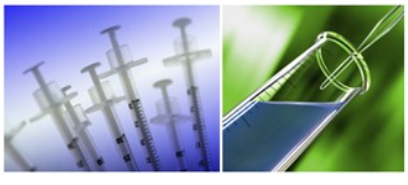


nPOD

Network for Pancreatic Organ Donors with Diabetes

March 2013 **Issue 16**

nPOD 5th Annual Meeting

The Network for Pancreatic Organ Donors with Diabetes (nPOD) held its *5th Annual Scientific Meeting* February 10-13, 2013 in Jacksonville, FL. With over 100 top diabetes researchers from around the world in attendance, the meeting featured new workshops where in-depth scientific discussions included the definitions of human insulitis; new collaborations in the field; and industry collaborations with researchers. The group also unveiled a new software program called DataShare that will allow newly formed working groups to share data more effectively.

Presentations covered many aspects of diabetes research. Importantly, several laboratories independently reported abnormalities in the pancreas of donors with single autoantibodies, despite the absence of the classical insulitis in the pancreas, suggesting the possibility of earlier abnormalities. The interactions among experts from different fields and the joint review of data from the same donor tissues is allowing a more integrated understanding of the interplay between disease mechanisms process and the response from beta cells, and ultimately a better understanding of the causes of this complex disease.

nPOD's grant through JDRF was recently extended through 2018 and the group is excited about the new partnerships created through this meeting. For more information on the nPOD project or the 2013 meeting, please visit www.jdrfnpod.org.

New Onset Cases and Your Hospital

In the fall of 2012, tragedy struck the family of a small child who had recently been diagnosed with type 1 diabetes. Once doctors realized they were unable to save the child, an astute attending physician that works with an nPOD investigator made a phone call. Eventually nPOD recovered this case. We want you and your staff to be aware of such rare cases and facilitate recoveries for nPOD research.

Background information on this type of recovery
nPOD currently works with all 58 accredited organ procurement organizations (OPOs) throughout the United States. The OPO in your region is notified of every death that occurs in that region.

Research consent must be obtained for every nPOD case. *nPOD does not have the ability to consent next of kin over the phone, so it is critical to involve either the OPO or hospital staff in the consent process.*

Step 1: We ask all nPOD investigators to talk to your local OPO and your area medical examiner (ME) *now*, instead of waiting for a case to occur. Let them know that even if a person is not a candidate for organ donation for transplant, donation to diabetes research may be possible and incredibly meaningful.

Step 2: If death is imminent for a recent onset type 1 diabetes case (recent onset is defined as any donor with type 1 diabetes disease duration for 7 years or less), please call your local OPO and mention nPOD. nPOD will work with OPO or hospital staff to facilitate recovery, through our 24/7 call line at 1-866-731-6585.

nPOD would like to provide a very short presentation about our research efforts to fellows at all hospitals where our approved investigators work. Please contact Jayne Moraski for more information.

OPOs: Save the date for October 8-10 Workshop

We would like to invite our OPO partners to nPOD's Fourth Annual OPO Workshop on October 8-10, 2013 at the University of Florida in Gainesville, Florida. Please consider sending your research director or one member of your recovery team that has yet to attend this workshop.

Goals of this workshop:

- Provide a deeper understanding of nPOD's type 1 diabetes research, and find ways that we can make referrals easier for YOU, our OPO partners.
- Increase donations to research and support CMS accreditation.
- CEUs are available.

Contact Jayne Moraski for more information.

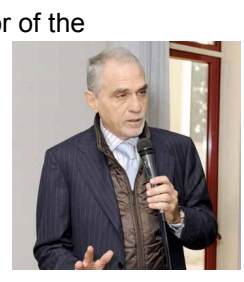
What types of donors are sought by nPOD?

- Any donor with type 1 diabetes age 30 and under.
- Any donor with **1 or more** autoantibodies to type 1 diabetes (GADAb, IA--2Ab, Or ZnT8), age 30 and under.
- Any donor with type 2 diabetes on incretin therapy for AT LEAST 12 months.
- 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 at time of demise.
- Donors with history of **bariatric surgery .**
- Donors with recent history of **pancreatitis or insulinoma.**

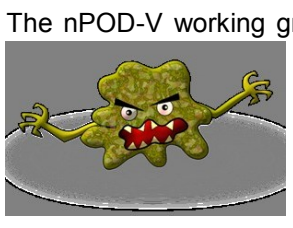
nPOD Sardinian Expansion

Sardinia has one of the highest rates of type 1 diabetes in the world. nPOD is now forming a partnership with Dr. Marco Songini and his team to recover pancreata from decedents with autoantibodies for the disease or from those with new onset diabetes.

Dr. Songini is Director of the Centre for Diabetes & Metabolic Diseases in Cagliari. Stay tuned for more information on this exciting new partnership.



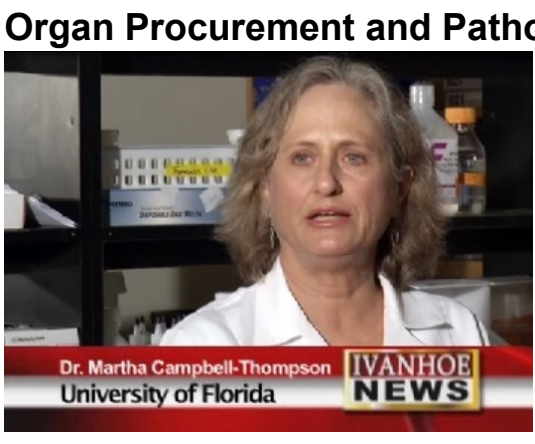
nPOD-V Update



The nPOD-V working group met for an afternoon during the nPOD Scientific Meeting on Tuesday February 12, from 4:30 to 6:00 PM in Atlantic Beach, Florida. The group is working to standardize protocols and generate reagents to move forward on all six tasks identified in the project.

They discussed cross-reactivity of antibodies and methods to distribute control specimens. They have regular calls for each task and are making progress on their core mission of investigating the role of viruses in type 1 diabetes. Many studies have linked enterovirus infection to islet autoimmunity and diabetes. Yet, many questions remain about which virus serotypes are linked to T1D, what type of infection they cause, and how this may contribute to the autoimmune process leading to diabetes. The availability of shared tissues from the same patients and their coordinated analysis provides unprecedented opportunity that investigations can be exhaustive and the most informative.

Organ Procurement and Pathology Core Update:



The last newsletter featured an article discussing pancreas weights by Dr. Campbell-Thompson et al *JAMA.* 2012;308(22):2337-2339. doi:10.1001/jama.2012.15008. [Link to Abstract].

The information in the article was recently featured on the Ivanhoe Broadcast News Network. They will be sending the story to various TV stations across the country soon.

To view the television story, click here. Congratulations to Dr. Campbell-Thompson and all of those involved in this exciting project.

nPOD Investigators from UCLA in the News

In research published online March 22 in the journal Diabetes, researchers from the Larry L. Hillblom Islet Research Center at UCLA and the Diabetes Center at the University of Florida found that cell mass was increased approximately 40 percent in the pancreas of deceased brain dead organ donors who had type 2 diabetes that had been treated by incretin therapy. Incretin therapy takes advantage of the action of the gut hormone glucagon like peptide 1 (GLP-1) to lower blood sugar in people with type 2 diabetes.

"There is an increasing appreciation that animal studies do not always predict findings in humans," said Dr. Peter Butler, director of the Larry L. Hillblom Islet Research Center at UCLA and chief of the Endocrinology, Diabetes and Hypertension unit.

The researchers examined the pancreas of 20 deceased human organ donors with type 2 diabetes. Pancreas of the individuals who had been on incretin therapy were larger than the organs from those who had been on other types of diabetes therapies, and was associated with increased cellular proliferation. Pancreas from incretin treated individuals also had an increase of pancreas dysplasia, an abnormal form of cell proliferation that is a risk factor for pancreatic cancer. The pancreas from incretin treated patients also had an expansion of alpha cells, endocrine cells that make the hormone glucagon. The latter finding is likely a consequence of the property of GLP-1 based therapy to suppress the release of glucagon by alpha cells, since decreasing the availability or action of the hormone glucagon has been shown in a variety of prior studies to induce a proliferation of pancreatic alpha cells. Of concern, the later has also been associated with the development of pancreatic neuroendocrine tumors. Three of the eight incretin treated individuals had microadenomas and one a neuroendocrine tumor composed of alpha cells.

"The present studies are only from a small number of individuals and while the findings do raise concerns, it will be important that other approaches are now used in a larger group of living individuals to further investigate these findings," he said..

For more information regarding these findings, please contact Enrique Rivero erivero@mednet.ucla.edu) or Melissa Lutz Blouin (melissa.blouin@ufl.edu).

Publications

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

In Print

Bollyky, P.L., Bogdani, M., Bollyky, J.B., Hull, R.L., Wight, T.N. (2012). The role of hyaluronan and the extracellular matrix in islet inflammation and immune regulation. *Curr Diab Rep.,* 12(5):471-80.

Yip, L., Creusot, R.J., Pager, C.T., Sarnow,P., Fathman, C.G. (2012). Reduced DEAF1 function during type 1 diabetes inhibits translation in lymph node stromal cells by suppressing Eif4g3. *J Mol Cell Biol,* [PubMed Abstract].

Abstracts/Orals

There were 35 abstracts submitted for the 2013 nPOD Annual Meeting. Thank you to all those that submitted and attended this event.

Korpos, É., N. Kadri, N, Kappelhoff, R. Overall, C., Weber, E., Holmberg, D., Cardell, S., Sorokin, L. (2012) The Role of the Extracellular Matrix in Leukocyte Infiltration into the Pancreas of Non-Obese Diabetic (NOD) Mice. 17th International Vascular Biology Meeting, Wiesbaden, Germany, 2012-poster presentation.

Korpos, É., N. Kadri, N, Reinhild Kappelhoff, R., Wegner, J., Overall, C., Weber, E., Holmberg, D., Cardell, S., Sorokin, L. (2012). The Peri-Islet Basement Membrane: a Barrier to Infiltrating Leukocytes in Type 1 Diabetes in Mouse and Human, 3rd Immunology Meeting Muenster, 2012-oral presentation.

Korpos, É., N. Kadri, N, Reinhild Kappelhoff, R., Wegner, J., Overall, C., Weber, E., Holmberg, D., Cardell, S., Sorokin, L. (2013) The Role of the Extracellular Matrix in Leukocyte Infiltration into the Pancreas of Non-Obese Diabetic (NOD) Mice . Meeting of German Society for Matrix Biology, poster presentation.

Want to learn more about nPOD? Please contact the nPOD coordinator via email at npod@pathology.ufl.edu, or by phone at (352) 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.To remove your name from our mailing list, please click here.