

PROGRAM SCHEDULE

Friday

10:00 AM **Registration/Poster Setup**

10:45 - 11:00 AM **Welcome to the Meeting**
Jon Harrison, AZPS President

11:00 AM - Noon **Session 1: Metabolism and Muscle Physiology**
Chairs: Tobias Riede (MWU) and Zack Graham (ASU)

11:00 AM Siwoo Jeong (NAU)
The different ratio of muscle stiffness to muscle force after active shortening at different velocities

11:15 AM Savannah Berry (NAU)
Sex Differences in Mechanisms to Mitigate Oxidative Stress Levels in Response to an Exercise Intervention

11:30 AM Ethan Ostrom (NAU)
Improvements in aerobic fitness predict responses to change in redox capacity in men but not women

11:45 AM Madeleine Ostwald (ASU)
Sociality Confers Energetic Savings in a Large Carpenter Bee

Noon - 1:00 PM **Lunch with Vendors and Raffle**

1:00 PM - 1:45 PM **One Minute Poster Presentations**

1:45 PM - 3:15 PM **Session 2: Cardiovascular Physiology**
Chairs: Paulo Pires (UA COM-Tucson) and Ike Chinyere (UA COM-Tucson)

1:45 PM Megan Sylvester (UA COM-Tucson)
Exploring Sex Differences In Immune Cell Profiles Of Male, Premenopausal, And Postmenopausal Female Mice To Understand Susceptibility To Immune Mediated Hypertension

2:00 PM Bobbie Garvin (UA COM-Phoenix)
Transient Angiotensin Converting Enzyme Inhibition in Hypertensive Rats Homogenizes the Cardiac Fibroblast Population Supporting a Less Fibrogenic Transcriptome

2:15 PM Matthew Klass (UA COM-Tucson)
Mutation-specific calcium dysregulation in troponin t-associated hypertrophic cardiomyopathy

2:30 PM Tala Curry (UA COM-Phoenix/MWU)
Role of Caveolin-1 in a Mouse Model of Marfan Syndrome-Associated Aortic Aneurysm

2:45 PM Nicholas Talley (MWU)
Understanding the Role of Inducible Nitric Oxide (iNOS) on the progression of Marfan Syndrome Associated Aortic Aneurysms

3:00 PM Lakshmi Madhavpeddi (UA COM-Phoenix)
Impact of Prenatal Dexamethasone on Adult Cardiovascular Autonomic Regulation

3:15 PM - 3:30 PM **Break**

3:30 PM - 4:45 PM **Session 3: Comparative and Environmental Physiology**
Chairs: Kiisa Nishikawa (NAU) and Stav Talal (ASU)

3:30 PM Anthony Basile (ASU)
Under Krogh's Umbrella: Comparative Physiology in a New Age.

3:45 PM Jacob Youngblood (ASU)
Outbreking locusts thermoregulate to maximize digestive performance

4:00 PM Trevor Fox (ASU)
Quantifying unidirectional ventilation in tenebrionid beetles

4:15 PM Adrian Fisher II (ASU)
*A widely-used fungicide produces symptoms of Colony Collapse Disorder in honey bees (*Apis mellifera*)*

4:30 PM Alec Oliva (MWU)
Canine-based risk factors drive the spread of RMSF in Arizona and Northern Mexico

4:45 PM - 5:00 PM **Break**

5:00 PM - 6:00 PM **Plenary Speaker**
Of flies and people: adaptation to high-altitude hypoxia
Gabriel Haddad, MD, Rady Children's Hospital, San Diego

6:00 PM - 7:30 PM **Dinner and Trainee Networking/Career Development Session (organized by Bobbie Garvin)**

7:30 PM - 9:30 PM **Poster Session**

Saturday

8:00 AM - 8:30 AM **Continental Breakfast**

8:30 AM - 9:45 AM **Session 4: The Charles Tipton Undergraduate Symposium**

Chairs: Haiwei Gu (ASU) and Karina Ahmadizadeh (MWU)

8:30 AM Trevor Wendt (UA COM-Phoenix)

S1PR-1 Activation Protects Against Ischemia-Induced Inflammation and Dysfunction in Human Brain Microvascular Endothelial Cells

8:40 AM Sarah Livingston (ASU)

Nutraceuticals Derived From Pomegranate Selectively Enhance Vitamin D Receptor Signaling To Amplify Key Vitamin D Target Genes

8:50 AM Amal Altaf (UA COM-Phoenix)

Unlocking Signaling Mechanisms That Underlie Persistent Anti-Fibrotic Effects of Transient ACE Inhibition

9:00 AM Anthony Albrecht (UA COM-Phoenix)

S1PR Ligand Protects Against Hypoxia plus Glucose Deprivation-Induced Morphological Changes in Human Brain Vascular Smooth Muscle

9:10 AM Brittney Childress (UA COM-Tucson)

Club Cell Secretory Protein-16 Deficiency Leads to a Predominately Neutrophilic Airway Inflammatory Response in a Mouse Model of Asthma

9:20 AM Cassidy Turner (ASU)

Ovarian Cancer Detection Using Targeted Plasma Metabolomics

9:30 AM Jack Short (GCU)

Effects of Stress and Exercise on Heart Rate Variability

9:45 AM - 10:00 AM **Break**

10:00 AM - 11:00 AM **Session 5: Clinical and Respiratory Physiology**

Chairs: Rakhad Alwari (GCU) and Reem Farad (UA COM-Phoenix)

10:00 AM Stephanie Bruggink (UA COM-Tucson)

Head-out plethysmography applied to study the role of obesity and muscarinic signaling in asthma

10:15 AM Paniz Jasbi (ASU)

A Brain Tissue Metabolomic Signature Discloses Alzheimer's Disease Post-Mortem

10:30 AM Charles Schaefer (MWU)

Male Sprague Dawley Rats use Deep Breaths in their Ultrasonic Vocal Behavior.

10:45 AM Kristen Bolte (MWU)

Characterizing the Action of Arginine Vasopressin at Hypoglossal Motoneurons In Neonatal Mice

11:00 AM - 11:15 AM **Break**

11:15 AM - 12:15 PM **Arizona Distinguished Physiologist Lecture**

'If you don't know where you are going, you'll end up someplace else.' - *How Yogi Berra's words forecast my career in physiology*
Ralph Fregosi, PhD, (UA COM-Tucson)

12:15 PM - 2:00 PM **Lunch with Business Meeting and Awards**

Poster Session

Note: In addition to presenting their poster during the Poster Session, each poster presenter gets one minute (without slides) to present the primary question and/or result of their poster during the One Minute Poster Presentation Session.

#	Lead author	Institution	Title
1	Andrew Alamban	UA COM-Tucson	Cx37-13k fails to reproduce phenotypic effects of Cx37 in rat insulinoma cells but alters Cx37's hemichannel function when co-expressed
2	Jose Ek-Vitorin	UA COM-Tucson	A mutant mimicking an ischemic preconditioned phospho-form of Cx43 lacks Vj-gating
3	Brikena Hoxha	MWU	Manipulation of Caveolae by Methyl- β -cyclodextrin in a Mouse Model of Marfan Syndrome
4	Ike Chinyere	UA COM-Tucson	Electrophysiologic Evaluation of Non-Ischemic Cardiomyopathy Models
5	Morgan Nelson	ASU	Evaluation of an organometallic complex on the development of cardiovascular disease risk following a 10-week high-fat diet
6	Kathleen Casey	ASU	The Effect of Exercise PreConditioning on VO ₂ Peak and Lean Mass in Breast Cancer Patients Treated with Anthracyclines- A Preliminary Analyses
7	Adam Copeland	GCU	Correlation between heart rate variability and obesity
8	Charis Courtney	GCU	Heart rate variability: Physiological effects of anxiety and depression on autonomic nervous system
9	Breana Schiete	GCU	Gender Disparities in HRV Values Between Genders
10	Nafisa Jadavji	MWU	The role of nutrition on recovery after ischemic stroke using an aged mouse model
11	Ryan Eghlimi	ASU	Triple Negative Breast Cancer Detection Using LC-MS/MS Targeted Lipidomics
12	Layla Al-Nakkash	MWU	Dietary genistein and exercise offer sex-dependent benefits to jejunum function in a model of diet-induced diabetic obesity.
13	Alex Mohr	ASU	Assessing the potential of a soil-derived compound for the prevention of liver toxemia and protein glycation in rats fed a high-fat diet
14	Karen Sweazea	ASU	Effects of urbanization on morphology and nutritional physiology of Gambel's Quail, <i>Callipepla gambelii</i>
15	Karina Ahmadizadeh	MWU	Expression patterns of CRF-family peptides in the zebra finch brain
16	Xiaojian Shi	ASU	Database Assisted Globally Optimized Targeted Mass Spectrometry (dGOT-MS): Broad and Reliable Metabolomics Analysis with Enhanced Identification
17	Stav Talal	ASU	High carbohydrate diets increase respiratory quotients above 1 in locusts
18	Jordan Glass	ASU	Testing the limits: Physiological responses of honeybees (<i>Apis mellifera</i>) during flight in variable-density gases
19	Thomas Huck	NAU	Investigating the relationship between muscle force, activity, and activation in human triceps surae during obstacle negotiation
20	Anaissa Ruiz	ASU	Myosin Heavy Chain Isoform mRNA Expression in Low and High Capacity Running Rats

21	Zack Graham	ASI	The Offense and Defense of a Regenerated Weapon
22	Dhruv Mishra	NAU	X-ray diffraction analysis of nanometer-scale sarcomere structure before and after active and passive stretch in skinned fiber bundles of skeletal muscles from wild type and mdm mice.
23	Logan Kasper	UA COM-Tucson	Preoperative patient reported outcome measures are predictive of postoperative outcome at 2 years following Unicompartmental Knee Arthroplasty
24	Jesse Wealing	MWU	GIRK channels contribute to modulation of XII motoneuron excitability in neonatal mice in vitro
25	Hailang He	ASU	Metabolic profiling reveals attenuated mitochondrial function and enhanced glycolysis induced by BDE-47 in PC12 cells
26	Joaquin Lopez Rosales	UA COM-Tucson	Porcine NPE Releases through interaction of TRPV4 and hemichannels
27	Charles Vo	MWU	Characterization of effector ion channels that mediate excitatory cholinergic modulation of XII motoneurons in neonatal mice in vitro
28	Reem Faraj	UA COM-Phoenix	A Novel Role for SAMD4A in Endothelial Cell Barrier Regulation in Response to Simvastatin