



nPOD DATASHARE

Accelerating Diabetes Basic Science Research



Welcome !

John S. Kaddis, PhD
City of Hope/Beckman Research Institute



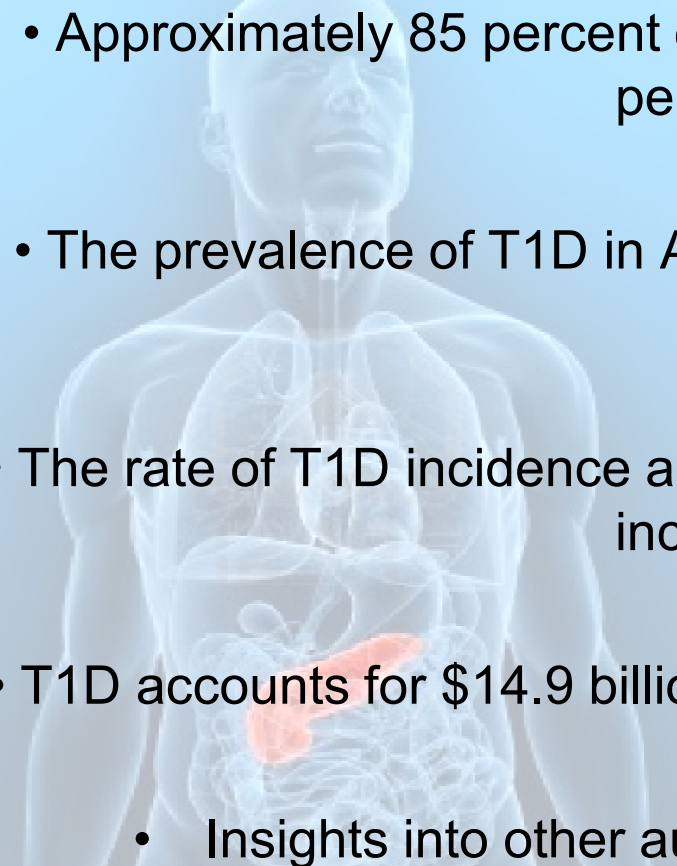
Les Jebson, MHA, FACHE, FACMPE, LHRM
University of Florida Diabetes Center of Excellence



TYPE 1 DIABETES

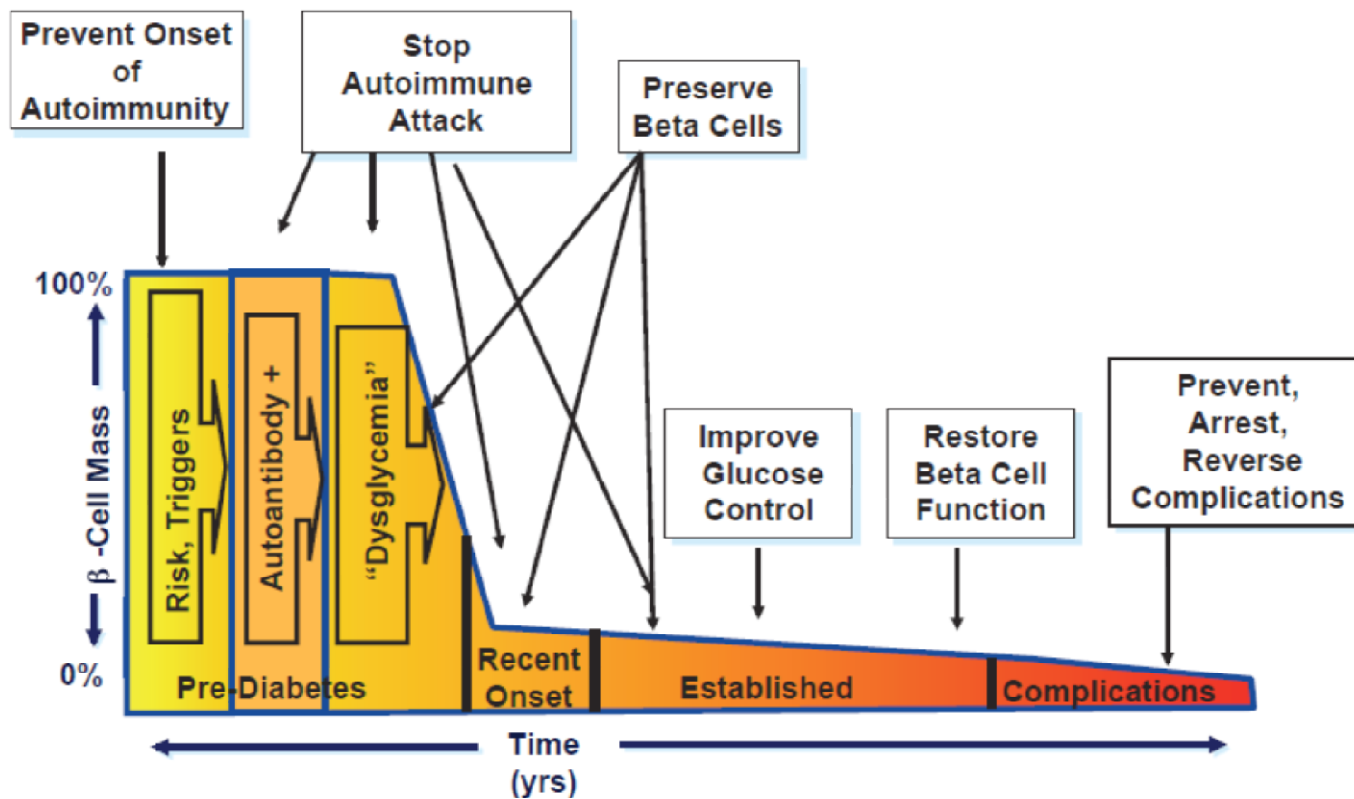
- Autoimmunity disorder, no relation to lifestyle – death of beta cell function in the pancreas
- Only 5%-7% of people with diabetes have type 1 diabetes
- As many as three million Americans may have T1D
- Each year, more than 15,000 children and 15,000 adults—approximately 80 people per day—are diagnosed with T1D in the U.S.

TYPE 1 DIABETES

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- Approximately 85 percent of people living with T1D are adults, and 15 percent of people living with T1D are children.
 - The prevalence of T1D in Americans under age 20 rose by 23 percent between 2001 and 2009.
 - The rate of T1D incidence among children under age 14 is estimated to increase by three percent annually worldwide.
 - T1D accounts for \$14.9 billion in healthcare costs in the U.S. each year
 - Insights into other autoimmune class disorders [Lupus, RA etc]

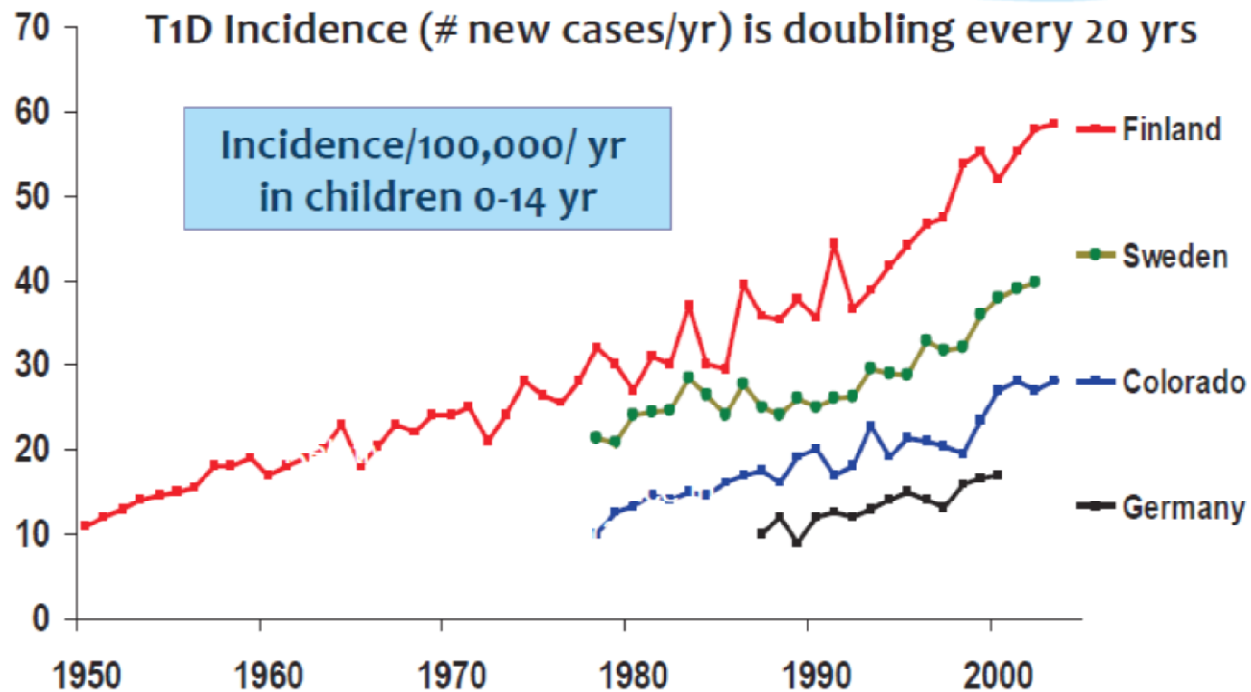
TYPE 1 DIABETES

Research Progress at All Stages of Type 1 Diabetes



TYPE 1 DIABETES

Incidence of Type 1 Diabetes Growing Worldwide

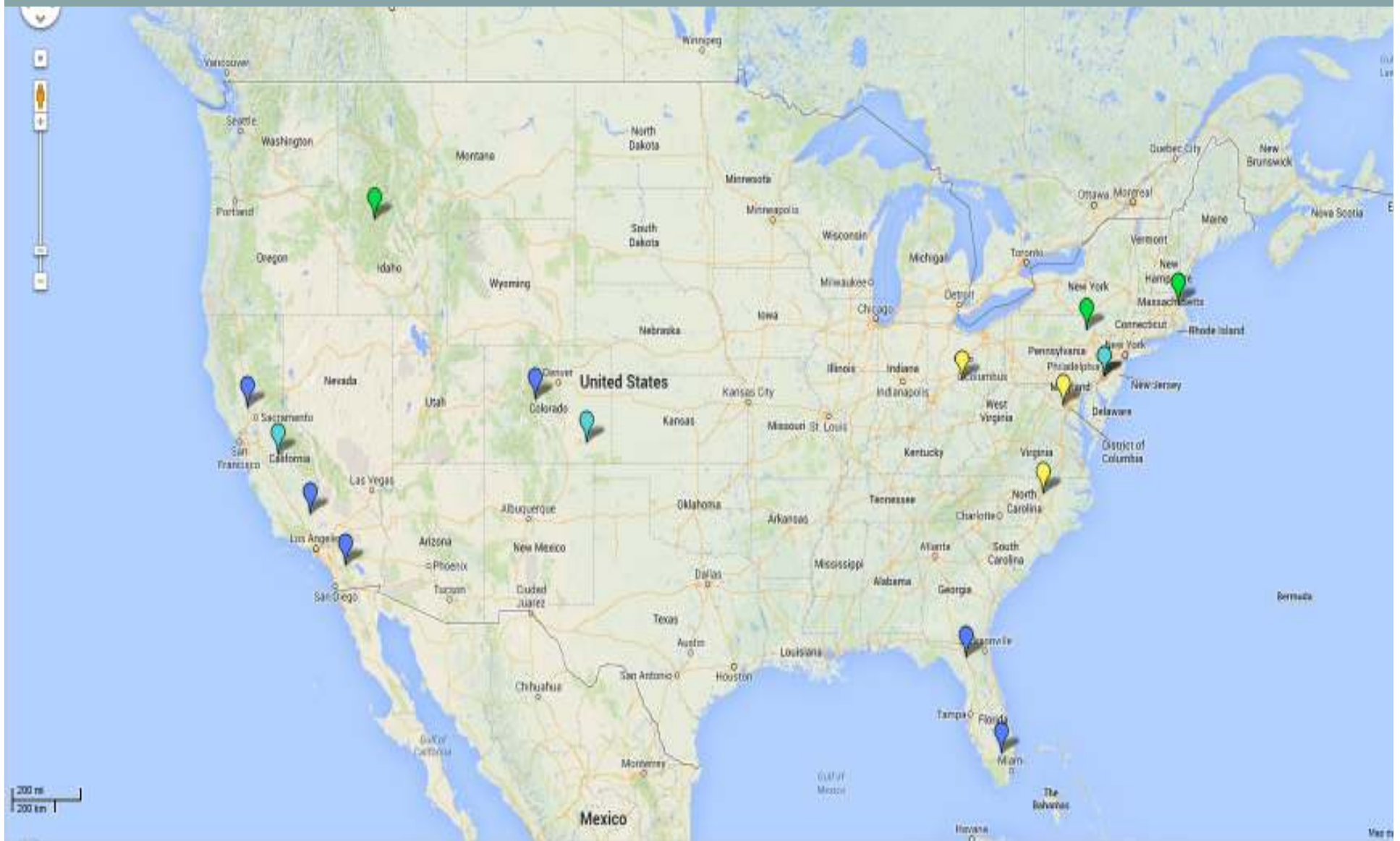




THE nPOD PROGRAM

- Founded in the last five years by faculty at DRI and UF.
- nPOD is a collaborative type 1 diabetes research project funded by The Juvenile Diabetes Research Foundation.
- The Administrative and Processing Cores are located on the campus of The University of Florida.
- We support scientific investigators by providing, without cost, rare and difficult to obtain tissues, coordinated research literature beneficial to their research.
- nPOD currently supports over 90 type 1 diabetes-related scientific studies at institutions around the world

PARTNERS

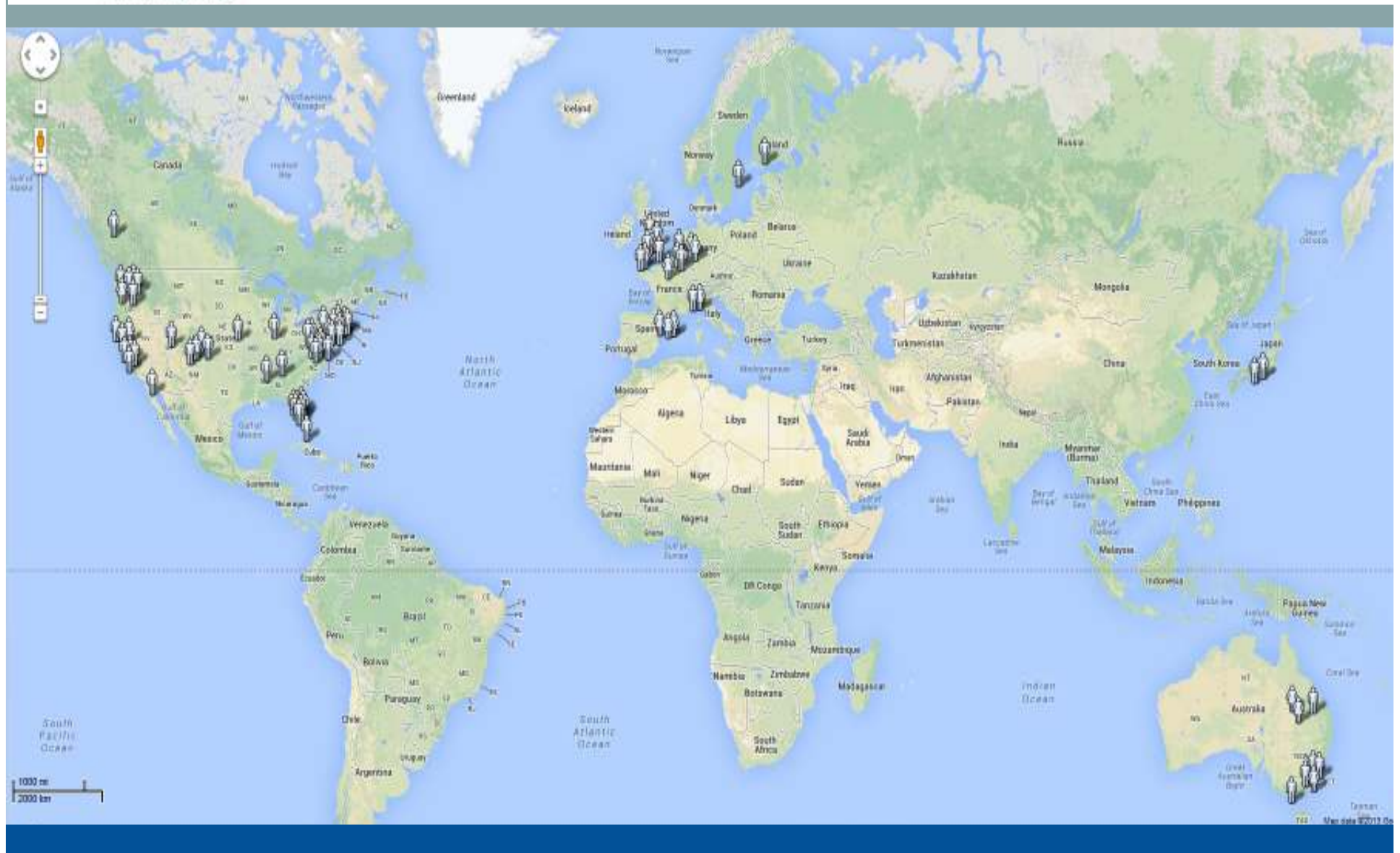


nPOD

Network for Pancreatic Organ
Donors with Diabetes

www.jdrfnpod.org

INVESTIGATORS





LabKey PARTNERSHIP

- **Sep 2011:** Attended Labkey User Conference
- Met Adam Rauch –
- **Sep 2012:** JDRF funding secured
- **Dec 2012 to Jan 2013:** **nPOD** **DATAshare** created and released to beta-testing group
- **Feb 2013:** nPOD annual meeting demo and feedback
- **June 2013:** Webinar training sessions



LabKey User
Conference 2013

SEPTEMBER 18 - 20, SEATTLE

fppt.com



BASIC REQUIREMENTS

1. Expedite Diabetes Research Discovery
2. Real-time Specimen Availability
3. Data Sharing/Aggregate Analysis
4. Confidentiality/Security
5. Workflow Consolidation
6. Future Growth





DataShare OVERVIEW



DataShare

[Home](#)[Admin](#) [Help](#) [John Kaddis](#)[Home](#)[Getting Started](#)

nPOD DataShare: Quick Guide



Welcome to nPOD DataShare. DataShare is an initiative by nPOD to address the growing need of supported investigators to collaboratively store, organize, analyze, and share data around common biospecimens received from the program. Given the appropriate permissions, all information in DataShare is available for download and analysis using built-in tools or custom programming languages such as SAS, R, Pythol, Perl, Java, and JavaScript. DataShare has been organized into the 3 below areas.



Case Reports & Research Data

Click on a CaseID to find other investigators who have received samples from a particular donor, learn more about research projects and published reports that include the selected case, view contributed pathology images, and access remaining tissue inventory.



nPOD Case Histories

Information, such as medical/lifestyle history, medications, autoantibody testing results, lab and assay data is available for use by clicking on the dataset of choice, reviewing prepared reports, or creating customized views.



Specimen Inventory

Search the entire donor inventory for real-time availability on all specimens in the biobank. Request tissues, slides, and/or cell samples for use in approved studies.

DataShare LIVE Tour

Home

Admin ▾ Help ▾ John Kaddis ▾

Home

Getting Started

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DataShare Future Plans

Short to Mid Term

- CSS customization
- Barcoding labels for samples
- Conversion of paper to e-based sample request
- Dataset diversity
 - MS, genotype, microarray, RNAseq, Images
- Outreach/effectiveness monitoring
- Custom scripting

Longer Term

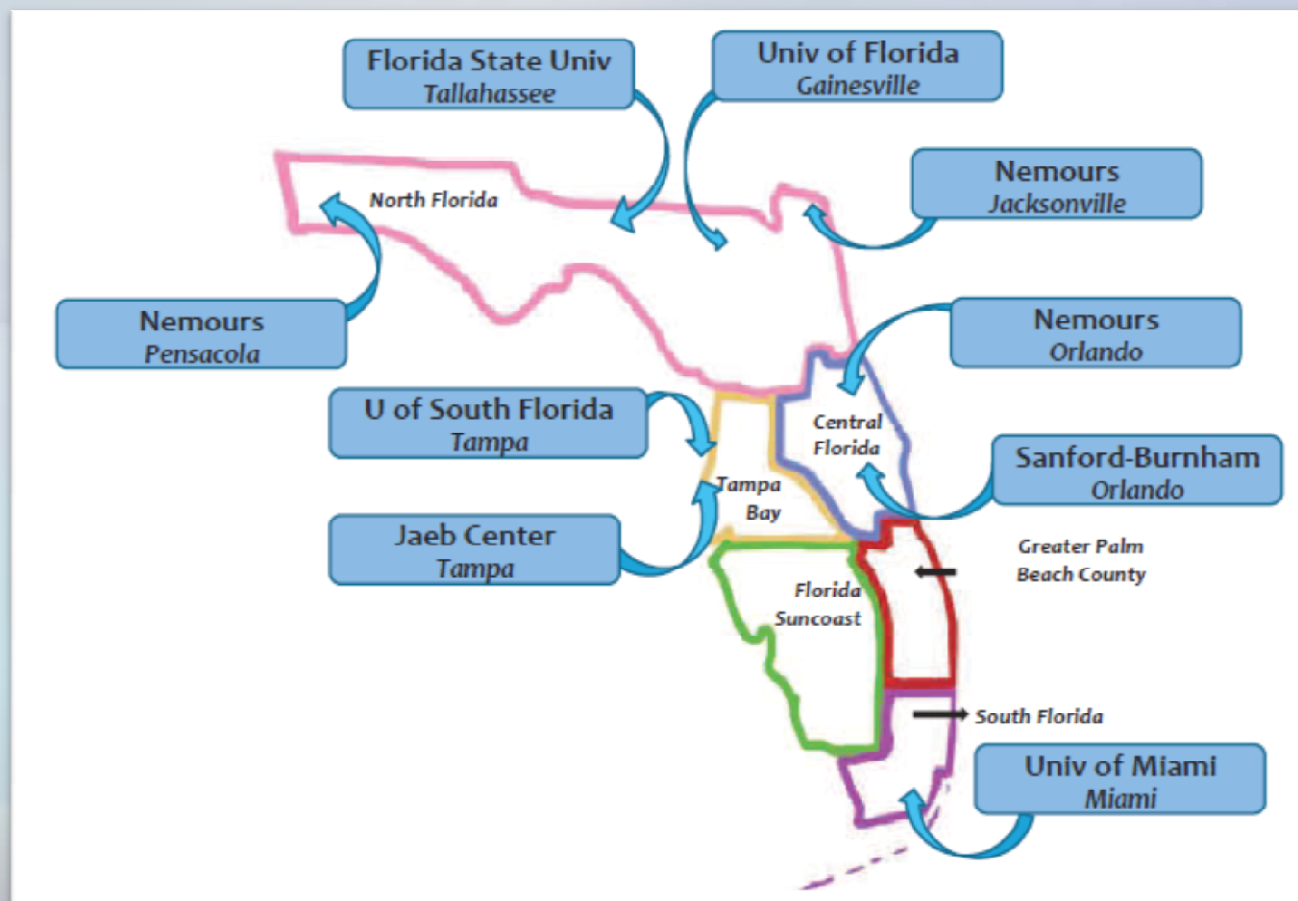
- Big data support
- Hosting environments
- e-based nPOD applications
- User base expansion
- Module/application development
- Reporting/data management



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THE FUTURE



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ACKNOWLEDGEMENTS

LabKey Software

- Adam Rauch, Nick Arnold, Rylan Bauermeister, Dave Bradlee

COH

- John Meng, Heather Sibley, Stacy Berger, Jenny Chuang

nPOD Core (U of F)

- Mark Atkinson, Alberto Pugliese, Suzy Ball, Jayve Moraski, Martha Campbell-Thompson, Irina Kusmartseva, Tiffany Heiple, Clive Wasserfall, Teresa Miller, Mingder Yang

nPOD Viral Work Group

- Ben Giepmans, Julius Nyalwidhe, Vincent Plagnol, Sally Kent, Dirk Homman, Sarah Richardson, Teresa Rodriguez Calvo

nPOD Investigators (early feedback)

- Todd Brusko, Howie Seay, Raphael Clynes, Maki Nakayama, Rick Lloyd

Immune Tolerance Network (ITN)

- Adam Asare, Tanya Antonille

JDRF

- Marie Concepcion, Teodora Staeva

