

nPOD

Network for Pancreatic Organ Donors with Diabetes

Program Update
Summer 2008

Welcome to our first e-newsletter!

You have been identified as someone whose professional interests include research that seeks to find a cure for type 1 diabetes. Our goal at nPOD is to support scientific investigators by providing them, without cost, rare and difficult to obtain tissues that may be beneficial to their research activities related to the disease. If you are already a partner of the nPOD project, we thank you for your support. If you are not, our hope is that you will assist us in our efforts to procure pancreata and related tissues to provide to our investigators.

Mark Atkinson, Ph.D.

nPOD Executive Director

What is nPOD?

nPOD is a pilot project funded by the [Juvenile Diabetes Research Foundation International \(JDRF\)](#). nPOD supports leading diabetes investigators around the world by providing tissue samples from organ donors with type 1 diabetes, from organ donors who have lived with type 1 diabetes for decades, and



from organ donors who test positive for type 1 diabetes-related autoantibodies but do not show clinical signs and symptoms of the disease.

Thanks to the generosity of donor

families, nPOD has provided tissue samples to over 16 leading diabetes investigators through August 2008. Based on the growing level of interest, we anticipate this number to grow rapidly. For further information regarding nPOD operations, including the process by which investigators can obtain access to tissues for research, please [email](#) us or visit our website at www.jdrfnpod.org.

nPOD supports type 1 diabetes research globally

One of the principal benefits of the nPOD project lies in its ability to support type 1 diabetes research wherever it takes



place. Each nPOD investigator examines the disease from a different vantage point. Some study the fundamentals of the autoimmune process in type 1 diabetes, others seek to understand the long-term effects of diabetes

on the insulin producing cells of the pancreas, and still others are attempting to unravel the process by which those cells are

Why would nPOD study organ donors with type 1 diabetes associated autoantibodies?

Type 1 diabetes is typically diagnosed after a significant number of the body's insulin-producing beta cells have been destroyed by the immune system and blood glucose levels can no longer be controlled. Indeed, the symptoms of type 1 diabetes occur many months to years following the initiation of this self-destructive or "autoimmune" process. Thanks to research efforts over the past three decades,



scientists have identified genetic markers that stratify individuals for their risk of type 1 diabetes, and have discovered several serum autoantibodies that can be detected in individuals during the pre-symptomatic stages of type 1 diabetes.

For decades, researchers have utilized tissues from type 1 diabetes patients *after* the onset of disease in order to understand why the disorder develops, and in attempts to find a cure. However, access to pancreatic tissue from autoantibody-positive donors (in other words, *before* symptoms occur) would allow nPOD investigators to better understand the progression to type 1 diabetes, and provide novel insights into the disease process *after* the autoimmune process has begun *but prior* to a diagnosis with type 1 diabetes. Ultimately, this information could help scientists literally "stop diabetes in its tracks" before its symptomatic onset.

Current nPOD tissue repository

In partnership with the nPOD network and, in particular, the [National Disease Research Interchange \(NDRI\)](#), the nPOD repository currently has organs and tissues from the following donors:

Individuals without type 1 diabetes (autoantibody negative)	26
Individuals with type 1 diabetes (0-25 years duration of disease)	14

destroyed. A complete list of the projects currently underway in Australia, Canada, Finland, the United Kingdom, and the United States is available on our [website](#). If you are a researcher interested in joining this expanding group of nPOD investigators, please contact us via [email](#).

The tissues we study

The nPOD network procures and retains the following organs and tissues within its repository:

- Pancreas
- Spleen
- Lymph nodes
- Pancreatic lymph nodes
- Peripheral blood

Depending on the investigator's needs, these organs and tissues are immediately shipped for analyses, or can be stored within the repository for later distribution. Samples are processed in a variety of ways including preparation of frozen and fixed sections (histology); fresh cells for in vitro and in vivo applications; cells for genomic and proteomic analysis; and more. For more information, please [contact us](#).

Joslin "Medalists" (those with type 1 diabetes >50 years)	1
Individuals who are autoantibody positive, but do not have type 1 diabetes	2

In our next edition of the nPOD e-newsletter

- *Learn about the scientific progress of nPOD studies*
- *Meet an nPOD investigator: Dr. Sally Kent, Brigham and Women's Hospital and Harvard Medical School*
- *Understand more about the organ procurement process*
- *Learn about nPOD funding opportunities*

Questions, comments, concerns?

Please contact the nPOD coordinator via email at npod@pathology.ufl.edu or by phone at (352) 846-3965.

For more information, please visit www.jdrfnpod.org.