MICHAEL A. FRANCISCO, PhD

Adjunct Professor, California State University Sacramento, Department of Kinesiology
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EDUCATION

Postdoctoral Research Fellow 2020-2022
University of Utah, Department of Internal Medicine, Division of Geriatrics
Department of Veterans Affairs, Salt Lake City, UT, Division of Geriatrics
Advisor: Walter Wray, PhD
Topic: Peripheral vascular health in heart failure with preserved ejection fraction

PhD Human Physiology 2016-2020
University of Oregon, Department of Human Physiology
Advisors: Chris Minson, PhD and John Halliwill, PhD
Topic: Integrative cardiovascular physiology

MS Human Physiology 2013-2016
University of Oregon, Department of Human Physiology
Advisor: Chris Minson, PhD
Topic: Integrative cardiovascular physiology

BS Human Physiology 2008-2013
University of Oregon, Department of Human Physiology

AWARDS AND HONORS

Top 10 blog post of 2021, ISPYPHYSIOLOGY: American Physiological Society 2021
High Impact Paper for Clinical Science, Hypertension: American Heart Association 2021
Environmental & Exercise Physiology Postdoctoral Award, American Physiological Society 2021
Evonuk Graduate Fellowship in Environmental Physiology, University of Oregon 2018-2020
Graduate Teaching Fellowship, University of Oregon 2013-2020
Science Literacy Fellowship, University of Oregon 2015
David S. Bruce Undergraduate Abstract Award, American Physiological Society 2013
Dean's Scholarship 2008-2013, University of Oregon 2008-2013
Eagle Scout, Boy Scouts of America 2008

FUNDING RECEIVED

Title: Eugene and Clarissa Evonuk Memorial Graduate Fellowship in Environmental or Stress Physiology
Funding Mechanism/Agency: University of Oregon
Total Direct Cost: $5,000
Status: Received

Title: Science Literacy Fellowship.
Funding Mechanism/Agency: University of Oregon
Total Direct Cost: ~$10,000
Status: Received

FUNDING APPLIED FOR

Title: Feasibility and Effectiveness of Passive Heat Therapy in People with Post-Concussion Syndrome
Funding Mechanism/Agency: Chuck Noll Foundation for Brain Injury Research
Total Direct Cost: $28,933
Status: Under Review

Title: Vericiguat and Cardiometabolic Health in Heart Failure Patients with a Preserved Ejection Fraction.
Funding Mechanism/Agency: K01, NHLBI of NIH
Total Direct Cost: $529,970
Status: Reviewed but not pursued

UNIVERSITY TEACHING EXPERIENCE

California State University Sacramento, Department of Kinesiology 2022- Present

Instructor of Record: Kinesiology 150 2022- Present

Lecturer for the course, Exercise and Sport Physiology, with approximately 80 Kinesiology undergraduate students. Lecture topics include bioenergetics, neuromuscular system during exercise, cardiopulmonary system during rest and exercise, environmental factors and exercise performance, hydration and nutrition, exercise training adaptations and programs.

Instructor of Record: Kinesiology 136 2023- Present

Lecturer for the course, Sport and Aging, with approximately 40 Kinesiology undergraduate students. Lecture topics include biology of aging (by system), impact of exercise on the aging process, fitness assessment in the elderly, exercise prescription in the elderly.

University of Utah, School of Medicine 2021-2022

Co-Instructor of Record: Dept. of Nutrition & Physiology 7305 (Winter) 2021

Lecturer for the course, Advanced Cardiovascular Physiology, with approximately 10 medical and graduate students. Lecture topics included central circulatory adjustments to dynamic exercise, regional control of blood flow during exercise, and cardiovascular adjustments to isometric exercise.

University of Oregon, Department of Human Physiology 2013-2020

Lab instructor: Human Physiology 471 (Fall) 2020

Lab instructor for the upper-division course, Environmental Physiology, with approximately 40 undergraduate human physiology majors. Designed and conducted laboratory demonstrations that illustrated course concepts including thermoregulatory, high altitude, dive, and space physiology. Guest lectured on thermoregulatory responses to hyperthermia.

Instructor of Record: Human Physiology 324 (Summer) 2019

Instructor of record for the upper-division course, Cardiopulmonary Physiology, with approximately 30 undergraduate human physiology majors. Condensed the course to six weeks for summer instruction. Topics included cardiovascular, pulmonary, and immune system physiology. Coordinated the laboratory sections with my teaching team (i.e., lab instructors and peer tutors).

Lab Instructor and Caretaker: Human Physiology and Anatomy 325 (Spring) 2018-2019

Lab instructor for the upper-division course, Digestive and Reproductive Physiology and Anatomy, with approximately 150 undergraduate human physiology majors. These labs provided a small classroom setting for anatomy and physiology instruction in the Department's donor body laboratory. Labs included hands-on donor body anatomy and histology, introduction to basic nutrition, and reproductive and digestive physiology. As the lab caretaker, I managed donor body preservation and lab maintenance, ordering, scheduling, lab tours to outside groups, and procurement and disposal of donor bodies.

Lab Instructor and Caretaker: Human Anatomy 321 (Fall) and 323 (Winter) 2018-2019

Lab instructor and donor body caretaker for the upper-division course sequence, Skeletal and Neuromuscular Anatomy (321) and Skeletal and Cardiopulmonary Anatomy (323), with approximately 250 undergraduate human physiology majors. Anatomy labs were conducted in the Department's donor body laboratory and provided a classroom for student oriented/hands-on identification of anatomical structures that culminated in "point and shoot" anatomy identification assessments. Oversaw proper donor body handling, including donor body procurement, preservation, maintenance, and disposal. In addition, scheduled and conducted laboratory tours to outside groups.

Instructor of Record: Human Physiology 322 (Summer) 2017

Instructor of record for the upper-division course, Neuromuscular Physiology, with approximately 40 undergraduate human physiology majors. Condensed the course to six weeks for summer instruction. Coordinated the lab sections with my teaching team (e.g. lab instructors and peer tutors).

Lab Instructor: Human Physiology 371 (Spring) 2014-2017
Lab instructor for the upper-division course, Exercise Physiology, with approximately 150 undergraduate human physiology majors. Taught student-based laboratory experiments (including anaerobic and cardiometabolic testing) to illustrate course concepts in a small classroom setting for the first half of the term. Facilitated discussions in experimental design and oversaw student-run data collection and analysis for their exercise physiology research projects during the second half of the term. These projects culminated in a poster symposium where students presented their research projects to fellow students and faculty.

Lab Instructor and Coordinator: Human Physiology 322 (Fall) and 324 (Winter) 2013-2017
Lab instructor and teaching coordinator for the upper-division sequence series, Neuromuscular Physiology (322) and Cardiopulmonary Physiology (324), with approximately 250 undergraduate human physiology majors. Designed and taught student-based laboratory experiments to illustrate course concepts. Physiology labs provided students with a small classroom setting and required them to collect data and interpret their findings in weekly graded laboratory reports. Managed teaching laboratory space, coordinated laboratory peer tutors, and oversaw their weekly lab preparation. Peer tutors were students who previously excelled in the class and wanted to gain teaching experience by assisting laboratory instructors and learning about pedagogy in lab preparations.

Instructor of Record: Human Physiology 111 (Summer) 2015
Instructor of record for the lower-division course, Science of Sex, with approximately 40 undergraduate non-science majors. Teaching this new class was part of my Science Literacy Fellowship and was designed from the ground up using backwards design. This class was taught with a strong emphasis on active learning.

Lab Instructor and Guest Lecturer: Human Physiology 104 (Spring) 2013
Lab instructor for the lower-division course, Human Health and Disease, with approximately 150 undergraduate non-science majors. Designed and taught discussion sections that illustrated course concepts from lecture. Prepared and gave several lectures to the overall class in the instructor's place. Topics included introductory level instruction in human anatomy and physiology as well as the impact of common diseases on the human body.

RESEARCH EXPERIENCE

University of Utah and U.S. Department of Veterans Affairs 2020-2022
Advanced Postdoctoral Fellow in Geriatrics
Research Fellow at the Utah Vascular Research Lab affiliated with both the University of Utah School of Medicine and Salt Lake City VA hospital.

Research Projects:

- Investigation of the mechanisms of peripheral vascular dysfunction and potential pharmacological interventions in heart failure patients with a preserved ejection fraction
- Assessment of blood pressure regulation in heart failure patients with a preserved ejection fraction
- Research on the effects of pollution on vascular function in young healthy individuals
- Study of cardiovascular dysfunction in COVID-19 "long haulers" and exploration of potential therapeutic interventions

University of Oregon, Department of Human Physiology 2012-2020
Cardiovascular Control Lab Graduate Student 2013-2020
Human based research with Drs. Christopher T. Minson and John R. Halliwill.

Graduate Research Experience:

- Mechanisms of skin blood flow and sweating in response to thermal stress
- Mechanisms of cutaneous vasodilation in humans
- Cardiometabolic adaptations to "thermal therapy" in young healthy and obese populations
- Physiological effects of overdressing and exercise-heat stress in elite runners
- Hemodynamic effects of hot water immersion in spinal cord injury patients
- Hemodynamics of exercise and hot water immersion
- Cardiometabolic adaptations to dynamic exercise training with and without histamine receptor blockade
- Exercise performance in the heat

Master's Thesis: Mechanisms of Local Heat Acclimation
Committee: Dr. Christopher Minson, Dr. John Halliwill

- Investigated cutaneous sudomotor and vasomotor adaptations to repeated localized heating of the forearm

Dissertation Research: Thermal Loading Modalities and Cutaneous Active Vasodilation
Committee: Dr. Christopher Minson, Dr. John Halliwill, Dr. Grant Simmons, Dr. William Cresko

- Investigated mechanisms of cutaneous vasodilation and sweat gland activation to differing thermal loading modalities (i.e., exercise vs. passive whole-body heating) and postures (i.e., seated vs. supine)

Columbia Sportswear Lab Technician 2012
Lab Technician in Dr. Christopher Minson's lab. Conducted product testing for Columbia Sportswear.

Cardiovascular Control Lab Research Assistant 2012
Undergraduate research assistant for Dr. Christopher T. Minson. Assisted with research on the mechanisms of vasodilation in human skin microcirculation. Also

assisted with research on performance exercise in hot environments. Conducted my own research project (Won the David S. Bruce Award) on the role of K_{ATP} and K_{ir} channels in skin microcirculation as an undergraduate.

SCHOLARSHIP

Peer Reviewed Journal Publications

1. Jeremy K. Alpenglow, Kanokwan Bunsawat, **Michael A. Francisco**, Jesse C. Craig, Jarred J. Iacovelli, John J. Ryan, and D. Walter Wray. Evidence of Impaired Functional Sympatholysis in Patients with Heart Failure with Preserved Ejection Fraction. *Am J of Physiol-Heart and Circ Phys.* 2023 325:4, H806-H813
2. Kanokwan Bunsawat, Seth Holwerda, Jeremy Alpenglow, Ryan Broxterman, **Michael Francisco**, Jesse Craig, Jarred Iacovelli, Joshua Weavil, Danilo Iannetta, Erin Inglis, Eric Tuday, Jonathan Harrison, Christy Ma, John Ryan, and D. Walter Wray. Arterial baroreflex control of heart rate in young and older adults and in patients with heart failure with preserved ejection fraction. *Physiology* 2023 38:S1
3. Alpenglow, J. K., Bunsawat, K., **Francisco, M. A.,** Craig, J. C., Iacovelli, J. D., Ryan, J. J., & Wray, D. W. (2022). Reflex Sympathetic Vasoconstriction and Functional Sympatholysis In Patients With Heart Failure With Preserved Ejection Fraction. *Medicine & Science in Sports & Exercise*, 54(9S), 681.
4. **Michael A. Francisco,** Brandon M. Gibson, John R. Halliwill, Christopher T. Minson. Cholinergic nerve activation during cutaneous active vasodilation in exercise heat loading is similar to passive whole-body heat loading. *J Appl Physiol*. 134(4):933-940, 2023.
5. **Michael A Francisco**, Joshua F. Lee, Zachary Barrett-O'Keefe, Jonathan H. Groot, Stephen M. Ratchford, John J. Ryan, Jose N. Nativi, Russel S. Richardson, Walter Wray. Evidence of locomotor microvascular dysfunction in heart failure patients with preserved ejection fraction. *Hypertension*. 78(6): 1750-1759, 2021
6. Emily Larson, Brett Ely, Vienna Brunt**, Michael Francisco**, Sarianne Harris, John Halliwill, Christopher Minson. Brachial and carotid hemodynamic response to hot water immersion in men and women. *Am J Physiol Regul Inegr Comp Physiol.* 321:R823-R832, 2021.
7. **Michael A. Francisco**, Cameron Colbert, Emily A. Larson, Dylan C. Sieck, John R. Halliwill, Christopher T. Minson. Hemodynamics of post-exercise vs. post-hot water immersion recovery. *J Appl Physiol*. 130:1362-1372, 2021
8. B.R. Ely, **M.A. Francisco**, J.R. Halliwill, S.D. Bryan, L.N. Comrada, E.A. Larson, V.E. Brunt, C.T. Minson. Heat therapy reduces sympathetic activity and improves cardiovascular risk profile in women who are obese with polycycstic ovary syndrome. *Am J Physiol Regul Inegr Comp Physiol.* 317(5): R630-R640, 2019.
9. V.E. Brunt, K.M Needham, L.N. Comrada, **M.A. Francisco**, T.M. Eymann, C.T. Minson. Serum from young, sedentary adults who underwent passive heat therapy improves endothelial cell angiogenesis via improved nitric oxide bioavailability. *Temperature.* 6(2):169-178, 2019.
10. Brett R. Ely, Laurie N. Blanchard, Jared Steele, **Michael A. Francisco**, Samuel N. Cheuvront, Christopher T Minson. Physiological responses to overdressing and exercise-heat stress in trained runners. *Med Sci Sports Exerc*. 50(6): 1285-1296, 2018.

11. **Michael A. Francisco**, Vienna E. Brunt, Krista N. Jensen, Santiago Lorenzo, Christopher T. Minson. Ten days of repeated local forearm heating does not affect cutaneous vascular function. *J Appl Physiol*. 123(2):310-316, 2017.
12. Vienna E. Brunt, Taylor M. Eymann, **Michael A. Francisco**, Matthew J. Howard, and Christopher T. Minson. Passive heat therapy improves cutaneous microvascular function in sedentary humans via improved nitric oxide-dependent dilation. *J Appl Physiol*. 121(3):716-723, 2016.
13. Vienna E. Brunt, Matthew J. Howard, **Michael A. Francisco**, Christopher T. Minson. Passive heat therapy improves endothelial function, arterial stiffness and blood pressure in sedentary humans. *J Physiol*. 594(23):7143-7144, 2016.

Manuscripts in Review or Preparation

1. **Michael A. Francisco**, Jeremy K. Alpenglow, Kanokwan Bunsawat, Jarred J. Iacovelli, Christy L. Ma, John J. Ryan, Keith B. Quencer, Claire S. Kaufman, and D. Walter Wray. Carotid baroreflex function in patients with heart failure with a preserved ejection fraction. (In preparation)
2. **Michael A. Francisco,** Brandon M. Gibson, John R. Halliwill, Christopher T. Minson. Postural influences on the nitric oxide component of cutaneous active vasodilation. (In preparation)
3. Dylan Sieck, **Michael Francisco**, Emily Larson, Christopher Minson, and John Halliwill. Histamine and cardiovascular adaptations to exercise training: O_2 Delivery. (In preparation)
4. Leandro Campos de Brito, **Michael A. Francisco**, John R. Halliwill, Christopher T. Minson. FloWave software is reliable in conduit vessel blood flow and flow mediated dilation analysis. (In preparation)

Letters to Editor and Invited Commentaries

1. Letter to the Editor: Brunt, V.E., Howard, M.J., **Francisco, M.A.**, Ely, B.R., C.T. Minson. Reply to: "Short-term heat therapy: sufficient stimulus for structural vascular adaptations? *Journal of Physiology* 595(11): 3669-3670, 2017.
2. Reply to: Brunt, V.E., Howard, M.J., **Francisco, M.A.**, Ely, B.R., C.T. Minson**.** "Heat Therapy: an ancient concept re-examined in the era of advanced biomedical technologies. *Journal of Physiology* 594(23): 7143-7144, 2016.

Book Chapters

1. **Michael A Francisco**, Christopher T Minson. Cutaneous active vasodilation as a heat-loss thermoeffector. In: Thermoregulation: From Basic Neurosciences to Clinical Neurology. *Handbook of Clinical Neurology*.156:194-209, 2018.

Conference Presentations

1. **Francisco MA**, Alpenglow J, Bunsawat K, Iacovelli JD, Ma CL, Ryan JJ, Quencer KB, Claire S. KaufmanCS, Wray DW. Carotid Baroreflex Responsiveness in Patients with Heart Failure with a Preserved Ejection Fraction. *2022 Experimental Biology Conference, Philadelphia, PA.*
2. **Francisco MA**, Gibson B, Halliwill JR, Minson CT. Cholinergic nerve contribution to cutaneous active vasodilation in response to exercise heat-heat loading is similar to passive whole-body heat-loading*. 2021 Experimental Biology Conference, virtual.*
3. **Francisco MA,** Colbert C, Larson EA, Sieck DC, Halliwill JR, Minson CT. Blood Pressure and Brachial Shear Patterns During Recovery from Exercise versus Passive Heat Stress. *2019 Experimental Biology Conference, Orlando, FL.*

4. **Francisco MA**, Brunt VE, Jensen KN, Miner CJ, Ely BR, Minson CT. Local forearm heat acclimation improves cutaneous vascular function in humans. *2014 Pharmacology and Physiology of Temperature Regulation Conference, Krueger, South Africa.*
5. **Francisco MA,** Fujii N, Minson CT, Brunt VE. A novel look at KIR channels and potassium in human skin. *2013 Experimental Biology Conference, Boston, MA.*

Abstracts

1. **Francisco MA**, Alpenglow J, Bunsawat K, Iacovelli JJ, Ma CL, Ryan JJ, Quencer KB, Claire S. KaufmanCS, Wray DW. Carotid Baroreflex Responsiveness in Patients with Heart Failure with a Preserved Ejection Fraction. *2022 Experimental Biology Conference, Philadelphia, PA.*
2. Alpenglow J, Bunsawat K, **Francisco MA,** Weavil JC, Broxterman RM, Iacovelli JJ, Harrison JD, Morgan DE, Ryan JJ, Ma CL, Wray DW. Skeletal Muscle Oxygen Delivery and Utilization during Exercise in Heart Failure with Preserved Ejection Fraction: Role of Sympathetic (α-adrenergic) Vasoconstriction. 2022 *Experimental Biology Conference, Philadelphia, PA.*
3. Bunsawat K, Broxterman RM, Jarret CL, Craig JC, **Francisco MA**, Alpenglow J, Iacovelli JJ, Ma CL, Ryan JJ, Wray DW. The impact of short-term tetrahydrobiopterin (BH_4) supplementation of peripheral vascular function in heart failure with preserved ejection fraction (HFpEF). 2022 *Experimental Biology Conference, Philadelphia, PA.*
4. **Francisco MA**, Gibson B, Halliwill JR, Minson CT. Cholinergic nerve contribution to cutaneous active vasodilation in response to exercise heat-heat loading is similar to passive whole-body heat-loading*. 2021 Experimental Biology Conference, virtual.*
5. **Francisco MA**, Colbert C, Larson EA, Sieck DC, Halliwill JR, Minson CT. Blood Pressure and Brachial Shear Patterns During Recovery from Exercise versus Passive Heat Stress. 2019 *Experimental Biology, Orlando, FL*.
6. Larson EA, Ely BR, **Francisco MA**, Brunt VE, Minson CT. Thermoregulatory response to acute passive heat exposure in individuals with low-level spinal cord injury. 2019 *Experimental Biology, Orlando, FL*
7. Larson EA, Ely BR, **Francisco MA**, Wright E, Halliwill JR, Minson CT. Thermoregulatory and Cardiovascular Adjustments to Acute Passive Heat Exposure in Low-level Spinal Cord Injury. *Presented at: Experimental Biology Meeting, 2018 April 21-25: San Diego, CA.*
8. Brunt VE, Jeckell AT, Ely BR, Howard MJ, **Francisco MA**, Minson CT. Passive Heat Stress Prevents Endothelial Ischemia-Reperfusion Injury in Young Healthy Humans. *Experimental Biology 2016.*
9. Brunt VE, Needham KW, Comrada LN, **Francisco MA**, Minson CT. Passive Heat Therapy as a Novel Approach for Inducing Angiogenesis in Humans: Roles of Nitric Oxide*. Poster presented at: Experimental Biology 2016. Talk presented at: Experimental Biology 2016.*
10. Brunt VE, **Francisco MA**, Needham KM, Comrada LN, Ely BR, & Minson CT. Passive heat therapy improves forearm reactive hyperemia and angiogenic balance in young healthy humans. *2015 American College of Sports Medicine Annual Meeting, San Diego, CA.*
11. Brunt VE, Ely BR, **Francisco MA**, & Minson CT. Chronic heat therapy improves endothelial function and arterial stiffness in young healthy humans. *2015 American College of Sports Medicine Northwest Chapter, Bend, OR, and University of Oregon Graduate Research Forum, Eugene, OR.*
12. Livingston KA, Brunt VE, **Francisco MA**, Ely BR & Minson CT. The effect of chronic passive heat therapy on resting heart rate, blood pressure, body core temperature. *Presented at: American College of Sports Medicine Northwest Chapter, Bend, OR.*

13. Howard MJ, Brunt VE, **Francisco MA**, Ely BR & Minson CT. Chronic passive heat therapy on pulse wave velocity as a measure of arterial stiffness. *2015 American College of Sports Medicine Northwest Chapter, Bend, OR.*
14. Eymann TM, Brunt VE, **Francisco MA**, Ely BR & Minson CT. Chronic passive heat therapy improves microvascular nitric-oxide dependent dilation during skin local heating. *2015 American College of Sports Medicine Northwest Chapter, Bend, OR.*
15. Jeckell AT, Brunt VE, **Francisco MA**, Ely BR, & Minson CT. The effect of chronic passive heat therapy on forearm reactive hyperemia. *2015 American College of Sports Medicine Northwest Chapter, Bend, OR.*
16. Comrada LN, Brunt VE**,** Needham KM, **Francisco MA**, Ely BR, & Minson CT. In *vitro* angiogenesis increases with chronic passive heat therapy: likely mechanism for improved cardiovascular health. *2015 American College of Sports Medicine Northwest Chapter, Bend, OR.*
17. Brunt VE, Ely BR, **Francisco MA**, Kaplan PF, & Minson CT. Repeated passive heat exposure improves arterial stiffness, endothelial-dependent dilation, and cutaneous vascular function in young healthy humans. *2014, International Symposium on the Physiology and Pharmacology of Temperature Regulation, Skukuza, South Africa.*
18. **Francisco MA**, Brunt VE, Jensen KN, Miner JC, Ely BR, Minson CT. Local forearm heat acclimation improves cutaneous vascular function in humans. *2014 International Symposium on the Physiology and Pharmacology of Temperature Regulation, Skukuza, South Africa.*
19. Fujii N, Brunt VE, **Francisco MA,** Minson CT. Endothelium-dependent cutaneous vasodilation in young smokers: role of endothelial-derived hyperpolarizing factors. *2013 Experimental Biology Conference, Boston, MA.*
20. **Francisco MA,** Fujii N, Minson CT, Brunt VE. A novel look at KIR channels and potassium in human skin. *2013 Experimental Biology Conference, Boston, MA.*

Other Media

1. **Michael Francisco.** Hot Tubs: The New Home Treadmills? *American Physiological Society's ISPYPHYSIOLOGY blog post*. April 2021. https://ispyphysiology.com/2021/04/23/hot-tubs-the-new-home-treadmills/

Scholarly Referee (Journals)

- Circulation 2021-present
- Journal of Applied Physiology 2020-present
- Regulatory, Integrative and Comparative Physiology 2020-present
- Experimental Gerontology 2021-present
- Purinergic Signaling 2021-present

UNIVERSITY SERVICE

Undergraduate Honors Thesis Mentor 2019-2020

Mentored undergraduate honor students through their honors research thesis for Dr. Christopher Minson.

- Cameron Colbert, Undergraduate thesis project, Department of Human Physiology, University of Oregon, 2019.
- Jolie Jitto, Undergraduate thesis project, Department of Human Physiology, University of Oregon, 2020.

SAIL Volunteer and Speaker 2013-2019
Worked with high school students participating in the University of Oregon's SAIL (Summer Academy to Inspire Learning) program. Program was designed for high school students who may not otherwise be thinking about going to college or university after graduation. The goal was to show them the possibilities the University has to offer and to generate interest in STEM in traditionally underrepresented groups.

Panel Speaker 2018
Undergraduate Career Forum (Hosted by: Women in Graduate Studies), University of Oregon

Committee Member, Graduation Committee 2017
Graduate Student Representative (Human Physiology Department), University of Oregon

Non-Departmental Undergraduate Honors Thesis Committee Member 2016
Geoff Thoma, Undergraduate thesis defense, Department of Political Science, University of Oregon

HPHY Graduate Student Club Vice President 2014-2015
Human Physiology Graduate Student Career Club Vice President

AFFILIATIONS AND SKILLS

PROFESSIONAL AFFILIATONS

- The American Physiological Society
- American Heart Association
- American College of Sports Medicine

SOFTWARE SKILLS AND RESEARCH TECHNIQUES

- Cardiometabolic testing
- Body composition assessment
- Phlebotomy
- Ultrasonography (FMD, PLM, CBF, etc.)
- Intradermal microdialysis and laser Doppler flowmetry
- Thermocouple design, construction, and application
- Resistance hygrometry
- Microneurography
- Applanation tonometry
- Oral glucose tolerance testing
- Modified Oxford technique
- Blood pressure regulation assessment via lower body negative pressure and variable neck pressure
- Venous occlusion plethysmography
- Blood volume assessment
- Cardiac output assessment
- Anaerobic capacity testing
- Windaq and BIOPAC data acquisition
- SigmaStat, SigmaPlot, and SPSS
- LABVIEW
- MATLAB
- Blackboard
- Canvas