



CENTER FOR ENGAGEMENT IN DISABILITY
HEALTH AND REHABILITATION SCIENCES
The University of Alabama at Birmingham



NUTRITION OBESITY RESEARCH CENTER
The University of Alabama at Birmingham



CENTER FOR
EXERCISE MEDICINE
The University of Alabama at Birmingham

"Precision-the genes and beyond" Interdisciplinary Research Symposium

September 15 and 16, 2022
UAB Hill Student Center Ball Rooms
1400 University Blvd, Birmingham, AL 35294

THURSDAY, SEPTEMBER 15, 2022

7:30 – 8:15 a.m. **Registration & Breakfast**

8:30 a.m. **Welcome & Opening Remarks**

[Thomas Buford, PhD](#)

Professor, Gerontology, Geriatrics, and Palliative Care
Heersink School of Medicine
Director, UAB Center for Exercise Medicine
The University of Alabama at Birmingham

8:40 a.m.

Keynote Speaker: [Lauren Ptomey, PhD, RD, LD](#)

Associate Professor
Center for Physical Activity & Weight Management
Department of Internal Medicine
University of Kansas Medical Center

"Weight Management Intervention for Individuals with Intellectual Disabilities"

9:40 a.m.

Break

Session 1: Adherence and Behavior

9:45 a.m.

[Dorothy Pekmezi, PhD](#)

Professor, Health Behavior
School of Public Health
The University of Alabama at Birmingham

"Wearables & mHealth Technologies to Support Rural Populations in Physical Activity"

10:05 a.m. [Holly Wyatt, MD, PhD](#)
Professor, Nutrition Sciences
School of Health Professions
The University of Alabama at Birmingham
"Strategies to increase dietary adherence in research and clinical programs"

10:25 a.m. [Brooks Wingo, PhD](#)
Associate Professor, Occupational Therapy
School of Health Professions
The University of Alabama at Birmingham
"Using technology to monitor and increase dietary adherence among people with physical disabilities"

11:05 a.m. **Break**

Session 2: Therapy Identification

11:25 a.m. [Merry-Lynn McDonald, PhD](#)
Assistant Professor, Pulmonary, Allergy and Critical Care Medicine
Heersink School of Medicine
The University of Alabama at Birmingham
"Genomics of Musculoskeletal Diseases"

11:45 a.m. [Constanza Cortes, PhD](#)
Assistant Professor, Cell, Developmental and Integrative Biology
Heersink School of Medicine
The University of Alabama at Birmingham
"The Muscle-to-Brain Axis: Neuroprotection on the Treadmill"

12:05 p.m. [Anna Thalacker-Mercer, PhD](#)
Assistant Professor, Cell, Developmental and Integrative Biology
Heersink School of Medicine
The University of Alabama at Birmingham
"Determinants of skeletal muscle health in aging and disease"

12:25 p.m. [Daniel Smith Jr., PhD](#)
Assistant Professor, Nutrition Sciences
School of Health Professions
The University of Alabama at Birmingham
"Assessing response variability in nutrition interventions"

12:45 p.m. **Lunch and Poster Session**

Session 3

- 2:30 p.m.** **Keynote Speaker: [Daniel Beavers, PhD](#)**
Associate Professor of Statistical Sciences
Wake Forest University
"Weight Loss and Physical Function in Aging: Study Design and Statistical Considerations"
- 3:30 p.m.** **Break**
- 3:45 – 4.25 p.m.** **Flash talks of trainees whose abstracts were selected by faculty judges**
- 3:45 p.m.** **Catherine Danielle Jones**
Do Fatigue and Depression have an Interactive Effect on Sedentary Behavior and Physical Activity in Persons with MS?
- 3:50 p.m.** **Jayakrishnan Nair**
ApoE4, Age And Sex Regulate Respiratory Neuroplasticity Elicited By Acute Intermittent Hypercapnic-Hypoxia In Humans
- 3:55 p.m.** **Keri Kemp**
Associations between dietary habits and gut microbiota composition in diverse adolescents
- 4:00 p.m.** **M. Natalie Davis**
Alzheimer's disease risk factor BIN1 in parvalbumin interneurons
- 4:05 p.m.** **Samia O'Bryan**
Attenuated Thigh Lean Mass Gains in Older Adults in Response to High-Intensity
- 4:10 p.m.** **Samuel Chang**
Targeting NADPH Oxidase 4 (NOX4) to prevent cardiac pathology associated with chronically induced cardiac O-GlcNAcylation.
- 4:15 p.m.** **Sourav Datta**
Visual Motor Integration among Children with Vision Impairment
- 4:20 p.m.** **Yanqi Zhang**
Maternal Diet-Induced Obesity Compromised the Availability and Altered the Tissue Distribution of Lutein in Neonatal Rats
- 4:25 p.m.** **Closing comments for Day 1 of the Symposium.**
- 5:00 p.m.** **Networking Reception (Open to all attendees)**
Hilton Birmingham at UAB
808 20th Street South, Birmingham, AL 35205

FRIDAY, SEPTEMBER 16, 2022

7:30 – 8:15 a.m. **Registration & Breakfast**

8:30 a.m. **Welcome & Opening Remarks**

[James Rimmer, PhD](#)

Professor, School of Health Professions - Research Collaborative
Lakeshore Foundation Endowed Chair in Health Promotion and
Rehabilitation Sciences

Director, UAB / Lakeshore Research Collaborative
The University of Alabama at Birmingham

8:35 a.m. **Keynote Speaker: [Rebecca Seguin-Fowler, PhD, RD, LD, CSCS](#)**

Associate Director, Institute for Advancing Health through Agriculture
Professor of Nutrition, College of Agriculture and Life Sciences
Chief Scientific Officer, Healthy Texas
Texas A&M University

*"Multilevel, Multicomponent Interventions to Advance Health Equity
through Community-Engaged Nutrition and Obesity Prevention
Research"*

Session 4: Sleep and Circadian Rhythms

9:30 a.m. **[Karen Gamble, PhD](#)**

Professor, Psychiatry and Behavioral Neurobiology
Heersink School of Medicine
The University of Alabama at Birmingham

"To Eat or Not to Eat: When is the Question"

9:50 a.m. **[Courtney M. Peterson, PhD](#)**

Associate Professor, Nutrition Sciences
School of Health Professions
The University of Alabama at Birmingham

"Meal Timing, Circadian Rhythms, and Precision Nutrition"

10:10 a.m. **[Girish Melkani, PhD](#)**

Associate Professor, Pathology
Heersink School of Medicine
The University of Alabama at Birmingham

*"You are when you eat: Time-restricted feeding and circadian clock
mediated regulation of cardiometabolic disorders"*

10:30 a.m.

[Martin Young, PhD](#)

Professor, Cardiovascular Disease
Heersink School of Medicine
The University of Alabama at Birmingham

"The interplay between cardiac clock genes and nutrition: Insights gained from murine models"

10:50 a.m.

Break

Session 5: Multi-phase Optimization Strategy

11:10 a.m.

[Tapan Mehta, PhD](#)

Professor, Family & Community Medicine
Heersink School of Medicine
The University of Alabama at Birmingham

"Developing sustainable cardiometabolic intervention packages in primary care settings: Leveraging optimization trial designs, machine learning and artificial intelligence"

11:30 a.m.

[Drew Sayer, PhD](#)

Assistant Professor, Nutrition Sciences
School of Health Professions
The University of Alabama at Birmingham

"SMART" Lifestyle Interventions for Improving Health and Wellbeing in People with Obesity"

11:50 a.m.

[Jereme Wilroy, PhD](#)

Assistant Professor, Physical Medicine & Rehabilitation
Heersink School of Medicine
The University of Alabama at Birmingham

"Protocol and design considerations for a sequential multiple assignment randomized trial (SMART) to increase adherence to home exercise in people with spinal cord injury"

12:10 p.m.

Lunch

12:45 p.m.

Closing Remarks and Announcement of Travel Awards