

## POSTER ABSTRACTS FOR THURSDAY EVENING SESSION

Thursday, June 27

- POSTER BOARD #1: “Muscle Metaboreflex Induced Increases in Effective Arterial Elastance”  
Mohamed-Hussein Al-Hassan, Joseph Mannozi, Beruk Lessanework, Alberto Alvarez, Maryetta Dombrowski, Charles Chung, & Donal S. O’Leary  
Department of Physiology and Cardiovascular Research Institute, Wayne State University
- POSTER BOARD #2: “The Role of the Cardiac Specific MiR-208a in Metabolic Heart Disease”  
Carmen Avramut, Naveen Mekala, Jacob Kurdys, Joel Santos, Neli Ragina, & Mariana Rosca  
College of Medicine, Central Michigan University
- POSTER BOARD #3: “SV40T-Mediated Neuronal Dysregulation Induces NFT Pathology in APP Knock-In Mice”  
Tomás Barrett<sup>1</sup>, Joshua Keene<sup>1</sup>, Takashi Saito<sup>2,3</sup>, Takaomi Saido<sup>2</sup>, & Kevin Park<sup>1,4</sup>  
<sup>1</sup>Neuroscience Program, Central Michigan University, <sup>2</sup>Laboratory for Proteolytic Neuroscience, RIKEN Brain Science Institute, <sup>3</sup>Japan Science and Technology Agency, <sup>4</sup>Department of Psychology, Central Michigan University
- POSTER BOARD #4 “Establishing Nitrite to Nitrate Ratios in the Clinical Wound Samples of Subjects With and Without Diabetes”  
Emily Cook<sup>1</sup>, Ashley Kennedy<sup>1</sup>, Maria Kwesiga<sup>2</sup>, Caroline Gwaltney<sup>1</sup>, Wade Liston<sup>3</sup>, Smitha Rao<sup>2</sup>, & Megan Frost<sup>2</sup>  
<sup>1</sup>Doctoral Program in Physical Therapy, Central Michigan University, <sup>2</sup>Biomedical Engineering Department Michigan Technological University, <sup>3</sup>UP Health System - Portage
- POSTER BOARD #5 “Spectral Power of Slow Wave Sleep is Associated with Reductions of Nocturnal Blood Pressure in Humans”  
Hannah Cunningham<sup>1</sup>, Ian Greenlund<sup>1</sup>, Anne Tikkanen<sup>1</sup>, John Durocher<sup>2</sup>, Carl Smoot<sup>1</sup>, & Jason Carter<sup>1</sup>  
<sup>1</sup>Department of Kinesiology & Integrative Physiology, <sup>2</sup>Department of Biological Sciences, Michigan Technological University
- POSTER BOARD #6 “Gut Microbiota and Host: The Fight for Iron”  
Nupur Das<sup>1</sup>, Amanda Sankar<sup>3</sup>, & Yatrik Shah<sup>1,2</sup>  
<sup>1</sup>Department of Molecular and Integrative Physiology, <sup>2</sup>Internal Medicine, Division of Gastroenterology, <sup>3</sup>Department of Pediatrics and Communicable Diseases, Division of Pediatric Hematology-Oncology, University of Michigan
- POSTER BOARD #7 “Decentering and Arterial Stiffness in Young Adults”  
Sarah LewAllen, Brigitte Morin, & John Durocher.  
Department of Biological Sciences, Michigan Technological University
- POSTER BOARD #8 “The Vitamin A Transport Protein, Stimulated by Retinoic Acid 6, is Not Associated with Lipid Rafts in Human Cells”  
Hana Fantin, CB Barrett, B Smiles, CO Straham, & DM Duriancik  
University of Michigan – Flint

## POSTER ABSTRACTS FOR THURSDAY EVENING SESSION (cont'd)

Thursday, June 27

- POSTER BOARD #9 "Giant Elastic Protein Titin Expression in Hibernating Thirteen-Lined Ground Squirrels"  
Jonathan Groening, Mark Hiske, Hannah Carey, Karen Ball, & Charles Chung  
Department of Physiology, Wayne State University, Department of Integrative Physiology & Health Science, Alma College, Department of Comparative Biosciences, University of Wisconsin-Madison
- POSTER BOARD #10 "Non-Invasive Ontogenetic Stimulation in a Rat Model of Spinal Cord Injury"  
GE Kendzioriski, ED Petersen, L Shafau, M Prakash, & U Hochgeschwender  
College of Medicine, Central Michigan University
- POSTER BOARD #11 "Monitoring Hydrogen Peroxide in Live Kidneys by Multiphoton Microscopy and Genetically Encoded Probes"  
Tang-Dong Liao, Pablo Ortiz, & Mariela Mendez  
Hypertension and Vascular Research Division, Henry Ford Health System
- POSTER BOARD #12 "Effects of Cold Exposure on Skeletal Muscle Glucose Uptake"  
Brooke Mason & Brianna Harfmann  
Alma College
- POSTER BOARD #13 "Utilizing PhUn Week as an Independent Study Opportunity for Collegiate Health Science Students"  
Nicholas McCann, Abigail Nelson, & Naveen Sharma  
School of Health Sciences, Central Michigan University
- POSTER BOARD #14 "Exposure to a Western Diet Rich in Linoleic Acid Exaggerates Viscerosensory-Sympathetic Reflexes in Spinalized Animals via a TRPV1-Dependent Mechanism"  
Zeljka Minic & Christian Reynolds  
Department of Emergency Medicine and Cardiovascular Research Institute, Wayne State University
- POSTER BOARD #15 "Fructose Analog Containing 3-D Scaffolds to Isolate and Study Breast Cancer Cell Metabolism by Mimicking Tumor Microenvironment"  
Carolynn Que, Samerender Nagam Hanumantharao, Emily Nelson, & Smitha Rao  
Michigan Technological University
- POSTER BOARD #16 "Effect of Exercise Training on Markers of Health and Fitness in Type 2 vs. Pre-Diabetic Adults"  
Gabriel Neil & Rachael Nelson  
School of Health Sciences, Central Michigan University
- POSTER BOARD #17 "Aldehyde Dehydrogenase-2 Mutation Aggravates Obesity Related Bone Disorders in Leptin Receptor Mutant Mice"  
Guodong Pan<sup>1</sup>, Joseph Gardinier<sup>2</sup>, Haiyan Pang<sup>1</sup>, Mandar Deshpande<sup>1</sup>, and Suresh Palaniyandi<sup>1,3</sup>  
<sup>1</sup>Division of Hypertension and Vascular Research, Department of Internal Medicine, Henry Ford Health System, <sup>2</sup>Bone and Joint Center, Henry Ford Hospital, <sup>3</sup>Department of Physiology, Wayne State University

## POSTER ABSTRACTS FOR THURSDAY EVENING SESSION (cont'd)

Thursday, June 27

- POSTER BOARD #18 “Sex-dependent Differences in Adrenal Gland and Ventricle Sizes of Sedentary and Physically Active Rats Contributing to Cardiovascular Disease Risk”  
N.S. Salman, T.A. Azar, B.E. Fyk-Kolodziej, & P.J. Mueller  
Department of Physiology, Wayne State University School of Medicine
- POSTER BOARD #19 “Optimal Dosing of the Anesthetic Tricaine Methanesulfonate (MS222) to Ensure Muscle Viability in *Xenopus Leavis* Frogs: A Pilot Project.”  
John Zubek  
Michigan State University
- POSTER BOARD #20 “The Effects of Prorenin on Normotensive Male Rat Neurophysiology”  
Steven Stelly, Jeremy Bigalke, & Zhiying Shan  
Michigan Technological University
- POSTER BOARD #21 “The Effect of Water Mites on Mosquitoes in Metro Detroit”  
Adrian Vasquez, Bana Kabalan, & Carol Miller  
Healthy Urban Waters, Wayne State University, College of Engineering and Science,  
University of Detroit Mercy ReBUILD
- POSTER BOARD #22 “Determining the Role of Collagen on Strain Rate Dependent Relaxation Rates in Intact Rat Cardiomyocytes and Cardiac Trabeculae”  
Madison Wang, Brianna Schick, & Charles Chung  
Wayne State University
- POSTER BOARD #23 “The Role of G-protein Signaling Regulation in the Development of Vascular Cognitive Impairment and Dementia”  
Ting-Chieh Yen, Janice Diaz-Otero, Hoa Phan, Richard Neubig, & Anne Dorrance  
Michigan State University
- POSTER BOARD #24 “Oxidative Stress as a Potential Cost of High Social Rank in a Cichlid Fish”  
Peter Dijkstra<sup>1</sup>, Robert Fialkowski<sup>1</sup>, & Shana Border<sup>2</sup>  
<sup>1</sup>Central Michigan University, <sup>2</sup>Illinois State University

## POSTER ABSTRACTS FOR FRIDAY AFTERNOON SESSION

*Friday, June 28*

- POSTER BOARD #1: “Altered Lysophosphatidic Acid Receptor Expression in Chronic Intestinal Pseudo-Obstruction”  
Mohammad Ahmadzai<sup>1</sup>, Roberto De Giorgio<sup>2</sup>, & Brian Gulbransen<sup>3</sup>  
<sup>1</sup>College of Osteopathic Medicine, Michigan State University, <sup>2</sup>Orsola-Malpighi Hospital and University of Ferrara, <sup>3</sup>Department of Neuroscience, Michigan State University
- POSTER BOARD #2 “Effects of Varying Dietary Fats on Oxidative Stress and Inflammatory Protein Markers in the Rat Brain”  
John Andraka, Naveen Sharma, & Yannick Marchalant  
Central Michigan University
- POSTER BOARD #3 “A GluN2B Mutation Identified in Autism Prevents NMDA Receptor Trafficking and Leads to Abnormal Dendrite Growth”  
Jacob Bahry, Michael Sceniak, Karlie Fedder, Qian Wang, Sammy Droubi, Sagar Patwardhan, Jazmin Wright-Zornes, Lucynda Pham, & Shasta Sabo  
Central Michigan University
- POSTER BOARD #4 “Sex Differences in the Response to Sedentary versus Active Conditions Alter the Coherence Between Splanchnic Sympathetic Nerve Activity and Blood Pressure”  
BM Brichacek<sup>1</sup>, BB Kaji<sup>1</sup>, SM Barman<sup>2</sup>, & PJ Mueller<sup>1</sup>  
<sup>1</sup>Department of Physiology, Wayne State University School of Medicine, and  
<sup>2</sup>Department of Pharmacology and Toxicology, Michigan State University
- POSTER BOARD #5 “Bioluminescence Driven Control of Photosensory Proteins”  
Emmanuel Luis Crespo & Ute Hochgeschwender  
Central Michigan University
- POSTER BOARD #6 “Does Membrane Sealant Poloxamer 188 Improve Survival and Maintain Function of Isolated Rat Cardiomyocytes?”  
Teresa Czeiszperger, Madison Wang, & Charles Chung  
Wayne State University
- POSTER BOARD #7 “Effect of Dynamic Eccentric Leg Exercise Training on Strength, Mobility, and Arterial Stiffness in Older Adults”  
Jill Poliskey<sup>1</sup>, Sarah LewAllen<sup>1</sup>, Carley Maanika<sup>2</sup>, Steven Elmer<sup>3</sup>, Lavanya Rajeshkumar<sup>4</sup>, Kevin Trewartha<sup>3,4</sup>, & John Durocher<sup>1</sup>  
<sup>1</sup>Department of Biological Sciences, <sup>3</sup>Department of Kinesiology & Integrative Physiology, <sup>4</sup>Department of Cognitive and Learning Sciences, Michigan Technological University, <sup>2</sup>Department of Physical Therapy, Central Michigan University
- POSTER BOARD #8 “National Biomechanics Day: Using a 3D Physical Model to Experience how the Human Body Works First Hand”  
Benjamin Cockfield, Stephen Hook, Alex Gabe, Jana Hendrickson, Lily Hart, Kathryn Carter, & Steven Elmer  
Michigan Technological University

## POSTER ABSTRACTS FOR FRIDAY AFTERNOON SESSION (cont'd)

*Friday, June 28*

- POSTER BOARD #9 “Stress and Mood Affect Sleep Quality and Quantity in College Female Soccer Players”  
Mikaela Gabler, Tomas Barrett, Gavin Connolly, Shane O’ Riordan, & Paul O’ Connor  
School of Health Sciences, Central Michigan University
- POSTER BOARD #10 “Heart Rate and Energy Expenditure in Division I Collegiate Soccer Players During a Competitive Season”  
Kaylin Hoomaian & Paul O’Connor  
School of Health Sciences, Central Michigan University
- POSTER BOARD #11 “Investigative Study on Nitric Oxide Production in the Macrophage cell line RAW 264.7 Cultured Under Normal and High Glucose Conditions”  
Maria Kwesiga<sup>1</sup>, Sarah Wayward<sup>1</sup>, Eyerusalem Gebreyesus<sup>1</sup>, Emily Cook<sup>2</sup>, Caroline Gwaltney<sup>2</sup>, Smitha Rao<sup>1</sup>, & Megan Frost<sup>1</sup>  
<sup>1</sup>Michigan Technological University, <sup>2</sup>Central Michigan University
- POSTER BOARD #12 “ERK1/2 Activation in Dusp 6/8 Double-null Mice Leads to Protection From Cardiomyopathy and Diet-induced Obesity”  
Ruijie Liu, Jacob Knowlton, Nicholas Urban, & Monica Peters  
Department of Biomedical Sciences, Grand Valley State University
- POSTER BOARD #13 “Isometric and Isotonic Twitch Dynamics in Omecamtiv Mecarbil Treated Intact Rat Cardia Trabeculae”  
Alexandra Matus, Melissa Bukowski, Brianna Schick, & Charles Chung  
Wayne State University
- POSTER BOARD #14 “Visualizing Breathing Physiology Through 3D Printing and Microcontroller Technology”  
Ross Michaels, David Zopf, Zahra Nourmohammadi, & Grace Stridick  
University of Michigan Medical School, University of Michigan School of Engineering
- POSTER BOARD #15 “Piezoelectric Scaffolds Containing Tricalcium Phosphate for Bone Tissue Engineering”  
Samerender Nagam Hanumantharao,Carolynn Que, Emily Nelson, Smitha Rao  
Michigan Technological University
- POSTER BOARD #16 “Making Conventional CPR Training Cuddler to Engage Children”  
Valerie VanRyn, Ryan Nazareno, Jacob Canfield, & Erica Wehrwein  
Michigan State University
- POSTER BOARD #17 “Examination of Underlying Mechanisms Contributing to the Enhanced Post-Exercise Blood Pressure Response”  
Gavin Power, Lea Haverback, Brendan Farley, Maria Martuch, Gavin Connolly, Andrew Butcko, Roop Jayaraman, Naveen Sharma, & Rachael Nelson  
School of Health Science, Central Michigan University
- POSTER BOARD #18 “Enteric Glia Express the Cytosolic DNA Sensor STING”  
Christin Dharshika, Christopher Waters, & Brian Gulbransen  
Michigan State University

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Friday, June 28

- POSTER BOARD #19 “Transsynaptic Neuronal Activation via Bioluminescent Optogenetics”  
Rachel Schumaker, Mansi Prakash, Akash Pal, Emmanuel Crespo, & Ute Hochgeschwender  
Central Michigan University
- POSTER BOARD #20 “Combining Bioluminescence Driven Optogenetic Stimulation with Swim Training for Treatment Following Spinal Cord Injury in Rats”  
Lateef Shafau, Eric Petersen, Ute Hochgeschwender  
College of Medicine, Central Michigan University
- POSTER BOARD #21 “*In vitro* Uptake, Delivery, and Temporal Regulation of hBDNF via Surface Modified PAMAM Dendrimer Nanoparticles Using TET System”  
Cassandra Thompson<sup>1,2</sup>, Paulina Otero<sup>1,2</sup>, Bhairavi Srinageshwar<sup>1,2,3</sup>, Maria Florendo<sup>2,3</sup>, Alex Figacz<sup>2,3</sup>, Rachel Kim<sup>2,3</sup>, Douglas Swanson<sup>5</sup>, Gary Dunbar<sup>1,2,4,6</sup>, Ajit Sharma<sup>5</sup>, & Julien Rossignol<sup>1,2,3</sup>  
<sup>1</sup>Field Neurosciences Institute Laboratory for Restorative Neurology, <sup>2</sup>Program in Neuroscience, <sup>3</sup>College of Medicine, <sup>4</sup>Department of Psychology, <sup>5</sup>Department of Chemistry & Biochemistry Central Michigan University, <sup>6</sup>Field Neurosciences Institute
- POSTER BOARD #22 “Bioluminescent Optogenetics Produces Fewer Nonspecific Effects Compared to DREADDs”  
Madison Waddell & Ute Hochgeschwender  
Central Michigan University
- POSTER BOARD #23 “Understanding Physiological Relevance of Differences in NO production in Clinical Samples for Wound Healing”  
Sarah Wayward<sup>1</sup>, Maria Kwesiga<sup>1</sup>, Eyerusalem Gebreyesus<sup>1</sup>, Emily Cook<sup>2</sup>, Ashley Kennedy<sup>2</sup>, Caroline Gwaltney<sup>2</sup>, Megan Frost<sup>1</sup>, & Smitha Rao<sup>1</sup>  
<sup>1</sup>Michigan Technological University, <sup>2</sup>Central Michigan University
- POSTER BOARD #24 “Regional Heterogeneity of Cholecystokinin Sensing by Enteric Glia”  
Luisa Seguella & Brian Gulbransen  
Michigan State University