



**CENTER FOR
EXERCISE MEDICINE**

The University of Alabama at Birmingham

10th Annual UAB Center for Exercise Medicine Symposium
"Exercise and Neuroscience"

September 16 and 17, 2024
UAB Alumni House
1301 10th Avenue South, Birmingham, AL 35294

MONDAY, SEPTEMBER 16, 2024

12:30 to 1 p.m. Registration

1 p.m. Welcome & Opening Remarks

Thomas Buford, PhD

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

Session: 1

Session Chair: Eric Plaisance, PhD

1:05 p.m. Matthew Miller, PhD

Professor, Assistant Director, and Graduate Program Officer
School of Kinesiology
Auburn University

*Neural underpinnings of people's decisions regarding exercise,
physical activity, and sedentary behavior*

1:40 p.m. Keith McGregor, PhD

Associate Professor
School of Health Professions
Department of Clinical and Diagnostic Sciences
The University of Alabama at Birmingham

*Cortical Inhibition and Aging: Effects of Exercise with Adaptive
Cognitive Processing Speed Training*

2:00 p.m. Christopher Ballmann, PhD

Associate Professor | Kinesiology
Departments of Human Studies and Physical Therapy
The University of Alabama at Birmingham

*All Fight, No Flight: Sympathomimetic Stimulants and Exercise
Performance*

2:20 p.m. **Break and refreshments. (10 min break)**

Session: 2

Session Chair: Glenn Rowe, PhD

2:30 p.m. **Patricia (Jill) Ward, PhD**
Assistant Professor
Department of Cell Biology
Emory University School of Medicine
Modulators of Skeletal Muscle Health in Neurological Disorders: Novel Roles for the Sympathetic Nervous System

3:05 p.m. **Rita Cowell, PhD**
Professor
Heersink School of Medicine
Department of Neurology
The University of Alabama at Birmingham
Manipulation of Transcriptional Programs for Mitochondrial and Lysosome Function in Neurodegeneration

3:25 p.m. **Peter King, MD**
Vice Chair and Professor, Department of Neurology
The University of Alabama at Birmingham
Chief of Neurology, Birmingham VA Medical Center
Skeletal muscle: a lens into the pathophysiology and clinical heterogeneity of ALS

3:45 p.m. **Taylor Taylor, PhD**
Assistant Professor
Heersink School of Medicine
Department of Family and Community Medicine
The University of Alabama at Birmingham
Exercise, Affect, and Neuroinflammation: A Biopsychosocial Approach to Chronic Pain Management in Veterans Living with Fibromyalgia

4:05 p.m. **Announcements for the next day**

4:10-5:45 p.m. **Poster Session and Networking Reception with hors d'oeuvres**

Poster set up time – 12:30 p.m. to 1 p.m.

(If you are not able to make it during this time frame, please make sure to set up your posters during break or in-between presentations. **Please do not set up when presentations are in progress.)**

TUESDAY, SEPTEMBER 17, 2024

7:30 – 8:25 a.m. **Registration & Breakfast**

8:25 a.m. **Welcome & Opening Remarks**
Anna Thalacker-Mercer, Ph.D.
UAHSF Endowed Professor of Regenerative and Translational
Medicine
Associate Professor and Vice Chair of Training Programs and
Mentorship
Department of Cell, Developmental and Integrative Biology
Associate Director, UAB Center for Exercise Medicine
The University of Alabama at Birmingham

Session: 3

Session Chair: Robert Mankowski, PhD

8:30 a.m. **Jill Barnes, PhD**
Associate Professor
Department of Kinesiology
University of Wisconsin-Madison
The Potential Impact of Exercise on Cerebrovascular Function

9:05 a.m. **Raymond Jones, PhD**
Assistant Professor
Heersink School of Medicine
Division of Gerontology, Geriatrics, and Palliative Care
The University of Alabama at Birmingham
Vascular Aging and Cognition in HIV: Exercise is Medicine

9:25 a.m. **Rajasekaran Namakkal-Soorappan, PhD**
Associate Professor of Pathology & Medicine
Department of Pathology
Division of Molecular & Cellular Pathology
The University of Alabama at Birmingham
*Reductive Stress Impairs Behavior in Heart Failure: The Therapeutic
Role of Exercise*

9:45 a.m. **Christopher Hurt, PhD**
Associate Professor
Department of Physical Therapy
The University of Alabama at Birmingham
*Working TO capacity: Working AT capacity, is there a
difference?*

10:05 a.m. **Break and refreshments. (20 min break)**

- 10:25 a.m. Session 4 - Introduction to Trainee Flash Talks (Competitive)**
Session Chair: Raymond Jones, PhD
- 10:30 a.m. Chang, Samuel**
Obesity as an Underlying Driver of Differences in Racial and Socioeconomic Disparity Associated Cardiac DNA Methylation Among Men with End-stage Heart Failure
- 10:34 a.m. English, Katherine**
Dock7 is an essential driver of Skeletal Muscle Health and Function
- 10:38 a.m. Kolapo, Tolulope Ruth**
Exercise Impacts Innate Immunity through IMD Pathway in Young Drosophila with Bacterial Infection
- 10:42 a.m. Novak, Tom S.**
The Influence of Cardiovascular Fitness and Ventilatory Efficiency on Hypercapnic Cerebrovascular Reactivity in Sedentary Older Adults
- 10:46 a.m. Sunny, Sini**
Exercise attenuates reductive stress-induced diastolic stiffness in the myocardium
- 10:50 a.m. Sweatt, S. Katherine**
Increase modulation of GABA receptors after resistance but not aerobic exercise intervention in aging adults
- 10:54 a.m. Vickers, Jasmine**
Physical Activity and Cognition in People Aging with HIV
- 10:58 a.m. Yadav, Angad**
Glutamine deficiency triggers the spatial distribution of TCA-cycle metabolic enzymes into the nucleus, impairing myogenesis
- 11:02 a.m. Yadav, Archana**
Genetic obesity linked cognitive dysfunction lipid dysregulation and neuro inflammation Impact of exercise
- 11:06 a.m. Q&A Session for Flash talks**

Session: 5

Session Chair: Matt Alexander, PhD

11:15 a.m. Rachel Smith, PhD
Assistant Professor
School of Engineering
Department of Electrical and Computer Engineering
The University of Alabama at Birmingham
Computational modeling to improve surgical outcomes in epilepsy

11:35 a.m. Jane Allendorfer, PhD
Associate Professor
Heersink School of Medicine
Department of Neurology
The University of Alabama at Birmingham
Neuroimaging effects of exercise in epilepsy

Faculty and Staff Short Talks (Non-competitive)

11:55 a.m. Crystal G. Bennett, PhD
Dean, College of Health Professions
Associate Professor of Nursing
University of Montevallo
Impacts of Adapted Dance on Agitation and Physical Function among Persons living with Alzheimer's Disease

12:05 p.m. Alexandra Evancho, PT, DPT
Assistant Professor
School of Health Professions
Department of Physical Therapy
The University of Alabama at Birmingham
CARE-PD Combining Auricular Vagus Nerve Stimulation with Rehabilitation Exercise for individuals with Parkinson's Disease

12:15 p.m. Ashley Wright, MS
Clinical Research Coordinator I
Heersink School of Medicine
Division of Pediatric Rehabilitation Medicine
The University of Alabama at Birmingham
Telehealth Maximal-Intensity Interval Training Safely Improves Cardiorespiratory Fitness and Cardiometabolic Health Among Children with Cerebral Palsy Preliminary Findings

12:25 p.m. Closing Remarks and Announcement of Travel Awards
Anna Thalacker-Mercer, PhD

12:45 p.m. Lunch and Networking