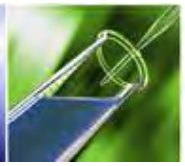



nPOD
Network for Pancreatic Organ Donors with Diabetes


March 2012 Issue 12

4th Annual nPOD Meeting

The Network for Pancreatic Organ Donors with Diabetes (nPOD), is a collaborative, type 1 diabetes project supported by the Juvenile Diabetes Research Foundation (JDRF). We held our 4th annual meeting for scientific investigators January 15-17th in Miami.

The meeting featured 95 attendees from 8 different countries; 49 oral presenters and 38 posters discussing:

- Viral etiology
- Autoantigens, T Cells and TCRs
- Heterogeneity of pancreas pathology and disease mechanisms
- Genetics and gene expression
- Emerging technologies and novel research avenues
- Pancreas and beta cell biology

Feedback from Attendees

- "The highest quality of speakers and participants. I loved the mixture of junior and senior presenters. There was plenty of time for questions."
- "nPOD is a great opportunity for the collaboration between groups with the aim of advancement in the study of T1D."
- "This is a highly collaborative project generating a valuable resource."

Average response for the overall rating of the meeting = **4.95** out of **5** stars!

For more information about the meeting, please see the nPOD Website.

Important OPO Updates

nPOD thanks our OPO partners for all you do for diabetes research. Please note below our updated donor inclusion criteria (or click on link for full information page).

What type of donor is sought by nPOD?

- Any donor with type 1 diabetes age 25 and under.
- Autoantibody positive with no clinical diagnosis of type 1 diabetes for **at least 2 or more** autoantibodies (GADAb, IA-2Ab, or ZnT8), **30 years old or less**
- Any donor with type 2 diabetes on Incretin therapy for AT LEAST 12 months. Please review records for *these* ***incretin drugs*****:**

  *Byetta/Exanatide *Januvia/Sitagliptin
  *Galvus/Vildagliptin *Onglyza/Saxagliptin
  *Tradjenta/Linagliptin *Victoza/Liraglutide
- Pancreas or pancreas/kidney **transplant recipient** with history (any duration) of T1D
- Diagnosis of rare disease, such as cystic fibrosis-related diabetes, Turner's Syndrome, Prader-Willi, gestational diabetes, and normal pregnancy

Why we updated criteria: On advice from our Advisory Committee, nPOD is currently focusing on tissues from *donors who are near to the onset of type 1 diabetes, especially preceding diagnosis*. Gifts from these donors help nPOD investigators understand disease pathways and help find a cure for type 1 diabetes.

For more information, please contact Jayne Moraski at jmoraski@pathology.ufl.edu or (352) 273-9271.

nPOD Viral Workgroup

nPOD has begun promoting the formation of self-assembled working groups focused on addressing key questions in type 1 diabetes.

Through nPOD coordinated discussions, investigators have formed a working group focused on the role of viruses in type 1 diabetes. The group has been named nPOD-Virus, or nPOD-V. Cooperative research could lead to further advances and the identification of novel

Investigator Spotlight

Dr. Suparna Sarkar is an Instructor at The Barbara Davis Center For Childhood Diabetes (BDC), University of Colorado Denver. She was awarded a JDRF fellowship during her postdoctoral years in Dr. John Hutton's laboratory at BDC.

Dr. Sarkar is also a recipient of a NIDDK Mentored Research Scientist Development Award (K01).

The use of nPOD tissues was critical in her recent collaborative work with Dirk Homann, MD (Sarkar et al., Diabetes, 2012, PMID: 22210319). This research integrated human islet culture system, murine models of virus-induced (RIP-LCMV) and spontaneous type 1 diabetes (NOD), and the histopathological examination of pancreata from diabetic organ donors with the goal of providing a foundation for the informed selection of potential therapeutic targets within the chemokine/ receptor family. CXCL10 was identified as the dominant chemokine expressed in vivo in the islet environment of prediabetic animals and type 1 diabetic patients.

nPOD—Transplantation

Thanks to generous JDRF support, nPOD has recently established the nPOD-Transplantation (nPOD-T) program. Building on the nPOD infrastructure, nPOD-T will collect tissues (transplanted and native pancreas, peripancreatic lymph nodes, spleen and peripheral blood) from patients with T1D who received a pancreas or pancreas/kidney transplants.

Specifically, nPOD-T plans to:

1) obtain donated organs/tissues from pancreas transplant recipients, post-mortem;

2) obtain biopsies of the *transplanted pancreas* and of the *native pancreas*, at the time of transplantation and/or on follow-up (in this case, based on reactivation of islet autoimmunity and or development of diabetes recurrence);

3) obtain retrospective pathology specimens from therapeutic targets through the shared and coordinated study of nPOD tissues.

Since last summer the group has been developing study plans based on a multidisciplinary approach, seeking cross-validation of results across platforms and to examine various aspects of detected virus and associated changes in the host tissue. Recognizing that these activities will require financial support, nPOD hopes to identify ways to fund this and other working groups in the future.

Stay tuned for more webinars and opportunities to participate in additional working groups targeted at key questions in diabetes research.

For more information on the viral working group or the formation of other groups, please contact Carmen Retrum by email at leahret@ufl.edu or by phone at 352-273-9296.

Welcome New Investigators

Congratulations to the following new nPOD Investigators:

- Reza Abdi & Marwan Mounayar – Brigham and Women's Hospital, Harvard University
- Vitaly Ablamunits, Kevan Herold, & Jasmin Lebastchi – Yale University
- Yuval Dor & Benjamin Glaser – Hebrew University of Jerusalem
- Abdel Hamad & Thomas Donner – Johns Hopkins University
- Richard Lloyd & Joseph Petrosino – Baylor College of Medicine
- Srinath Sanda – Benaroya Research Institute
- Antonio Toniolo, Andreina Baj, &Roberto Accolla – University of Insubria Medical School
- Shannon Wallet – University of Florida

pancreas transplant and native organ biopsies. The nPOD-T program will involve transplant centers at the University of Miami, Minnesota and Indiana. The transplant program in Miami has recently identified pancreas transplant patients with recurrent diabetes.

Tissues from transplanted patients should help nPOD investigators addressing questions of islet autoimmunity and pancreas regeneration/remodeling in both the native and transplanted pancreas. Expect updates as tissues becomes available in the near future.

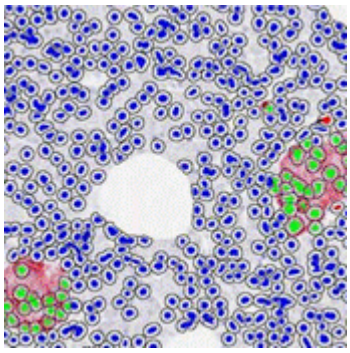
Farewell to Amy Wright, nPOD Investigator Relations Coordinator

We wish the best of luck to Amy as she leaves nPOD to get married. Congratulations Amy, we will miss you! Please contact Carmen Retrum with any questions or concerns you might have, including those for the Viral Workgroup. You can reach Carmen at leahret@ufl.edu or by phone at 352-273-9296.

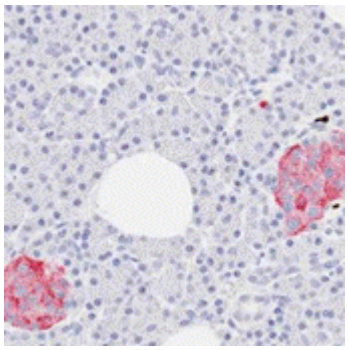
New Technologies at nPOD's Organ Processing and Pathology Core

The Organ Processing and Pathology Core (OPPC), located at the University of Florida, receives nPOD donor tissue directly from OPOs, processes the tissue, ships samples directly to investigators and stores case samples and data.

In addition to their normal array of tissue processing services, the OPPC recently added new image analysis programs that allow for clearer identification of cells within islets. This software is now part of the baseline histopathological characterization done by OPPC.



The software counts all cells and whether co-stained with insulin and/or Ki67.



Publications

Congratulations to the following investigators for their publications since our last newsletter:

Greiner, D. L., Brehm, M. A., Hosur, V., Harlan, D. M., Powers, A. C., & Shultz L. D. (2011). Humanized mice for the study of type 1 and type 2 diabetes. *Ann NY Acad Sci.*, 1245 (1):55-58.
[PubMed Abstract]

Sarkar, S. A., Lee, C. E., Victorino, F., Nguyen, T. T., Walters, J. A., Burrack, A., Eberlein, J., Hildemann, S. K., & Homann, D. (2011). Expression and regulation of chemokines in murine and human type 1 diabetes. *Diabetes*, Dec. 30. PMID: 22210319.
[PubMed Abstract]

Dai, C., Brissova, M., Hang, Y., Thompson, C., Poffenberger, G., Shostak, A., Chen, Z., Stein, R., & Powers, A. C. (2012). Islet-enriched gene expression and glucose-induced insulin secretion in human and mouse islets. *Diabetologia*, 55(3), 707-18.
[PubMedAbstract]

Coppieters, K. T., Dotta, F., Amirian, N., Campbell, P. D., Kay, T. W., Atkinson, M. A., Roep, B. O., & von Herrath, M. G. (2012). Demonstration of islet-autoreactive CD8 T cells in insulitic lesions from recent onset and long-term type 1 diabetes patients. *J Exp Med.,* 209 (1):51-60.
[PubMed Abstract]

LIAI Press Release (2012) -- Matthias von Herrath and Ken Coppieters. To view this release, please click here for a web version and click here for a PDF version.

Want to learn more about nPOD? Please contact the nPOD coordinator via email at npod@pathology.ufl.edu, or by phone at (354) 273-8277 during regular business hours. To refer a donor to nPOD please call our 24hr toll free referral line at (866) 731-6585 or contact IIAM if you are an OPO partner that refers through IIAM.