**MIC 2024 Schedule of Events**

The University of Chicago

David Rubenstein Forum

1201 E. 60th St, Chicago, IL 60637

<https://drtc.bsd.uchicago.edu/mic-2024>

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| **Wednesday, July 10, 2024** |

**11:30 am – 1:00 pm Registration/Poster Set-Up/Lunch**

**1:00 pm Welcome and Introduction**

Raghu Mirmira University of Chicago

**1:15 pm – 1:45 pm Young Investigator Award Presentation/Talk**

Danielle Dean Vanderbilt University

**1:45 pm – 2:45 pm** **Session I. The Blueprints of β-Cell Maturity and Function**

 **Moderator: Michael Kalwat**

1:45 pm #28 Katy Matson Michigan Technological University

miR-483 deficiency induces β-cell dedifferentiation to α-cells

2:00 pm #72 Kelly Vazquez Wheaton College

Modulation of the biomechanical environment alters β-cell function and maturity

2:15 pm #45 Madison Thomas University of Pittsburgh

The acute knock out of glucagon in α-cells leads to impaired glucose homeostasis and β-cell dysfunction

2:30 pm #10 Jennifer Stancill Medical University of South Carolina

Thioredoxin reductase 1 is required for normal pancreatic β-cell function

**2:45 pm – 3:00 pm Break**

**3:00 pm – 4:15 pm** **Session II. Conductors of the Insulin Secretion Symphony**

 **Moderator: Katie Coate**

3:00 pm#63 Nathaniel York Washington University in St. Louis

Chronic KATP inhibition or depolarization results in decreased Ca2+-sensitivity of insulin secretion

3:15 pm #47 Ben Thompson University of Michigan

 Regulation of islet pulsatility by pyruvate dehydrogenase

3:30 pm #70 Ava Stendahl University of Michigan

Loss of the mitochondrial inorganic phosphate transporter impairs β-cell glucose-stimulated insulin secretion despite a maintenance of ATP levels

3:45 pm #78 Jade Stanley Vanderbilt University

SLC7A2-dependent arginine transport in α-cells signals arginine tone to regulate insulin secretion

4:00 pm #7 Shannon Townsend Washington University in St. Louis

Serotonin signals through the cilia-localized serotonin receptor 6 to stimulate β-cell autocrine insulin secretion

**4:15 pm – 4:30 pm Break**

**4:30 pm – 6:00 pm**  **Session III. Metabolic Matrix: Stress, Obesity, and Islet Health**

 **Moderator: Jing Hughes**

4:30 pm #86 Brian List Ohio University

Reducing glycolysis uniquely maintains normal islet function in chronic hyperglycemic conditions

4:45 pm #19 Luhui Zhang Mayo Clinic

Effects of diet-induced obesity on circadian regulation of β-cell function and islet circadian transcriptome in male and female mice

5:00 pm #74 Rashaun Williams Washington University in St. Louis

Impact of in vivo microenvironment on viability and function of transplanted islets

5:15 pm #42 Catharina Villaca Indiana University

Impaired on-demand protein synthesis drives β-cell dysfunction

5:30 pm #4 Molly Mulcahy University of Wisconsin-Madison

Cholecystokinin expression in islets under metabolic stress

5:45 pm #87 Christopher Acree Vanderbilt University

High-resolution mapping of glucose-derived 13C in pancreatic islets using MIMS-EM: Unraveling organelle interactions and metabolic flux

**6:00 pm – 7:00 pm Cocktail Hour**

**7:00 pm – 9:00 pm Dinner and Posters**

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| **Thursday, July 11, 2024** |

**8:00 am – 9:00 am Breakfast**

**9:15 am – 10:30 am** **Session IV. Cellular Crossroads: ER Stress and Inflammation**

 **Moderator: John Corbett**

9:15 am #38 Jacob Bartosiak Medical College of Wisconsin

IL-1β inhibits encephalomyocarditis virus (EMCV) replication in pancreatic islets

9:30 am #20 Erica Cai Indiana Biosciences Research Institute

Genome-scale *in vitro* CRISPR screens identify an ER export cargo protein as a mediator for β-cell stress response and autoimmune vulnerability

9:45 am #80 Renato Branco Indiana University

Knockout of ryanodine receptor 2 partially prevents tunicamycin-induced misfolded protein accumulation and β-cell death

10:00 am #6 Caterra Leavens University of Wisconsin-Madison

The β-cell “invisibility cloak” – Developing stem cell derived pancreatic β-cells that are protected from the immune system

10:15 am #69 Paul Sidlowski Medical College of Wisconsin

Bromodomain and extraterminal domain proteins in inflammatory activation of pancreatic islet resident macrophages

**10:30 am – 10:45 am Break**

**10:45 am – 12:00 pm** **Session V. Rewriting Diabetes: Innovations in T1D Research**

 **Moderator: Sarah Tersey**

10:45 am #61 Justin Choe Mayo Clinic

ST8Sia6 overexpression protects pancreatic β-cells from spontaneous autoimmune diabetes in NOD mice

11:00 am #39 Titli Nargis University of Chicago

Inhibition of 12-lipoxygenase modifies autoimmune diabetes pathogenesis and delays progression to hyperglycemia in human gene replacement mice

11:15 am #35 Matthew Austin Indiana University

Characterizing the role of autophagy in type 1 diabetes development

11:30 am #8 Alexander Hopkirk Vanderbilt University

Altered islet morphology and increased extracellular matrix deposition in type 1 diabetes

11:45 am #23 Charanya Muralidharan University of Chicago

Inhibition of the PERK (eukaryotic initiation factor 2α kinase) decreases risk of autoimmune diabetes in mice

**12:00 pm – 1:00 pm**  **Lunch**

**1:15 pm – 1:45 pm**  **Awards and Lacy Medal Presentation**

1:15 pmMidwest Islet Club Presentation and Poster Awards

1:30 pm Lacy Medal Lecture Introduction and Award

**1:45 pm 2024 Lacy Medal Lecture**

Rohit Kulkarni Harvard Medical School, Joslin Diabetes Center

**2:45 pm Closing Remarks**

*MIC Organizers*

**3:00 pm Meeting Adjourned**