



2021  
MID-ATLANTIC  
DIABETES AND  
OBESITY  
RESEARCH  
SYMPOSIUM

SEPTEMBER 24, 2021

Co-sponsored with the Mid-Atlantic Nutrition Obesity Research Center

Virtual Meeting



## Agenda

**Organizing Committee:** Stephanie Chung, Sam Cushman, Aaron Cypess, Oksana Gavrilova, Carol Haft, Michael Krashes, Barbara Linder, Ranganath Muniyappa, Connie Noguchi, Sushil Rane, Marc Reitman, Artie Sherman, Simeon Taylor (University of Maryland School of Medicine), and William Wong (Johns Hopkins University School of Medicine)

8:30 a.m. **Zoom Opens**

8:50 a.m. – 9:00 a.m. **Welcome and Introduction**  
*Marc Reitman, M.D., Ph.D., National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)*

### SESSION 1

*Moderator: Simeon Taylor, M.D., Ph.D., University of Maryland School of Medicine*

9:00 a.m. – 9:30 a.m. Contribution of Novel Mesenchymal Progenitor Cell Populations to Adipose Tissue Remodeling in Obesity  
*David Merrick, M.D., Ph.D., Perelman School of Medicine at the University of Pennsylvania*

9:30 a.m. – 9:45 a.m. Short-term Selective Restriction of Dietary Fat, But Not Carbohydrate, Increases Dopamine in the Human Brain  
*Valerie L. Darcey, Ph.D., M.S., RD, NIDDK*

9:45 a.m. – 10:00 a.m. A1 Adenosine Receptor Transcription Is Acutely Regulated in Adipocytes by FOXO1 to Alter Adenosine Control of Fatty Acid Metabolism  
*Mitchell E. Granade, M.S., Departments of Pharmacology and Medicine, University of Virginia*

10:00 a.m. – 10:30 a.m. The Endocannabinoid System as a Therapeutic Target in Diabetic Kidney Disease  
*George Kunos, M.D., Ph.D., Scientific Director, National Institute on Alcohol Abuse and Alcoholism*

10:30 a.m. – 10:45 a.m. **Break**

10:45 a.m. – 10:50 a.m. **Welcoming Remarks**  
*Griffin P. Rodgers, M.D., MACP, NIDDK*

10:50 a.m. – 11:30 a.m. **Blitz Group A (12 three-minute presentations)**  
*Moderator: Stephanie Chung, NIDDK*

11:30 a.m. – 11:45 a.m. Liver-specific Recovery of MC3R Partially Reduces the Severity of MC3R Deficiency Associated Obesity  
*Arad Jain, Eunice Kennedy Shriver National Institute of Child Health and Human*

*Development*

11:45 a.m. – 12:00 p.m. Phosphoglucosyltransferase 1 Deficiency Induces Hypoglycemia Due to Lower Threshold for Glucose-stimulated Insulin Secretion  
*Patrick M. Van Hoose, Ph.D., Division of Endocrinology and Diabetes, Children's Hospital of Philadelphia*

12:00 p.m. – 1:00 p.m. **Lunch**

**SESSION 2**

*Moderator: Marc Reitman, M.D., Ph.D., NIDDK, NIH*

1:00 p.m. – 1:30 p.m. The Importance of Epidemiology in Screening and Diagnosis of Diabetes  
*Elizabeth Selvin, Ph.D., M.P.H., Cardiovascular and Clinical Epidemiology, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health*

1:30 p.m. – 2:15 p.m. Blitz Group B (12 three-minute presentations)  
*Moderator: Aaron Cypess, NIDDK*

2:15 p.m. – 2:30 p.m. **Break**

**SESSION 3**

*Moderator: William Wong, Ph.D., Johns Hopkins University School of Medicine*

2:30 p.m. – 3:00 p.m. Addressing Social Determinants of Health in Diabetes  
*Sherita Golden, M.D., M.H.S., Hugh P. McCormick Family Professor of Endocrinology and Metabolism, Vice President, Chief Diversity Officer, Johns Hopkins Medicine*

3:00 p.m. – 3:15 p.m. Liquid-liquid Phase Separation (LLPS) Facilitates Insulin Granule Biosynthesis  
*Julia von Blume, Department of Cell Biology, Yale School of Medicine*

3:15 p.m. – 3:30 p.m. Vitamin D Supplementation Mitigates Adverse Effects of Canagliflozin on Biomarkers of Bone Health  
*Zhinous Shahidzadeh Yazdi, M.D., Department of Medicine, University of Maryland School of Medicine*

3:30 p.m. – 4:00 p.m. PLA2G12b: An Understudied Phospholipase-related Gene That Profoundly Regulates Vertebrate Lipoprotein Biology and Potentially Cardiovascular Risk  
*Steven Farber, Ph.D., Department of Embryology, Carnegie Institution for Science*

4:00 p.m. **Adjournment**

## Blitz Sessions

### Blitz Group A, Alphabetical order

- Modulation of Parenting Behavior by Hunger States  
*Ivan C. Alcantara, M.S.*
- Diabetes Distress, Daily Functioning, and Hemoglobin A1C in Older Black Individuals with Diabetes and Mild Cognitive Impairment  
*Navajyoti R. Barman*
- Short-term High Fat Diet Feeding Attenuates Hormone-induced IP3 Generation and Calcium Wave Propagation in the Liver  
*Paula J. Bartlett, Ph.D.*
- Lipoprotein Particle Distribution Suggests Increased Cardiovascular Risk in Patients with Lipodystrophy Compared with Insulin Receptoropathy  
*Brianna Brite*
- Sleep Fragmentation in a Mouse Model of MASH Exacerbates Fibrosis and Induces Phenotypic Changes in Liver Macrophages in An Age-dependent Manner  
*Ravin Fisher*
- EHD2 Deficiency Restricts Adipose Tissue Expansion and Impairs Lipolysis in Primary Inguinal Adipocytes  
*Claes Fryklund, Ph.D.*
- Model Disposition Index (mDI) during an OGTT Predicts Glucose Excursion of Continuous Glucose Monitor (CGM)  
*Joon Ha, Ph.D.*
- Growth and the Growth Hormone (GH)-IGF-1 Axis in Severe Insulin Resistance (IR)  
*Marinna Okawa*
- Immunomodulatory Effects of Colchicine on PBMC Subpopulations in Human Obesity: Data from a Randomized Controlled Trial  
*Tushar P. Patel, Ph.D.*
- The Effects of Housing Density on Mouse Thermal Physiology Depend on Sex and Ambient Temperature  
*Vojtěch Škop, Ph.D.*
- AgRP Neurons Coordinate the Mitigation of Activity-based Anorexia  
*Ames K. Sutton, Ph.D.*
- Beta-cell Failure Rather Than Insulin Resistance Is the Major Cause of Abnormal Glucose Tolerance in Africans: Insight from the Africans in America Study  
*Annemarie Wentzel, Ph.D.*

### Blitz Group B, Alphabetical order

- Effects of Oral Anti-inflammatory Treatments on Markers of Hepatic Inflammation and Whole-body Insulin Sensitivity in Obese Mice  
*Brooke Arner*
- Cell Cycle-dependent Mechanisms of Muscle Fiber Transition in Myogenesis, Movement, and Metabolism  
*Youngjae Bahn, Ph.D.*
- Chronic Stimulation of the  $\beta$ 3-Adrenergic Receptors via Mirabegron Increases Fatty Acid Oxidation Genes and Cellular Respiration in Human Brown Adipocytes  
*Cheryl Cero, Ph.D.*
- Conflicting Hunger with Self-preservation Behavior  
*Isabel De Araujo Salgado, Ph.D.*
- FINDRISC Identifies Diabetes Due to Insulin Resistance But Not  $\beta$ -cell Failure  
*M. Grace Duhuze-Karera, M.D.*

- Role of Macrophage-derived Transglutaminases on Adipose Tissue Expansion and Chronic Inflammation  
*Diana M. Elizondo, Ph.D.*
- PFOA Exposure Prior to Hepatocyte Differentiation Leads to Gene Expression Changes Implicated in Non-alcoholic Fatty Liver Disease  
*Stephanie Green, M.D., M.S.*
- Identifying the Neural Mechanisms Underlying High-fat Diet–induced Food Devaluation  
*Laura E. Mickelsen, Ph.D.*
- Modeling the Type 2 Diabetes-associated ABCC8 Arg1420His Mutation Using iPSC-derived Pancreatic Islet-like Cells  
*Anup K Nair, Ph.D.*
- Post-acute Infection of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV2) Leads to Chronic Renal Podocyte Damage  
*Seshagiri Rao Nandula, Ph.D.*
- Preoptic BRS3 Neurons Increase Body Temperature and Heart Rate via Multiple Pathways  
*Ramón A. Piñol, Ph.D.*
- NADPH Oxidase-1 Is a Key Mediator of Beta Cell Dysfunction Induced by Pro Inflammatory Cytokines  
*David A. Taylor-Fishwick, Ph.D.*