

Updated April 26, 2017

**OPPORTUNITIES FOR RESEARCH SUPPORTED BY THE SPECIAL STATUTORY FUNDING PROGRAM FOR TYPE 1 DIABETES RESEARCH: A WORKSHOP OF THE DMICC**

**April 26-27, 2017**

**5635 Fishers Ln., Conference Room, Rockville, MD 20852**

**AGENDA**

**APRIL 26**

- 8:00-8:10 am**                    **Welcome and Introduction**  
Dr. Griffin Rodgers, Director, NIDDK
- 8:10-8:30 am**                    **Overview of the *Special Statutory Funding Program for Type 1 Diabetes Research***  
Dr. Judith Fradkin, Director, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK
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**TOPIC 1: AUTOIMMUNE ETIOLOGY, CLINICAL TRIALS, AND EPIDEMIOLOGY**

**Primary Discussants:** Dr. Robert Eckel, Dr. Mark Espeland, Dr. Peter Gregersen, Dr. Jonathan Himmelfarb, Dr. Georgeanna Klingensmith, Dr. Rudolph Leibel, Dr. Megan Levings, Dr. R. John Looney, Dr. James Meigs, Dr. Trevor Orchard, Dr. Elizabeth Selvin, and Dr. Matthias von Herrath.

- 8:30-8:40 am**                    **Current Efforts in Autoimmune Etiology, Clinical Trials, and Epidemiology**  
Dr. Judith Fradkin, Director, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK
- 8:40-8:55 am**                    **Proposal 1-1: Mechanisms Underlying the Contribution of Type 1 Diabetes Disease-associated Variants**  
Dr. Beena Akolkar, Senior Advisor, Immunopathogenesis and Genetics of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Gregersen, Dr. Leibel**
- 8:55-9:15 am**                    **Proposal 1-2: Incidence of Type 1 Diabetes among Young Adults: Diabetes in Young Adults (DIYA) Study**  
Dr. Sharon Saydah, CDR USPHS, Senior Scientist, Division of Diabetes Translation, Centers for Disease Control and Prevention  
**Primary discussants: Dr. Meigs, Dr. Orchard, Dr. Selvin**
- 9:15-9:45 am**                    **Proposal 1-3: The Environmental Determinants of Diabetes in the Young (TEDDY)**
- **Proposal 1-3a: Continued Follow-up of TEDDY Subjects**
  - **Proposal 1-3b: Assessments of Toxins and Other Environmental Factors in TEDDY Subjects**
- Dr. Beena Akolkar, Senior Advisor, Immunopathogenesis and Genetics of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Espeland, Dr. Meigs, Dr. von Herrath**
- 9:45-10:00 am**                    **BREAK**

- 10:00-10:30 am**      **Proposal 1-5: Type 1 Diabetes TrialNet**  
 Dr. Lisa Spain, Program Director, Immunobiology of Type 1 Diabetes and Autoimmune Endocrine Diseases, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Eckel, Dr. Espeland, Dr. Looney**
- 10:30-11:00 am**      **Proposal 1-6: Immune Tolerance Network (ITN)**  
 Dr. James McNamara, Chief, Autoimmunity and Mucosal Immunology Branch, Division of Allergy, Immunology, & Transplantation, NIAID  
**Primary discussants: Dr. Eckel, Dr. Espeland, Dr. Looney**
- 11:00-11:15 am**      **Proposal 1-7: Immune System Engineering for Targeted Tolerance in Type 1 Diabetes**  
 Dr. Lisa Spain, Program Director, Immunobiology of Type 1 Diabetes and Autoimmune Endocrine Diseases, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Levings, Dr. Looney, Dr. von Herrath**
- 11:15-11:30 am**      **Proposal 1-8: The Characterization and Discovery of Novel Autoantigens in Type 1 Diabetes**  
 Dr. Salvatore Sechi, Program Director, Proteomics and Systems Biology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Gregersen, Dr. von Herrath**
- 11:30-11:45 pm**      **Proposal 1-9: Mass Spectrometric Assays for the Reliable and Reproducible Detection of Proteins/Peptides of Importance in Type 1 Diabetes Research**  
 Dr. Salvatore Sechi, Program Director, Proteomics and Systems Biology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Leibel, Dr. Levings**
- 11:45 am-12:30 pm**      **LUNCH**
- 12:30-12:45 pm**      **Proposal 1-10: Research Using Subjects from Selected Type 1 Diabetes Clinical Studies**  
 Dr. Lisa Spain, Program Director, Immunobiology of Type 1 Diabetes and Autoimmune Endocrine Diseases, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Eckel, Dr. Klingensmith, Dr. Selvin**
- 12:45-1:10 pm**      **TOPIC 1 PANEL DISCUSSION (led by primary discussants)**
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**TOPIC 2: BETA CELLS: ASSESSMENT AND THERAPIES**

**Primary Discussants: Dr. Mark Espeland, Dr. Michael German, Dr. Peter Gregersen, Dr. Jonathan Himmelfarb, Dr. Rudolph Leibel, Dr. Megan Levings, Dr. R. John Looney, Dr. Vincent Poitout, Dr. Robert Sherwin, Dr. Matthias von Herrath, and Dr. Joseph Wolfsdorf.**

- 1:10-1:20 pm**      **Current Efforts in Beta Cell Assessment and Therapy**  
 Dr. Judith Fradkin, Director, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK

- 1:20-1:40 pm**      **Proposal 2-1: Pre-Clinical and Clinical Evaluation of Novel Cell Replacement Therapies for Type 1 Diabetes**  
 Dr. Thomas Eggerman, Program Director, Clinical Islet Transplantation Trials, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
 Dr. Nancy Bridges, Chief, Transplantation Branch, Division of Allergy, Immunology, & Transplantation, NIAID  
**Primary discussants: Dr. German, Dr. Levings, Dr. Wolfsdorf**
- 1:40-1:55 pm**      **Proposal 2-2: Development of New Technologies and Bioengineering Solutions for the Advancement of Cell Replacement Therapies for Type 1 Diabetes**  
 Dr. Guillermo Arreaza, Program Director, Clinical Immunology of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Poitout, Dr. Sherwin**
- 1:55-2:15 pm**      **Proposal 2-3: Nonhuman Primate Transplantation Tolerance Cooperative Study Group (NHPCSG)**  
 Dr. Kristy Kraemer, Section Chief, Transplantation Basic Sciences, Division of Allergy, Immunology, & Transplantation, NIAID  
**Primary discussants: Dr. Levings, Dr. Sherwin, Dr. von Herrath**
- 2:15-2:30pm**      **Proposal 2-4: High-resolution Exploration of the Human Islet Tissue Environment**  
 Dr. Olivier Blondel, Program Director, Endocrine Systems Biology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. German, Dr. Poitout**
- 2:30-2:40pm**      **BREAK**
- 2:40-2:50pm**      **Overview of the Human Islet Research Network (HIRN)**  
 Dr. Olivier Blondel, Program Director, Endocrine Systems Biology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK
- 2:50-3:10pm**      **Proposal 2-5: HIRN Consortium on Human Islet Biomimetics (CHIB)**  
 Dr. Sheryl Sato, Program Director, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Himmelfarb, Dr. Poitout**
- 3:10-3:30pm**      **Proposal 2-6: HIRN Consortium on Modeling Autoimmune Interactions (CMAI)**  
 Dr. Kristin Abraham, Senior Advisor, Model Systems and Resources, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Gregersen, Dr. Looney, Dr. Poitout**
- 3:30-3:50pm**      **Proposal 2-7: HIRN Consortium on Targeting and Regeneration (CTAR)**  
 Dr. Olivier Blondel, Program Director, Endocrine Systems Biology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. German, Dr. Poitout**
- 3:50-4:10pm**      **Proposal 2-8: HIRN Human Pancreas Analysis Program (HPAP)**  
 Dr. Olivier Blondel, Program Director, Endocrine Systems Biology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. German, Dr. Leibel**

- 4:10-4:30pm**            **Proposal 2-9: Discovery of Early Type 1 Diabetes Disease Biomarkers in the Human Pancreas (HIRN Consortium on Beta Cell Death and Survival [CBDS])**  
 Dr. Olivier Blondel, Program Director, Endocrine Systems Biology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. German, Dr. Himmelfarb**
- 4:30-4:50pm**            **Proposal 2-10: HIRN Data Coordinating Center (DCC)**  
 Dr. Kristin Abraham, Senior Advisor, Model Systems and Resources, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Espeland, Dr. Leibel**
- 4:50-5:15pm**            **TOPIC 2 PANEL DISCUSSION (led by primary discussants)**
- 5:15-5:45pm**            **DAY ONE CLOSING DISCUSSION (led by Dr. Fradkin)**

**APRIL 27**

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**TOPIC 3: DIABETES COMPLICATIONS**

**Primary Discussants: Dr. John Buse, Dr. Nigel Calcutt, Dr. Robert Eckel, Dr. Mark Espeland, Dr. Thomas Gardner, Dr. Jonathan Himmelfarb, Dr. James Meigs, Dr. Trevor Orchard, and Dr. Elizabeth Seaquist.**

- 8:00-8:10 am**            **Current Efforts in Diabetes Complications**  
 Dr. Judith Fradkin, Director, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK
- 8:10-8:25am**            **Proposal 3-1: The Impact of Type 1 Diabetes Mellitus on the Skeleton**  
 Dr. Saul Malozowski, Program Director, Endocrinology and Physiology, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Buse, Dr. Seaquist**
- 8:25-8:55am**            **Proposal 3-2: Diabetic Retinopathy Clinical Research Network (DRCR.net)**
- **Proposal 3-2a: Continuation of DRCR.net**  
 Dr. Frederick Ferris, III, M.D., Clinical Director, Division of Intramural Research, NEI
  - **Proposal 3-2b: DRCR.net Evaluation of Fenofibrate for Prevention of Diabetic Retinopathy Worsening**  
 Dr. Emily Chew, Deputy Director, Division of Epidemiology & Clinical Applications, NEI
- Primary discussants: Dr. Buse, Dr. Eckel**
- 8:55-9:10am**            **Proposal 3-3: Periodontitis and Oral Wound Healing in Type 1 Diabetes**  
 Dr. Jane Atkinson, Director, Center for Clinical Research, NIDCR  
**Primary discussants: Dr. Calcutt, Dr. Meigs, Dr. Orchard**
- 9:10-9:25am**            **Proposal 3-4: Building a Cellular and Molecular Atlas of Diabetic Skin and Wounds**  
 Dr. Aaron Pawlyk, Program Director, Diabetes and Endocrine Disease Translational Research, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Calcutt, Dr. Gardner, Dr. Himmelfarb**

<b>9:25-9:40am</b>	<b>Proposal 3-5: Establishing a Cohort to Clarify Risk and Protective Factors for Neurocognitive Complications of Pediatric and Adolescent Type 1 Diabetes</b> Dr. Luke Stoeckel, Program Director, Cognitive and Clinical Neuroscience of Obesity and Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK <b>Primary discussants: Dr. Espeland, Dr. Orchard, Dr. Seaquist</b>
<b>9:40-9:55am</b>	<b>Proposal 3-6: Development of Tissue Chip and Organoid Models for the Study of Kidney and Urological Complications of Type 1 Diabetes</b> Dr. Daniel Gossett, Program Director, Division of Kidney, Urologic, & Hematologic Diseases, NIDDK <b>Primary discussants: Dr. Calcutt, Dr. Himmelfarb</b>
<b>9:55-10:15am</b>	<b>TOPIC 3 PANEL DISCUSSION (led by primary discussants)</b>
<b>10:15-10:30am</b>	<b>BREAK</b>

#### **TOPIC 4: CLINICAL MANAGEMENT**

**Primary Discussants: Dr. Korey Hood, Dr. David Marrero, Dr. Deborah Wiebe.**

<b>10:30-10:40am</b>	<b>Current Efforts in Clinical Management</b> Dr. Judith Fradkin, Director, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK
<b>10:40-10:55am</b>	<b>Proposal 4-1: Impact of the Use of Glucose Monitoring and Control Technologies on Health Outcomes and Quality of Life in Older Adults with Type 1 Diabetes</b> Dr. Guillermo Arreaza, Program Director, Clinical Immunology of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK <b>Primary discussants: Dr. Hood, Dr. Marrero, Dr. Wiebe</b>
<b>10:55-11:10am</b>	<b>Proposal 4-2: Patient Reported Outcomes in Type 1 Diabetes Research and Practice</b> Dr. Christine Hunter, Program Director, Behavioral Research, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK <b>Primary discussants: Dr. Hood, Dr. Marrero, Dr. Wiebe</b>
<b>11:10-11:25am</b>	<b>Proposal 4-3: Understanding Needs and Identifying Research Opportunities to Improve Treatment and Self-Management for Adults Living with Type 1 Diabetes</b> Dr. Christine Hunter, Program Director, Behavioral Research, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK <b>Primary discussants: Dr. Hood, Dr. Marrero, Dr. Wiebe</b>
<b>11:25-11:40am</b>	<b>TOPIC 4 PANEL DISCUSSION (led by primary discussants)</b>
<b>11:40am-12:20pm</b>	<b>LUNCH</b>

#### **TOPIC 5: ARTIFICIAL PANCREAS**

**Primary Discussants: Dr. John Buse, Dr. Georgeanna Klingensmith, Dr. Korey Hood, Dr. David Marrero, Dr. Robert Sherwin, Dr. Deborah Wiebe, and Dr. Joseph Wolfsdorf.**

- 12:20-12:30pm**            **Current Artificial Pancreas Efforts**  
Dr. Judith Fradkin, Director, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK
- 12:30-12:45pm**            **Proposal 5-1: Advanced Clinical Trials to Test Artificial Pancreas Device Systems in Type 1 Diabetes**  
Dr. Guillermo Arreaza, Program Director, Clinical Immunology of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Buse, Dr. Wolfsdorf**
- 12:45-1:00pm**            **Proposal 5-2: Clinical, Behavioral and Physiological Studies of Closed-loop Systems**  
Dr. Guillermo Arreaza, Program Director, Clinical Immunology of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Buse, Dr. Klingensmith, Dr. Wiebe**
- 1:00-1:15 pm**            **Proposal 5-3: Development and Integration of Novel Components for Open- and Closed-loop Hormone Delivery for Type 1 Diabetes Therapy**  
Dr. Guillermo Arreaza, Program Director, Clinical Immunology of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Hood, Dr. Marrero, Dr. Wolfsdorf**
- 1:15-1:30pm**            **Proposal 5-4: Support for SBIR Research to Develop New Therapeutics and Monitoring Closed-Loop Automated Technologies for Type 1 Diabetes**  
Dr. Guillermo Arreaza, Program Director, Clinical Immunology of Diabetes, Division of Diabetes, Endocrinology, & Metabolic Diseases, NIDDK  
**Primary discussants: Dr. Hood, Dr. Sherwin, Dr. Wolfsdorf**
- 1:30-1:45 pm**            **TOPIC 5 PANEL DISCUSSION (led by primary discussants)**
- 1:45- 2:00 pm**            **Patient Perspective**  
Ms. Ellen Leake, Vice Chairman, International Board of Directors, JDRF; NIDDK Council Member
- 2:00-3:00 pm**            **CLOSING DISCUSSION (led by Dr. Fradkin)**