Pancreas Transplant Program, Multi-Organ Transplant Program, Toronto General Hospital, UHN
<b>Contact Person(s) &amp; Contact Information:</b> <b>Primary Contact:</b> Trevor Reichman. Cell: 416-518-3410 <b>Secondary contact:</b> Laura Mazilescu. Cell: 647-286-7734
<b>Offering Information:</b> <b>If both pancreas and pancreas for islets are declined for transplant in Ontario and nationally, pancreas will be offered <u>for research</u> in accordance with the following offering algorithm:</b> <ol style="list-style-type: none"> <li>1. Ex-Vivo Perfusion of Human Pancreases (Dr. Reichman)</li> <li>2. In Situ Investigation of Human Islet &amp; Exocrine Function &amp; Disease (Dr Gaisano)</li> <li>3. Edmonton research program (Islet Core)</li> </ol> <b>For #1 and #2, TGLN-CSC will offer the pancreas for research to TGH-MOTC who will coordinate with Dr Reichman and/or Dr. Gaisano.</b>
<b><u>Inclusion:</u></b> <ol style="list-style-type: none"> <li>1. Donors whose pancreas has been declined for transplantation, as well as cases in which the pancreas was accepted for transplantation at UHN but subsequently declined by the accepting surgeon.</li> <li>2. Donors must be &gt; 5 years old (no upper age limit)</li> <li>3. NDD/DCD donors</li> <li>4. Warm ischemic time &lt; 2 hours for DCD donors</li> <li>5. UHN abdominal recovery team recovering other organs to transplant into one or more UHN recipients</li> </ol>
<b><u>Exclusion:</u></b> <ol style="list-style-type: none"> <li>1. Acute Pancreatitis</li> <li>2. Active cancer (surgery, chemotherapy, radiation therapy, or palliative care within the past 5 years)</li> <li>3. Type 1 Diabetes</li> </ol>
<b>Recovery</b>
<b>Method:</b> Donor Pancreases will be recovered using standard technique as if they were being recovered for transplantation.
<b>Requirements for Perfusion:</b> TGLN SRC will package pancreas in standard solution on wet ice.
<b>Time Requirements:</b> Recovery of pancreas for research as per usual.
<b>Impact on Transplant/ Recovery Procedure:</b> Procedure does not change from normal recovery procedure.
<b>Effect on Body / Post-Mortem Care:</b> NA
<b>Consent Considerations:</b> Requires research consent from the donor NOK for pancreas.
<b>Recovery Personnel:</b> UHN abdominal recovery team. Credentialing: As per PRC database.
<b>Required Documentation:</b> As per usual documentation.
<b>Transportation:</b> UHN abdominal recovery team will deliver the pancreas to the TGH OR desk. The OR nurse will contact the TGH MOTC who will then contact Dr Reichman.