ERICA A WEHRWEIN, PhD
Michigan State University, Department of Physiology
567 Wilson Rd, 2168 Biomedical Physical Sciences Bldg
East Lansing, MI 48823
wehrwei7@msu.edu; 517-884-5043

EMPLOYMENT

Oct 2024-Present	Professor, Department of Physiology, College of Natural Sciences, Michigan State University, East Lansing MI
Oct 2018-Oct 2024	Associate Professor, Department of Physiology, College of Natural Sciences, Michigan State University, East Lansing MI
Nov 2011-Oct 2018	Assistant Professor, Department of Physiology, College of Natural Sciences, Michigan State University, East Lansing MI

EDUCATION AND TRAINING

2008-2011	Postdoctoral Fellow, Human and Integrative Physiology, Dept of Anesthesiology Research Autonomic Division, Mayo Clinic, Rochester, MN (Fellowship Mentor: Michael J Joyner, MD) Projects: 1) Novel role for peripheral chemoreceptors in regulation of blood glucose; Control of sympathetic nerve activity in blood pressure regulation, 2) Respiratory modulation of muscle sympathetic nerve activity, 3) Interactions between chemoreflex and baroreflex in control of blood pressure
2002-2008	Ph.D., Physiology, Dept of Physiology, Michigan State University (3.94 GPA) Dissertation Topic: Elucidating a role of cardiac norepinephrine transporter in hypertension (Major Advisor: David L Kreulen, PhD) Dissertation Committee: Gregory D Fink, Stephen E DiCarlo, William S Spielman, and Ronald Meyer Lab Rotations: Fall 2003, Robert Wiseman, PhD; Spring 2003: Stephanie W Watts, PhD
1998-2001	M.S., Biological Sciences, Dept of Biological Sciences, Western Michigan University (4.0 GPA) Thesis Topic: Activity-Induced Changes in Neurotrophic Factor Expression (Major Advisor: John M Spitsbergen, PhD)
1993-1998	B.S., Biomedical Science (Pre-Med) with Chemistry Minor (selected coursework in Secondary Education, Biology, Psychology), Western Michigan University, Cum Laude

NOTABLE HONORS

2025 Michigan State University, President's Distinguished Teaching Award

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American Physiological Society Fellow, 2024

Featured in APS The Physiologist Magazine 2024

https://www.physiology.org/publications/news/the-physiologist-magazine/under-the-microscope/the-power-of-teaching?SSO=Y

Featured by MSU Nat Sci Article

https://physiology.natsci.msu.edu/physiology-news/erica-wehrwein-named-american-physiological-society-fellow.aspx

American Physiological Society Guyton Educator of the Year, 2022

https://natsci.msu.edu/news/erica-wehrwein-named-distinguished-educator-of-the-year.aspx

2022 Western Michigan University Alumni Achievement Award (Dept of Biological Sciences)

https://wmich.edu/arts-sciences/alumni/alumni-awards

2022 Western Michigan University Learner Centered Pinnacle Award (*selected from all department alumni winners for the one who most exemplifies the Pillar of WMU to be learner centered)

https://wmich.edu/news/2022/10/69545

Featured alumni in Western Michigan University magazine

https://wmich.edu/news/2022/09/69144

Donald & Barbara Koch Quality in Undergraduate Teaching Award (all university honor), 2020

https://msutoday.msu.edu/news/2021/quality-in-undergraduate-teaching

CURRENT KEY ROLES

Internal

Course Director, PSL 475L Capstone Laboratory in Physiology (supervise up to 10 TAs per semester)

Director, PSL Senior Capstone Projects

Lead for Integrative Biomedical Laboratory, HM 553 Medical School I, Pulmonary Function Testing, Electrocardiogram, and Blood Pressure

Departmental Outreach Coordinator

Chair, Departmental Award Committee

Departmental Education Development Committee

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Faculty Mentor, Physiology Society and Reach Outside Student Clubs

Graduate Program Recruitment Booth Host, Experimental Biology and Michigan Physiological Society, 2014-present

External

Chair, Advisory Board, American Physiological Society Center for Physiology Education

Director, Physiology Majors Interest Group (P-MIG)

Editorial Board, Advances In Physiology Education Journal

Reviewer, International Research Congress on Integrative Medicine and Health (IRCIMH) Congress

iSpy Physiology Contributor (Lay Press Blog, sponsored by APS)

TEACHING EXPERIENCE

Fall 2025-present	Course Director and Instructor, PSL 431 Human Physiology I, Autonomic, Cardiac, Vascular, Integrative Units, Michigan State University College of Natural Science
Fall 2025-present	Instructor, HM 552 Histology
Fall 2025-present	Instructor, HM 555 Rotational Study Group, Pulmonary (Cough and Dyspnea Units)
Spring 2012-present	Course Director and Instructor, PSL 475 Capstone Laboratory, Michigan State University College of Natural Science
Spring 2012-present	Instructor, HM 553 Medical School I, Virtual Imaging and Physiology and Integrative Biomedical Laboratory, Pulmonary Function Testing, Electrocardiogram, and Blood Pressure
Summer 2004-present	Instructor of Physiology, Gifted and Talented Education Program Science Summer Camp for Middle School Students, Mathematics, Science & Technology Division, Michigan State University
Summer 2014, 2015	Course Director and Instructor, PSL 439 Integrative Physiology, Michigan State University College of Natural Science
Fall 2009	Guest Lecturer, Cardiovascular Pathophysiology Honors Course, Winona State University (Course Director: Edward Wilson)
Winter 2009-2012	Guest Lecturer (Cardiac Cycle and Electrocardiogram Lectures), Integrative Physiology Course, Department of Physiology and

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	Biomedical Engineering, Mayo Clinic (Course Director: Nisha Charkoudian, PhD)
Spring 2007	Guest Lecturer (Autonomic Physiology Unit), PSL 828 (Systems Physiology), Department of Physiology, Michigan State University
Spring 2005	Laboratory Instructor/Teaching Assistant, PSL 475 (Capstone Physiology Laboratory), Department of Physiology, Michigan State University
Spring 2004	Instructor, NSC301 (Science for Elementary Schools), Division of Mathematics and Science Education, Michigan State University
Fall 2003	Teaching Assistant, NSC301 (Science for Elementary Schools), Division of Mathematics and Science Education, Michigan State University
Summer 2003	Instructor, Scientific Research Methods and Writing for the Natural Sciences, McNair/SROP Scholars Program (Summer Research Experience for Undergraduate Students), Michigan State University
Winter 2000-Fall 2001	Laboratory Instructor/Teaching Assistant, BIOS 350 (Human Physiology For Majors Laboratory), Department of Biological Sciences, Western Michigan University
Fall 2001	Laboratory Coordinator, BIOS 350 (Human Physiology For Majors Laboratory), Department of Biological Sciences, Western Michigan University
Spring 2000	Laboratory Instructor/Teaching Assistant, BIOS 240 (Human Physiology for non-majors) Department of Biological Sciences, Western Michigan University
Fall 1999	Laboratory Instructor/Teaching Assistant, BIOS 151 (Organismal Biology), Department of Biological Sciences Western Michigan University
Fall 1998	Laboratory Instructor/Teaching Assistant, BIOS 211 (Human Anatomy), Department of Biological Sciences Western Michigan University
Fall 1997-Fall 1998	Course Content Tutor for Introduction to Biomedical Sciences, Molecular Biology, Cellular Biology, Organismal Biology, Genetics, Human Anatomy and Human Physiology, Academic Skills Center, Western Michigan University

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Spring 1996	Supplemental Instruction Leader, BIOS 112 (Introduction to Biomedical Sciences), Academic Skills Center, Western Michigan University

SERVICE

A. Community Outreach

Physiology Understanding Week

- PhUn Day Lead Organizer, Impression 5 Science Center, 2012-present (~1000 visitors to the event annually)

Elementary School Science Nights

- Marble Elementary School Science Night 2013-present
- Beagle Elementary Science Night, March 2016-present
- Whitehills Elementary Science Night, 2016-present
- Glencairn Elementary Science Night 2014-present
- Donley Elementary Science Night, 2013-presnet
- Fairview Elementary Science Night, 2013-present
- Lansing Charter Academy Science Experience, Mar 2017

Camps

- Mathematics, Science, and Technology (MST) 2 week intensive Summer Camp for gifted middle school students, Physiology Class Instructor, Course Designer 2005, Instructor 2006, 2007, 2015, 2016, 2017, 2020, 2022, 2023
- Young Future Phenoms, July 2016-present
- Grandparents University 2013, 2014

Other Outreach

- MSU Science Festival- expo tent or other event for physiology and meet a physiologist stations, lead organizer, April 2013-present
- Coach, Michigan Physiology Quiz (MI-PQ) Team from MSU (2nd place in state tournament), 2018-present
- Glencairn Elementary STEM club mentor, 2016-2017
- Mason High School-PhUn Day (high school honors student experiment in my laboratory) 2013
- 4H Science Day, 2014
- Girl Scout STEM Day, 2014
- St Thomas Elementary- Kindergarten Physiology Event, Mar 2012
- Volunteer Judge, Michigan Science Olympiad State Tournament “Anatomy B” event (middle school division), 2013, 2014
- Building a Healthier Community InSciEd Out: Mayo Clinic community outreach, Summer 2010-present

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- Elementary Science Fair Coach: Bi-weekly visits to Lincoln Elementary, Oct 2010-March 2010
- Participant in Speed Date a Scientist Day: interaction with elementary and middle school teachers from local elementary schools, Aug 2010, Feb 2011
- Celebration of Research Day volunteer (lab tours and research introduction to High School students) February 2009-11
- GATEway Science Fair Judge, Mayo Clinic February 2009-11
- Research Mentor/Project Consultant, Winona State University (Laboratory of Dr Ted Wilson), Fall 2009
- Event Coordinator and Judge, Michigan Science Olympiad State Tournament "Experimental Design" event (high school and middle school divisions), 2003-06

B. Conference and Symposium Planning

Director and Conference Planning Committee, 4th Conference Physiology Majors Interest Group, Univ Oregon, August 2023

Symposium Co-Chair, Using History of Physiology in Teaching About Science as a Research Endeavor, Experimental Biology Symposium, 2021

Director and Conference Planning Committee, 3rd Conference Physiology Majors Interest Group, Univ Oregon, July 2020

Symposium Co-Chair, Using History of Physiology in Teaching About Science as a Research Endeavor, Experimental Biology Symposium, 2020

Lead Speaker and Moderator, Physiology Majors Interest Group Networking Session, APS Education Sponsored Session, Experimental Biology, April 2020

Symposium Co-Chair, Curriculum, Core Concepts, and Cooperation: Physiology Majors Interest Group, Human Anatomy & Physiology Society, 2019

Conference Planning Committee-5th Annual Michigan Physiological Society June 2018

Director and Conference Planning Committee, 3rd Conference Physiology Majors Interest Group, Univ Minnesota, June 2019

Director and Conference Planning Committee, 2nd Conference Physiology Majors Interest Group, Univ Arizona, June 2018

Director and Conference Host, 1st Conference Physiology Majors Interest Group, Michigan State Univ, May 2017

Past President and Conference Planning Committee-4th Annual Michigan Physiological Society June 2016

Conference Planning Committee, 2nd conference for Michigan High School Teachers on Physiology 2017 (partner with APS), June 2017

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Host, ADI workshop for Physiology Educators, June 2017

Co-founder and organizing committee, First Michigan Physiology Quiz (MI-PQ), June 2017

President and Conference Planning Committee-3rd Annual Michigan Physiological Society 2016

Conference Planning Committee, First conference for Michigan High School Teachers on Physiology 2016 (partner with APS)

Symposium Co-Chair, The mind matters: Psychology as a forgotten variable in autonomic physiology, Experimental Biology 2016

Symposium Co-Chair, What's Your Major? The Rise of the Undergraduate Physiology Degree, APS Education Symposium, Experimental Biology 2015

Symposium Chair, Resilience is Power: Dealing with the Ups and Downs of Your Scientific Career, APS Career Symposium, Experimental Biology 2015

Symposium Co-Chair, Conscious Choice and Serendipity in Your Career Trajectory: A Panel Discussion, APS Career Symposium, Experimental Biology, 2014

Symposium Chair, Complementary and Alternative Therapies for Chronic Autonomic and Cardiovascular Diseases, FASEB Summer Research Conference Neural Control 2013

Symposium Organizer and Co-Chair with Glenn Toney PhD, Control of sympathetic nerve activity: Coupling to Respiration, Experimental Biology Neural Control Featured Topic, 2010

Symposium Co-Chair, "Donald Reis Memorial-Neural Control & Autonomic Regulation Trainee Featured Topic, Experimental Biology, 2010

Workshop Organizer, "Begin with the end on mind planning for a successful scientific career", Mayo Clinic guest speaker Philip Clifford, PhD, Feb 2010

Symposium Organizer and Co-Chair, Experimental Biology Trainee Symposium, 2007: "Multiple Career Options In Physiology: Understand your options and how to get there", 2007

C. College and Departmental Service

College

CHM Mentoring Circle

CHM MMI interviewer, 2024

CHM Curriculum Review of Physiology Content, 2024

College of Natural Science Curriculum Committee

MSU representative to HHMI Constellation Studio on Quantitative Skills and Assessment in Undergraduate Students, March 2017

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MSU Biology Initiative Operating Committee, College of Natural Sciences, July 2012-July 2019

College Search Committee Work

- Human Biology Faculty Search (meet with candidates and evaluate), 2023
- Human Biology Capstone Instructor, 2017
- Director search for Bio Sci Program, 2016

Department

Chair, PSL Awards Committee

Education Development Committee

PSL Chair Search, 2024

PSL 250 Search, 2024

PSL Fixed Term Annual Review Committee, 2023-25

Faculty Mentor, Physiology Society Undergraduate Club, Michigan State University, Spring 2012- present

Graduate Program Recruitment Booth Host, Experimental Biology and Michigan Physiological Society, 2014-present

Honors and Entrepreneurial Option Mentor PSL 475, Michigan State University, Spring 2012-present

Departmental Career and Professional Development Student Advisor, Michigan State University, Spring 2012- present

Chair, Undergraduate Programming and Curriculum Committee, MSU Dept of Physiology, 2014-2016

Member, Undergraduate Programming and Curriculum Committee, MSU Dept of Physiology 2012-2018

MSU Physiology Department Search Committee Work

- PSL Department Chair Search, 2022-2024
- Faculty Search for PSL 250 Instructor, 2021
- Chair, Instructional Technician Search, 2016
- Faculty Search, PSL 311 Instructor, 2016
- Faculty Search, College of Veterinary Medicine integrative physiology researcher, 2016
- Chair PSL 250 Assistant Professor Faculty Search, Nov 2013-March 2014
- Faculty Search for PSL 250 Instructor, April 2013-Aug 2013
- Chair for Instructional Technologist Search, Jan-Feb 2013
- Professional Academic Advisor Search, Nov 2012- April 2013

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Other Service

- Mayo Research Fellows Association, Coordinator on career and teaching development workshops, 2008-2011
- Co-Organizer, Writing Support Group, Departmental of Physiology & Biomedical Engineering, Mayo Clinic, 2009-2011
- Postdoctoral Affairs Committee, Mayo Clinic Department of Physiology and Biomedical Engineering, 2008-09
- Simulated Patient Volunteer, College of Human Medicine, Michigan State University, 2003
- Biological Sciences Graduate Student Organization (BGSO)- President April 2000-April 2001, BGSO student representative for departmental faculty search, 2000, Western Michigan University
- Teaching Circle- Co-founder/Secretary, group of teaching assistants in Biological Sciences with the goal of improving quality of teaching, Western Michigan University, 2000
- Scientific Consultant, National Science Foundation Education Grant (Jane Rice, PhD., Michigan State University), 2003

D. Professional Service and Consulting

External Reviewer, College of Arts and Sciences at the University of Oregon, Conduct a comprehensive review of the Department of Human Physiology

Consultant, University of Oregon, Mission to Mars – A Novel Model of Experiential Learning through Role-Play in a Simulated Professional Experience, 2025

> Develop a novel model for a course that is designed to facilitate the development of professional skills (i.e., career readiness competencies) for undergraduate majors in human physiology while simultaneously exploring the fascinating physiology of human spaceflight.

Consultant, McGraw-Hill Medical Division, First-Aid-USMLE-Step-2025 TextBook Question Reviewer (Content expert for autonomic, cardiac, vascular, pulmonary, endocrine); checking accuracy of a new AI Tool to generate accurate questions

Judge for APS Physiolo-GIST Competition (Generalized & Impactful Short Talk), APS Summit 2026

APS CPE educator conference planning committee

Physiology Majors Interest Group Conference planning committee

APS symposium proposal, From the Lab to the Layperson: Effective Science Communication to the General Audience Consultant, U Oklahoma Physiology Education (Bodine and Busik)

Consultant, U Arizona, Development of Capstone Courses (Kanady)

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Consultant, Launch of a Texas Chapter of APS

Advisory Board, American Physiological Society Center for Physiology Education

- Projects:
  - Lead, Autonomic nervous system month of learning
  - CPE Undergraduate Curriculum Working Group
  - CPE Conference Working Group

APS Guyton Award Committee

APS NCAR Award Committee

APS Anne Crecelius Award Committee

AD Instruments, Consultant on New Autonomic Testing Mini-Laboratory Lessons, Cold Pressor Test

Co-Chair, American Physiological Society Center for Physiology Education Interim Advisory Board

Co-Chair, American Physiological Society Center for Physiology Education Task Force

Director, Physiology Majors Interest Group (P-MIG)

Invited Guest Editor, International Journal of Environmental Research and Public Health, Special Issue on Interdisciplinary Aspects of Women's Physiology and Physical Fitness

Association of Charis of Dept. of Physiology, Physiology Core Concepts Working Group

American Physiological Society Teaching Section Steering Committee, Liaison to Educators Committee

Michigan Physiological Society, Conference Planning Committee and Michigan Physiology Quiz Co-Coordinator

Editorial Board, Advances In Physiology Education Journal

Consulting Editor, Ganong's Medical Physiology 26th Edition (McGraw Hill)

Michigan Physiological Society, Conference Planning Committee and Michigan Physiology Quiz Co-Coordinator

External Program Evaluator, Gonzaga University Dept of Human Physiology, March 2021

Education Consultant, University of Georgia Physiology Department (starting a new BS degree), February 2019

Education Consultant, University of Louisville (starting a new BS degree), February 2018

Physiology Majors Interest Group, Co-Founder 2014

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Michigan Physiology Quiz (state-wide quiz event for undergraduates), Event Organizer and Judge, 2017-present

Human Anatomy and Physiology Society Curriculum and Instruction Committee, Subcommittee on Physiology Learning Objectives, 2017-2019

Invited abstract reviewer, International Congress on Integrative Medicine and Health and the Academic Consortium for Integrative medicine and health, Dec 2017-present

American Physiological Society LifeSciTRC Reviewer, 2014-2019

HHMI Focus Group Member, HAPS 2017

Co-founded Michigan Physiology Quiz (MI-PQ), State-wide competition for physiology undergraduate students (First event May 2017)

Invited Consultant on Undergraduate Education, APS strategic planning 2016-17

American Physiological Society Institute for Teaching and Learning Planning Committee, 2015-2017

Michigan Physiology Society-President, 2015-16; President Elect, 2014-15; Secretary-Treasurer, 2013-14; Founding Member, 2012

Michigan Physiological Society-Conference Planning Committee 2014-2017

American Physiological Society, Chapter Advisory Committee, 2014-2017

American Physiological Society Career Opportunities In Physiology Committee member 2012-2015

American Physiological Society, Teaching Section liaison to Education Committee, 2012-2015, 2019-2021

Abstract reviewer, International research congress on integrative medicine and health (IRCIMH) Congress, 2014, 2016-present

American Physiological Society David Bruce Awards Judge, 2012-2020

American Physiological Society Professional Skills Course Liaison 2014

American Physiological Society Publications Task Force 2011-2012

Faculty of 1000 Biology Website, Associate Faculty Member and evaluation contributor for physiology (faculty partner Gregory D Fink, PhD), http://f1000biology.com/ , Aug 2009-2014

Committee Chair, American Physiological Society, Trainee Advisory Committee 2009-2011

Committee Chair (2009) and Chair Elect (2008) of the American Physiological Society Arthur C Guyton Physiology Educator of the Year Selection Committee

American Physiological Society, Arthur C Guyton Awards Committee Member 2008-09

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American Physiological Society, Trainee Advisory Committee, 2004-2008

American Physiological Society, Teaching Section Steering Committee, 2004-2008 & 2009-2010

American Physiological Society, Volunteer for Undergraduate Poster Session, 2004-present

American Physiological Society, Professional Skills Advisory Board, 2006

Young Investigator Travel Award Judge Experimental Biology Travel Award, Society for Experimental Biology in Medicine, 2005

E. Editorial Roles and Peer Review

Editorial Board

Advances in Physiology Education

Journal of College Science Teaching Editorial Board

American Physiological Society LifeSciTRC Editor for Undergraduate Physiology

American Physiological Society Center for Physiology Education, Undergraduate Curriculum Resource Working Group

Invited Guest Editor

Consulting Editor, Ganong's Medical Physiology 26th Edition (McGraw Hill)

International Journal of Environmental Research and Public Health, Special Issue on Interdisciplinary Aspects of Women's Physiology and Physical Fitness

Journal Reviewer

Advances in Physiology Education
Journal of Physiology
Comprehensive Physiology
American Journal of Physiology-Heart and Circulatory
American Journal of Physiology-Regulatory, Integrative and Comparative Physiology
American Journal of Physiology - Renal Physiology
Clinical Autonomic Research
Autonomic Neuroscience: Basic and Clinical
OBM Integrative and Complementary Medicine
Hypertension
Computational and Structural Biotechnology Journal

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International Congress on Integrative Medicine and Health
American Journal of Undergraduate Research
Saudi Medical Journal
Behavior Therapy
Frontiers in Physiology
Frontiers in Integrative Physiology
Journal of Molecular and Cellular Cardiology
Journal of Autonomic and Autacoid Pharmacology
Journal of Physiology and Pharmacology
Biochemical Sciences
Chemical Sciences Journal
Molecular Pharmaceutics
Scientific Reports
International Journal of Environmental Research and Public Health
HAPS Educator

Laboratory Manuals:

Experiments In Physiology 10th Edition (Tharp and Woodman), 2013

Conference Abstract Review:

Invited abstract reviewer, International Congress on Integrative Medicine and Health

Invited abstract reviewer, Academic Consortium for Integrative Medicine and Health

HONORS

2025 President's Distinguished Teaching Award, Michigan State University

2022 Western Michigan University Alumni Achievement Award (Dept of Biological Sciences)
https://wmich.edu/arts-sciences/alumni/alumni-awards

2022 Western Michigan University Learner Centered Pinnacle Award
https://wmich.edu/news/2022/10/69545

(*selected from all department alumni winners for the one who most exemplifies the Pillar of WMU to be learner centered)

2022 Guyton Distinguished Educator Award (APS national teaching award)
https://natsci.msu.edu/news/erica-wehrwein-named-distinguished-educator-of-the-year.aspx

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Donald & Barbara Koch Quality in Undergraduate Teaching Award (all university honor), 2020
https://msutoday.msu.edu/news/2021/quality-in-undergraduate-teaching

Nominee for APS Guyton Educator of the Year, 2020 and 2021

Michigan State University, College of Natural Science, Undergraduate Teaching Award, 2019

Top downloaded article of the year: Wehrwein EA, Orer HS, Barman SM. Overview of the Anatomy, Physiology, and Pharmacology of the Autonomic Nervous System. Compr Physiol. 2016 Jun

Nominee to American Physiological Society Council, 2018, 2022

The Physiological Society, Dublin Conference Travel Award, 2016

Michigan State University, College of Natural Science, Teaching Prize Award for Excellence in Teaching at the Undergraduate Level, 2014

Dale Benos Early Career Professional Service Award, American Physiological Society, 2013

DiCastro-Heymans Research Recognition Award, International Society for Arterial Chemoreception, 2011

Research Recognition Award, American Physiological Society Neural Control and Autonomic Regulation Section, Experimental Biology, 2011

FMS/Penaz Wesseling Travel Fellowship Award for the 20th International Symposium on the Autonomic Nervous System, August 2009

Michael J Brody Young Investigator Award, Neural Control and Autonomic Regulation American Physiological Society, April 2009

American Physiological Society Travel Award to attend the International Union of Physiological Sciences (IUPS) in Kyoto Japan, July 2009

Caroline tum Suden/Frances Hellebrandt Postdoctoral Award Winner-selected by the American Physiological Society Women in Science Committee 2009, 2011 (declined)

FASEB Trainee Travel Award, Neural Mechanisms in Cardiovascular Regulation, Sydney, Australia 2007

Best Poster in Session Recognition, Neural Mechanisms in Cardiovascular Regulation, Sydney, Australia 2007

Best Poster Award, 17th International Symposium on the Autonomic Nervous System Poster Session 3, November 2006

Research Recognition Award for New Investigators in Education Research, Experimental Biology 2005 (Teaching Section)

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American Heart Association Hypertension Summer School Travel Stipend, 5th Annual Meeting 2005

International Union of Physiological Sciences Travel Award, Experimental Biology 2005

Society for Experimental Biology in Medicine Travel Award, Experimental Biology 2004

Commendation for Excellence in Teaching of Physiology, Michigan State University Gifted and Talented Education Program, 2004

Best Poster Presentation Award, Michigan Neuroscience Meeting 2002

Caroline tum Suden/Frances Hellebrandt Predoctoral Award Winner-selected by the American Physiological Society Women in Science Committee 2001

Distinguished Biomedical Sciences Graduate Student (research and teaching excellence)-Department of Biological Sciences, Western Michigan University 2001

University Wide Graduate Research and Creative Scholar (recognition for teaching and research excellence), Western Michigan University 2001

Department of Biological Sciences Graduate Research and Creative Scholar 2001

Student Employee of the Year nominee-Western Michigan University 2000-01

University Wide Graduate Teaching Excellence Award, Western Michigan University 2001

Western Michigan University Travel Grant Awardee-2000

Western Michigan University Travel Grant Awardee-2001

Lee Honor's College Grant for Undergraduate Research recipient

College of Arts and Sciences Undergraduate Research Grant Recipient (declined due to stipulations of another grant)

American Heart Association Grant for Undergraduate Research-honorable mention

Western Michigan University- Medallion Academic Scholarship recipient

Alpha Lambda Delta Scholarship recipient

Michigan Competitive Scholarship recipient

General Motors Scholarship for Dependent Children recipient

Dean's List (9 semesters)-Western Michigan University

Who's Who Among American College Students

National Dean's List

Golden Key National Honor Society

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GRANTS AND FUNDING

2025

University of Oregon Williams Instructional Grant, Halliwill (PI), 06/05/2025-06/04/2026

Mission to Mars – A Novel Model of Experiential Learning through Role-Play in a Simulated Professional Experience

Total direct costs: $5900

Develop a novel model for a course that is designed to facilitate the development of professional skills (i.e., career readiness competencies) for undergraduate majors in human physiology while simultaneously exploring the fascinating physiology of human spaceflight.

Role: Consultant

Funding Announcement: RFA-AT-24-010

Project Title: COMPASS: Concepts and Ontologies to Model Physiology Across Systems and Scales

Project Period: 07/01/2025-06/30/2030

UMN Contact PI: Rui Zhang

Role: Clinical Subject Matter Expert for Physiome Mapping and Prototyping

Consultant, Mind, Machine and Motor Nexus (M3X) Program, "Collaborative Research: Understanding, Modeling, and Optimizing Co-Robotization in Construction by Cognitive Profiling and Co-Learning”

Duration: 3 year project (NSF)

Previous Submissions:

2019	National Science Foundation, RCN-UBE: Sustainable partnership for enrichment of undergraduate physiology education, $500,000

Previous External Funding:

04/01/10-03/31/13	1 F32 DK84624-01A1, NIH NRSA NIDDK, Role of the carotid bodies in glucose homeostasis in humans, $39,756 (2010), $43,476 (2011)

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10/01/09-10/01/11	NIH, Clinical Loan Repayment Grant, Role of the carotid bodies in glucose homeostasis in humans, $25,000
04/01/08-03/31/10	T32 DK 07352, NIH Institutional Training Grant Diabetes and Metabolism, Role of carotid bodies in glucose homeostasis in humans, $39,996
07/01/05-07/01/07	American Heart Association Predoctoral Fellowship, “Elucidating a role of cardiac norepinephrine transporter in hypertension”, $52,000

Previous Internal Research Funding:

09/03/07-09/17/07	Chronic Disease Fellowship, College of Natural Sciences, Michigan State University, “Evaluation of antibody specificity using 3H-nisoxetine binding in cardiac membranes”, $2500
07/15/07-09/15/07	Dissertation Completion Fellowship, College of Natural Sciences, Michigan State University, “Elucidating a role of cardiac norepinephrine transporter in hypertension”, $6000

Previous Internal Education Funding:

2015-16	Teaching Learning and Education (TLE) Funding for development of PSL 311L, $125,000
2015-16	Teaching Learning and Education (TLE) Funding for enhancement of PSL 475 teaching to incorporate human and systems physiology laboratory experiences, College of Natural Sciences, Michigan State University, $129,953
2014-15	Teaching Learning and Education (TLE) Funding for enhancement of PSL 475 teaching to incorporate human and systems physiology laboratory experiences, College of Natural Sciences, Michigan State University, $18,573
2013-14	Teaching Learning and Education (TLE) Funding for enhancement of PSL 475 teaching to incorporate human and systems physiology laboratory experiences, College of Natural Sciences, Michigan State University, $253,733
2012-13	Teaching Learning and Education (TLE) Funding for enhancement of PSL 475 teaching to incorporate human and systems physiology laboratory experiences, College of Natural Sciences, Michigan State University, $156,000

Previously Submitted:

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2017	Community-Engaged Teaching Scholarship, Using an annual large-scale community-engaged teaching event to establish partnerships with local schools and the community, $5000
2017	Arnold & Mabel Beckman Foundation Scholars Program Grant, $66,720
2017	Teaching Learning and Education (TLE) Funding for updates to teaching lab computers, $8197

PUBLICATIONS

Magazine Features

Interviewed for feature story about student mental health, "Taking Its Toll: Mental health crisis overwhelms college campuses, as students and professors feel the burden", The Physiologist, July 2023 https://www.physiology.org/publications/news/the-physiologist-magazine/2023/july/taking-its-toll?SSO=Y

"Western alumna named Distinguished Educator of the Year", Western Michigan University Alumni Magazine, Sept 2022 https://wmich.edu/news/2022/09/69144

Magazine Cover and main article, "The Undergraduate Physiology Boom", The Physiologist Magazine, May 2020 https://www.physiology.org/publications/news/the-physiologist-magazine/2020/may-landing?SSO=Y

The Last Word Editorial: Physiology: Dying…or Thriving?, (pg 40), The Physiologist Magazine, September 2019, https://www.physiology.org/publications/news/the-physiologist-magazine/2019/september?SSO=Y

Special Collections

Co-organized a 14 paper Special Collection for Advances in Physiology Education from the Physiology Majors Interest Group on physiology undergraduate education https://journals.physiology.org/action/doSearch?AllField=p-mig

Book Chapters

1. Erica A. Wehrwein, Hakan S. Orer, and Susan M. Barman. Overview of the Anatomy, Physiology, and Pharmacology of the Autonomic Nervous System, Comprehensive Physiology, 2016
2. Thomas E. Dick, Yee-Hsee Hsieh, Rishi R. Dhingra, David M. Baekey, Roberto F. Galán, Erica Wehrwein, Kendall F. Morris. Cardiorespiratory Coupling: Common Rhythms in Cardiac, Sympathetic and Respiratory Activities. Progress in Brain Research: Breathing, Emotion and Evolution, 2014
3. Wehrwein EA, Joyner MJ. Regulation of blood pressure by the arterial baroreflex and autonomic nervous system. Handb Clin Neurol. 2013
4. EA Wehrwein and MJ Joyner, Cardiovascular Methods: General Considerations for Human Studies, Ch 33 in Essential Guide to Reading Biomedical Papers, 2013

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5. EA Wehrwein and MJ Joyner, Measuring Cardiac Output in Humans, Ch 34 in Essential Guide to Reading Biomedical Papers, 2013
6. EA Wehrwein and MJ Joyner, Measuring Peripheral Blood Flow in Humans, Ch 35 in Essential Guide to Reading Biomedical Papers , 2013
7. EA Wehrwein and MJ Joyner, "Arterial Baroreflex: What king, how many?", Handbook of Clinical Neurology, 2011

INVITED EDITORIALS

8. Erica A Wehrwein, Physiology: Dying…or Thriving?, The Physiologist Magazine, September 2020
9. Michael J Joyner, Jacqueline K Limberg, **Erica A Wehrwein**, and Blair D Johnson, Role of the Carotid Body Chemoreceptors in Glucose Homeostasis and Thermoregulation in Humans, Journal of Physiology 2018 Aug;596(15):3079-3085.
10. **Wehrwein EA**. Setting national standards for physiology undergraduate degree programs. Adv Physiol Educ 2018 Mar 1;42(1):1-4
11. Silverthorn D, Carroll R, and **Wehrwein EA**. Undergraduate and Medical School Physiology Education in the United States. Physiology (Bethesda). 2017
12. **Wehrwein EA**. Physiology is Alive and Well. Just ask an undergraduate student. The Physiologist, Vol 59, No 6, Nov 2016
13. **Wehrwein EA**, Carter JR. The Mind Matters: Psychology as an Overlooked Variable Within Physiology Studies. Physiology (Bethesda). 2016 Mar;31(2):74-5. doi: 10.1152/physiol.00059.2015.

iSPY PHYSIOLOGY ARTICLES (Lay Press Release sponsored by APS)

14. Blue spaces: the surprising health benefits of being near water, July 31, 2024
15. Change Your Mindset—You May Improve Your Health!, Jan 4 2023
16. Floating: How Sensory Deprivation Can Improve Wellness, Jan 14, 2022
17. Smile Rx: A Smile a Day Can Go a Long Way, April 2021
18. The Healing Power of Nature, July 2020
19. The Power of Gratitude to Improve Mental and Physical Wellness, May 2020
20. Physiology Is Alive and Well, Just Ask an Undergraduate Student, August 2016

PEER REVIEWED PUBLICATIONS

21. Samantha Musso, Stephen Elmer, and Erica Wehrwein, Health in Translation: A Workshop Model for Health Literacy and Lay Science Communication," Adv Physiol Educ. 2026 Jun 1;50(2):365-369. doi: 10.1152/advan.00324.2025. Epub 2026 Feb 16. PMID: 41696779
22. Erica Wehrwein, Who Will Teach Physiology? The Growing Shortage of Physiology Generalists, Who will teach physiology? The growing shortage of physiology generalists. Adv Physiol Educ. 2026 Jun 1;50(2):361-362. doi: 10.1152/advan.00321.2025. Epub 2026 Feb 16. PMID: 41696760
    ***This article has been chosen for the APS Spotlight Cover Program

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23. Alyssa Vadovsky, Keeler Steele, and Erica Wehrwein, Integration of Professional Competency Development in a Physiology Capstone Curriculum, Advances in Physiology Education, In Press, March 2026
24. Luís Monteiro Rodrigues* , MSc, PhD, João Gregório, MSc, PhD, **Erica Wehrwein**, PhD. Contemporary views on the future of physiology—a report from the 2019 P-MIG focus group, Front. Physiol., 06 June 2023
25. Rael B, Alfaro-Magallanes VM, Romero-Parra N, Castro EA, Cupeiro R, Janse de Jonge XAK, **Wehrwein EA**, Peinado AB. Menstrual Cycle Phases Influence on Cardiorespiratory Response to Exercise in Endurance-Trained Females., Int J Environ Res Public Health. 2021 Jan 20;18(3):860. doi: 10.3390/ijerph18030860. PMID: 33498274
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27. Aguilar-Roca N, Crecelius A, McFarland J, Rogers J, Stanescu C, **Wehrwein EA**. Where do we go from here: a forward thinking vision for physiology undergraduate degree programs. Advances in Physiology Education, Dec 2020.
28. Anderson L, Rogers J, Stanescu C, VanRyn V, **Wehrwein EA.** What Draws Physiology Educators to the Physiology Majors Interest Group: Results from Pre and Post Conference Surveys. Advances in Physiology Education, Dec 2020.
29. Rogers J, McFarland J, Stanescu C, Crosswhite P, Crecelius A. The 2019 P-MIG student survey and capturing the undergraduate perspective of physiology programming. Advances in Physiology Education, Dec 2020.
30. Stanescu C, **Wehrwein EA**, Anderson L, Rogers J. Evaluation of Core Concepts of Physiology in Physiology Curricula: Results from Faculty Surveys. Advances in Physiology Education. Dec 2020.
31. Steele K, VanRyn V, Stanescu C, Rogers J, **Wehrwein EA**. Student career aspirations, employment paths, and perceptions on career preparation in undergraduate physiology programs. Advances in Physiology Education. Dec 2020.
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38. VanRyn, V and **Wehrwein, EA**. “Building Community by Serving the Community”. Adv Physiol Educ. 2018 Jun 1;42(2):247-250. doi: 10.1152/advan.00052.2017.
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73. Valerie VanRyn, Jennifer Rogers, Jeffrey Osborn, Claudia Stanescu, and **Erica A Wehrwein** Report from the Inaugural Physiology Majors Interest Group Meeting, The Physiologist, Vol 60, No 6, Nov 2017
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ABSTRACTS AND POSTER PRESENTATIONS

1. Zal Chinoy and Erica Wehrwein, Practicing clinical lay communication skills in an undergraduate physiology laboratory course using complementary and alternative medicine therapy recommendations, Michigan Physiological Society Mid-Year Symposium, February 2025

2. Hanna Peterson and Erica Wehrwein, Career and professional development in an undergraduate science laboratory course, MSU Teaching and Learning Knowledge Sharing Conference, May 2025

3. Samantha Musso, Ally Hopman, Kirstin Parkin, and Erica Wehrwein, The Impact of Prior Communication Experience on Achieving Health Literacy Recommendations, MSU FAST Fellows Symposium, April 2025

4. Keeler Steele, and Erica Wehrwein, “Career Next Steps”: incorporating job or graduate/professional school application preparation into a capstone physiology lab course, APS Summit April 2025

5. Jackson Joseph, Hanna Peterson, and Erica Wehrwein, Integrating Professional Skills and Career Readiness into Physiology Undergraduate Education: A Capstone Laboratory Course Model, Michigan State University Department of Physiology, Michigan Physiological Society Annual Meeting, June 2025

6. E.G. Zblewski, L.C. Merem, B.A. Lattner, R.N. Woodard, E.A. Wehrwein, Insights from social media discourse: Themes and quality of medical information on TikTok #POTS, Michigan Physiological Society Annual Meeting, June 2025

7. Zal Chinoy, Kevin Kelly, and Erica Wehrwein, Beyond the Breath: Prolonged Vasodilatory Effects of a 20-Minute Slow Deep Breathing Session, Michigan Physiological Society Annual Meeting, June 2025

8. Harrison A Feber, Zal Z Chinoy, and Erica A Wehrwein, Training Pre-Health Undergraduates in Patient-Centered Communication Through a Complementary and Alternative Medicine Recommendation Assignment, Michigan Physiological Society Annual Meeting, June 2025

9. Eva Conley and Erica Wehrwein, Where physiology lives: A snapshop of undergraduate programs in North America, Michigan Physiological Society Annual Meeting, June 2025

10. Ally Hopman, Samantha Musso, Kirstin Parkim, and Erica Wehrwein, From the lab to the layperson: Communication gaps in pre-health student science presentations and

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relationships to presenter demographics, Michigan Physiological Society Annual Meeting, June 2025

11. Keeler Steele and Erica Wehrwein, Career next steps: Incorporating job or graduate/professional school application preparation into a capstone physiology lab course, Michigan Physiological Society Annual Meeting, June 2025

12. Eva Conley and Erica Wehrwein, Where the Physiology Path Begins: Mapping Undergraduate Degree Programs Across North America Using a Comprehensive Database Approach, Physiology Majors Interest Group, August 2025

13. Samantha Musso, Ally Hopman, Kirstin Parkin, and Erica Wehrwein, Science Simplified: Training Undergraduates to Bridge Health Communication Gaps, SABER/AAS
14. Keeler Steele, Bill Wonderlin, and Erica Wehrwein, Incorporating Concept Maps into Physiology Laboratory Protocols to Support Content Mastery, APS Summit 2024

15. Emma G. Zblewski, Lourdes C. Merem, Brooke A. Lattner, Rain N. Woodard, Lydia K. Podlesak, Erica A. Wehrwein. Insights from social media discourse: themes and quality of medical information on TikTok #POTS, American Autonomic Society 2024

16. Keeler Steele, Bill Wonderlin, and Erica Wehrwein, Not all those who wander are lost. Students appreciate using concept maps in class as a hands-on illustrative approach to content. P-MIG 2024

17. Erica Wehrwein*, John Zubek, Shanaz Masani, and Keeler Steele, Integration of career development and professional skills across the curriculum in an undergraduate Physiology program and in non-majors courses in the department, P-MIG 2024

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19. Keeler Steele, Lauren Lambert, Rhian Soloman, Shahnaz Masani, and Erica Wehrwein. Student self-efficacy scores improve on twelve career skills with weekly professional skills development assignments in a senior physiology laboratory course. PMIG, 2023

20. Erica A Wehrwein* and Keeler Steele, “Use of an Individual Development Plan assignment for career development in a senior physiology undergraduate laboratory course, PMIG 2023

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28. Ryan Hunt, Max Macgregor, and Erica Wehrwein, “Caffeine intake may affect diabetics and endurance athletes.”, MID-SURE 2019
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31. Ivan Rakic, Sreekar Malempati, The effects of salt and glucose on blood pressure and blood glucose levels, UURAF MSU 2019
32. Brianna Sholte and Reagan Dehnbostel, Stress responses exhibited when political ideology is challenged, UURAF MSU 2019
33. Valerie S VanRyn, Whitney Symons, Kaylie Chiles, and Erica A Wehrwein, HI-Tech: Helping Integrate Technology in the Local Community, MSU PSL Department Retreat, May 2019
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39. Valerie S VanRyn, Whitney Symons, Kaylie Chiles, and Erica A Wehrwein, HI-Tech: Helping Integrate Technology in the Local Community, Experimental Biology 2019
40. VV VanRyn, S Hammer, EA Wehrwein, “Dress the Part – “You are the Scientist”.” – Experimental Biology 2018 Annual Conference
41. Claudia Stanescu, Valerie VanRyn, Jennifer Rogers, Jeffrey Osborn, and Erica Wehrwein. “Current State of Physiology Undergraduate Degree Programs and Curricula: Survey Results from the Physiology Majors Interest Group Inaugural Meeting” – Experimental Biology 2018 Annual Conference
42. Valerie S VanRyn, Erica A Wehrwein, Susan M Barman, “Michigan Physiological Society introduces an undergraduate Physiology Quiz team competition at their annual meeting.” – Experimental Biology 2018 Annual Conference
43. VanRyn and Wehrwein, “Building community by serving the community” – Experimental Biology Spring 2017 Annual Conference
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46. JM Poteracki, K Kelly, E A Wehrwein, Slow breathing reductions in mean arterial pressure are
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52. J M Poteracki, E A Wehrwein, Museum-Based Phun Week 2014: Reflections From The Third Year. Experimental Biology, 2015

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53. KL Kelly, MJ Dick, MJ Joyner, J Lin, JS Moser, EA Wehrwein, Self-Paced Slow Deep Breathing: Persistence of Effects on Vascular Function, Experimental Biology 2015
54. Thomas Mayer, Ryan Haag, Erica Wehrwein. "Effects of Hyperglycemia on Carotid Body Hypoxic Responses" UURAF 2015
55. Rachel Peterson, Christina Buglione, Erica Wehrwein. Exploring the Relationship between Sleep Quality and Glucose Metabolism UURAF 2015
56. Nicholas Rykulski & Alex Kaechele. Caffeine's effect on changes in blood pressure in response to postural transition UURAF 2015
57. Fehinti Akande, Michael D Steury, James M Poteracki, Kevin L Kelly, Jonathan Rennhack, and Erica A Wehrwein. Hypothesis Driven Labs: An Innovative Way to foster Learning in Physiology Laboratory Courses. Michigan Physiological Society, 2015
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59. Thomas Mayer, Ryan Haag, Erica Wehrwein. "Effects of Hyperglycemia on Carotid Body Hypoxic Responses" Michigan Physiological Society, 2015
60. Erica A Wehrwein James M Poteracki, and Robert Dunbar. Proposal To Poster: A Model For Individualized Inquiry Based Research Projects In The Context Of An Undergraduate Physiology Laboratory Course. Michigan Physiological Society, 2015
61. J M Poteracki,E A Wehrwein, Museum-Based Phun Week 2014: Reflections From The Third Year. Michigan Physiological Society, 2015
62. Ryan Haag, Thomas Mayer, Erica Wehrwein. "Hyperglycemia Blunts Hypoxic Ventilatory Response" International Society for Autonomic Neuroscience, 2015
63. Kevin Kelly, James Poteracki, Mike Steury, and Erica Wehrwein, Physiology in the news: Using press releases to enhance lay communications and introduce current physiology research to undergrads, MPS 2015
64. JM Poteracki, Robb Dunbar, and Erica Wehrwein, Proposal to poster: A model for individualized inquiry based research projects in the context of an undergraduate Physiology laboratory course, Submitted for EB 2015
65. James M Poteracki and Erica A Wehrwein, Museum-Based PhUn Week 2014: Reflections from the Third Year, submitted for EB 2015
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67. Jacqueline K. Limberg, Jennifer L. Taylor, Michael T. Mozer, Simmi Dube, Ananda Basu, Rita Basu, Robert A. Rizza, Timothy B. Curry, Michael J. Joyner and Erica A. Wehrwein, Effect of bilateral carotid body resection on baroreflex control of blood pressure during hypoglycemia, submitted for Experimental Biology 2015
68. EA Wehrwein, JM Poteracki, DJ McCann, EJ Henriksen, ML Matyas, and JR Halliwill, A nationwide assessment and comparison of curriculum requirements in undergraduate physiology programs, APS Institute on teaching and learning, 2014
69. Erica Wehrwein and James Poteracki, Lessons Learned: Improving a Large-Scale PhUN Week Event at a Science Center, Experimental Biology Abstract 2014
70. James M Poteracki and Erica A Wehrwein, A millennial perspective of Physiology as a discipline, Experimental Biology Abstract 2014

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71. James Poteracki and Erica Wehrwein, Organizing a Large-Scale PhUN Week Event at a Science Center, PhUn Week Training Session 2014
72. Erica Wehrwein and James Poteracki, Lessons Learned: Improving a Large-Scale PhUN Week Event at a Science Center, MPS 2014
73. Bhanu Swamy, JN Drobish and EA Wehrwein, Student understanding of glucose homeostasis: not so “sweet, MPS 2014
74. JN Drobish and EA Wehrwein, Slow-paced breathing acutely reduces circulating stress hormones, Michigan Physiological Society meeting, May 2014
75. EA Wehrwein, JM Poteracki, DJ McCann, EJ Henriksen, ML Matyas, and JR Halliwill, A nationwide assessment and comparison of curriculum requirements in undergraduate physiology programs, APS Institute on teaching and learning, 2014
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77. Michael Mozer, Paul J Fadel, Christopher Johnson, B Gunnar Wallin, N Charkoudian, Justin N Drobish, Michael Joyner, and Erica Wehrwein, Acute Slow-Paced Breathing Increases Periods of Sympathetic Nervous System Quiescence, Experimental Biology Abstract 2014
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79. Kathryn E. Farni, Jacqueline K. Limberg, Erica A. Wehrwein, Jennifer L. Taylor, Simmi Dube, Rita Basu, Ananda Basu, Michael J. Joyner, Autonomic and cardiovascular control during hypoglycemia in Type 1 Diabetes, American Society of Anesthesiologists Meeting 2013
80. JN Drobish and EA Wehrwein, Slow-paced breathing acutely reduces circulating stress hormones, MSU Undergraduate Research and Arts Forum (UURAF), 2013
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87. EA Wehrwein, R Basu, A Basu, TB Curry, R Rizza, and MJ Joyner. Does carotid body resection result in blunted counterregulation to hypoglycemia in young humans?, Cardiorespiratory Control Satellite Meeting of ISAN, 2011

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Capillary Electrophoresis Coupled with Amperometric Detection. American Chemical Society Midland Section, October 2007

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112. EA Wehrwein, GD Fink, and DL Kreulen. Norepinephrine transporter mRNA is present in the heart and stellate ganglion and is differentially regulated in hypertension. Council for High Blood Pressure Research, 60th Annual Meeting, 2006

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116. EA Wehrwein, AA Wright, GD Fink, DL Kreulen. Norepinephrine transporter is reduced in left ventricle from chronically hypertensive rats, but is unchanged during hypertension development. Experimental Biology Abstract 2006
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118. EA Wehrwein, AA Wright, GD Fink, and DL Kreulen. Cardiac norepinephrine transporter protein is regulated inversely with blood pressure in the left ventricle and the right atrium. Neurotransmitter Transporter Biology Abstract, 15th Neuropharmacology Conference 2005
119. EA Wehrwein, AA Wright, GD Fink, and DL Kreulen. Left ventricular norepinephrine transporter protein is regulated inversely with blood pressure. Council for High Blood Pressure Research, 59th Annual Meeting, 2005.
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122. EA Wehrwein, H Wang, CS. Hall, X Dai, GD. Fink, and DL. Kreulen. Norepinephrine transporter protein is downregulated in left ventricle from deoxycorticosterone-acetate (DOCA)-salt hypertensive rats. IUPS 2005 Abstract
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124. EA Wehrwein, CA Northcott, RD Loberg, SW Watts. “Rho/Rho kinase and phosphoinositide 3-kinase are parallel pathways in the development of spontaneous arterial tone in deoxycorticosterone acetate-salt hypertension”, Experimental Biology Abstracts 2004, Washington D.C.
125. EA Wehrwein, C.A. Northcott, and S.W. Watts. “Is the Rho/Rho-kinase pathway downstream of PI3-kinase?”, Michigan Regional Hypertension Conference Abstracts, April 2003

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127. EA Wehrwein, and J.M. Spitsbergen. "Neurotrophic factor expression in the heart is altered following an increase in physical activity". Michigan Chapter for the Society of Neuroscience Abstracts, 2002
128. E.A. Wehrwein, SML Richards, and JM Spitsbergen. "Neurotrophic Factors are regulated in an activity dependent manner in the heart" Experimental Biology Abstract (2002)
129. SML Richards, EA Wehrwein, EM Roskelley, and JM Spitsbergen. Activity dependent regulation of neurotrophic factor expression in cardiac and skeletal muscle. Department of Biological Sciences, Western Michigan University. Kalamazoo Center for Medical Studies Abstracts (2001)
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131. EA Wehrwein, E.M. Roskelley, J.M. Spitsbergen. Effects of walk-training on glial cell line derived neurotrophic factor expression in skeletal muscle. Integrative Biology of Exercise Abstract (2000).
132. EA Wehrwein, E.M. Roskelley, J.M. Spitsbergen. The effects of increased physiological activity on glial cell line derived neurotrophic factor (GDNF) expression in skeletal muscle of rat, Society for Neuroscience-Michigan Chapter Program and Abstracts (2000)
133. EA Wehrwein, E.M. Roskelley, J.M. Spitsbergen. The effects of increased physiological activity on glial cell line derived neurotrophic factor (GDNF) expression in skeletal muscle of rat. Kalamazoo Center for Medical Studies Abstracts (2000)
134. BM Smith, EA Wehrwein, and J.M. Spitsbergen, "Correlating Systolic Blood Pressure and Levels of Nerve Growth Factor in Vascular Tissues of Dahl Salt-Sensitive and Dahl Salt-Resistant Rats". Michigan Neuroscience Abstract (1999)
135. EA Wehrwein and J.M. Spitsbergen, "Tissue levels of nerve growth factor in hypertensive Dahl salt-sensitive (SS/Jr) rats". American Society for Cell Biology Abstract, 1998

COURSEPACKS AND LAB MANUALS

EA Wehrwein, "PSL 475 Laboratory Manual" (Jan 2012)

EA Wehrwein, "Mathematics, Science, and Technology for Gifted & Talented Students: Physiology Lab Manual" (July, 2004)

EA Wehrwein, "Research Methods and Design for the Natural Sciences Coursepack", Ronald McNair/SURF student coursepack (May, 2003)

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T. Shimamura, and EA Wehrwein. "Bios 350: Human Physiology Laboratory Manual. Fall 2000 (primary author of the following chapters: Units and Conversions, Sensory Physiology, Skeletal Muscle Physiology, Amphibian Heart, Human Cardiac Function, ECG, Respiratory Physiology)

OTHER PUBLISHED RESOURCES

Website:

Www.physiolgoymajors.org

LifeSci TRC:

VanRyn, V and Wehrwein, EA. “Building Community by Serving the Community”. PhUn Week Poster Session EB 2017 (online). Life Science Teaching Resource Community, 2017.

INVITED SEMINARS AND ORAL PRESENTATIONS

Arrupe Virtual Learning Institute (home school co-op), Guest Lecturer, Medical Terminology and Career Explorations, February and October, 2025

Health in Translation: Communicating Medicine and Science to a Diverse Audience, St Catherine University Seminar, April 2025

Educator Conference Host and Emcee, APS Concept to Classroom Pre-Conference, American Physiological Society Summit, April 2025

Workshop lead, Core concepts and backwards design (undergraduate), APS Concept to Classroom Pre-Conference, American Physiological Society Summit, April 2025

Erica Wehrwein, Shanaz Masani, and John Zubek, Finding True North: Classroom-based Professional Development and Career Skills Development, American Physiological Society Summit, April 2025

1st Annual Anne R. Crecelius High Impact Scholar Award Presentation, Teaching Section Dinner Address, American Physiological Society Summit, April 2025

Panelist, APS Exercise & Environmental Physiology Teaching Career Panel, American Physiological Society Summit, April 2025

Health in Translation: Communicating Medicine and Science to a Diverse Audience, PSL Retreat May 2025

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Facilitator, PSL retreat, Career and Professional Skills Discussion

Welcome Address, Physiology Majors Interest Group Conference, Aug 2025

Update from the American Physiological Society's Center for Physiology Education, Physiology Majors Interest Group Conference, Aug 2025

How many physiology programs are there?, Physiology Majors Interest Group Conference, Aug 2025

Where the Physiology Path begins: Mapping Undergraduate Degree Programs Across North America Using a Comprehensive Database approach, Physiology Majors Interest Group Conference, Aug 2025

Erica Wehrwein and John Halliwill, What is Program Review and How Can it Benefit Your Program? Physiology Majors Interest Group Conference, Aug 2025

Erica Wehrwein, Elise Donovon, and Dax Ovid, PMIG Strategic Planning Physiology Majors Interest Group Conference, Aug 2025

Closing Address and Meeting Summary, Physiology Majors Interest Group Conference, Aug 2025

"Building Your Mental Health Toolkit to Maximize Resiliency Skills", P-MIG 2024 Keynote Presentation

"P-MIG: Welcome Address and Conference Agenda", P-MIG 2024

"P-MIG: Where do we go from here?", P-MIG 2024

Integration of career development and professional skills across the curriculum in an undergraduate Physiology program and in non-majors courses in the department, P-MIG 2024

Current trends to improve physiology teaching and learning in the USA, XXIII Meeting of the Federation of European Physiological Societies and XLI Meeting of the Spanish Society for Physiological Sciences 2024 Education Track Keynote (International)

Effective public engagement with physiology, Michigan Physiological Society Mid-year symposium Keynote 2024

Teaching beyond the facts: The importance of student career and professional skills development, 2024 American Physiological Society Summit Main Stage Presentation (Co-presented with Zubek and Steele). (*Main stage talks are invited by the Society and featured in the main exhibit hall rather than part of the standard conference program)

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In memorial: Anne R Crecelius High Impact Scholar Award, 2024 American Physiological Society Educator Conference

In memorial: Anne R Crecelius High Impact Scholar Award, 2024 American Physiological Society Teaching Section Dinner Presentation
"Use of an Individual Development Plan assignment for career development in a senior physiology undergraduate laboratory course, PMIG 2023

"P-MIG: Where do we go from here?", PMIG 2023

"History of the Michigan Physiological Society: 2014-2016" MPS 10 year Anniversary Conference, 2023

"Building Your Mental Health Toolkit to Maximize Resiliency Skills", APS Summit 2023

New strategic direction in the USA to improve physiology teaching and learning, Portuguese Physiological Society, Nov 2022

There and back again, a physiologist's tale, Western Michigan University Alumni Achievement Award, Oct 2022

Nov 2021, Expanding science course instruction beyond "just the facts": What else should we be teaching our students?, Western Michigan University Dept of Biological Sciences Seminar

Oct 2021, Professional Development for Undergraduate Students, Physiology Society Club Presentation

April 2021, Speaker, Panel Moderator, "Using History of Physiology in Teaching About Science as a Research Endeavor", Experimental Biology, 2021

March 2021, Those who can teach, should: Choosing and preparing for a fulfilling teaching career, University of Missouri Dept Seminar

February 2019, University of Georgia Seminar, Trends and Program Requirements for Physiology Undergraduate Degree Programs

April 2019, Experimental Biology Conference, Lead Speaker and Moderator for Physiology Majors Interest Group Networking Session, APS Education Sponsored Session

May 2019, Human Anatomy and Physiology Society, Curriculum, Core Concepts, and Cooperation: Physiology Majors Interest Group

June 2019, Physiology Majors Interest Group Conference, Two talks and Discussion Moderation

1. Conference Welcome and Introduction
2. Society Organization and Structure

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February 2018, University Of Louisville. National Trends and Program Requirements for Physiology Undergraduate Degree Programs in the U.S.

February 2018, University of Oregon, Expanding course instruction beyond “just the facts”: What else should we be teaching our students and how to do it?

April 2018, Experimental Biology Conference, Lead Speaker and Moderator for Physiology Majors Interest Group Networking Session, APS Education Sponsored Session

May 2018 MSU Teaching and Learning Spring Conference, Teaching and Assessing Professionalism in the College Classroom. Is it our Job?.(Co-Presented with Denison, Paganini, Seischab, Shaltry, Zubek)

May 2018, Human Anatomy and Physiology Society Conference, Teaching and Assessing Professionalism and Employability Skills in the College Classroom: Is it our job? (Co-present with John Zubek)

June 2018, Physiology Majors Interest Group Conference, Three talks and Discussion Moderation

1. Conference Welcome and Introduction
2. Society Organization and Structure
3. Teaching beyond the facts: What else do we need to teach our students?

September 2018, Iowa Physiological Society Conference Keynote Speaker, Expanding course instruction beyond “just the facts”: What else should we be teaching our students and how to do it?

December 2018, Association of Chairs of Departments Of Physiology Annual Meeting, Two talks

1. Update Presentation on the Physiology Majors Interest Group
2. Core Concepts In Physiology (Co-present with Jen Rogers, U Iowa)

Invited Talk, "What's in an physiology undergraduate degree?: Setting national curricular standards" Human Anatomy and Physiology Society, 2017

Dissecting a teaching job ad, APS Career Symposium, Experimental Biology 2017

Workshop Leader, Creating National Curriculum Guidelines for Undergraduate Physiology Education. Two-day workshop. Association of Chairs of Departments of Physiology Annual Meeting, December 2016

Workshop Co-organizer, Establishing Core Concepts for Undergraduate Physiology Education. Two-day workshop. Association of Chairs of Departments of Physiology Annual Meeting, December 2016

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Having PhUn with Physiology!, Michigan Technological University, Sept 2016

Department Consultation and Workshop, Best Practices for Teaching Evaluation and Portfolios for Undergraduate Faculty. Michigan Technological University, Sept 2016

Department Consultation, Best Practices for Community Engagement in Physiology. Michigan Technological University, Sept 2016

Effective public engagement with Physiology: A model for course-based service learning to enhance undergraduate student engagement with the community. APS-TPS Joint Meeting, Dublin, Ireland, July 2016

The effect of yogic breathing techniques on respiratory-sympathetic coupling: relationship to blood pressure regulation and psychological metrics. The International Research Congress on Integrative Medicine and Health (IRCIMH) Conference, June 2016

Workshop Leader, Physiology Undergraduate Education and Assessment 2 hour Workshop, APS Institute for Teaching and Leaning, June 2016

Transforming Teaching Beyond Content: Incorporation of experiential learning for development of critical thinking and employability skills. University of Michigan Dept. of Physiology Seminar, May 2016

Integrative studies in human subjects: Interactions of peripheral chemoreflex and glucose homeostasis, and respiratory-sympathetic coupling in yoga breathing, MSU Physiology Department Seminar, May 2016

Meeting Welcoming Address, Michigan Physiology Society, May 2016

State of the Society, Michigan Physiology Society, May 2016

Career Panel Organizer and Moderator, Michigan Physiology Society, May 2016

Meeting Welcoming Address, Michigan High School Teaching Physiology Workshop, May 2016

The Mind Matters: Psychology as an Overlooked Variable in Autonomic Physiology, Experimental Biology April 2016

Workshop Leader, Physiology Majors Interest Group Networking Session, Experimental Biology April 2016

Department Consultation and Workshop, Undergraduate Physiology Curriculum. University Michigan, 2015

EA Wehrwein, Undergraduate physiology curriculum workshop, Association of Chairs of Departments of Physiology, 2015

EA Wehrwein, Learning objectives for certification of undergraduate physiology programs workshop, Association of Chairs of Departments of Physiology, 2015

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EA Wehrwein, “Get a job: Build the Skills Employers Want”, APS Physiology and Gender Conference, 2015

EA Wehrwein, “Expanding course instruction beyond “just the facts”: what else should we be teaching our students, University of Oregon, 2015

EA Wehrwein, Panelist on Writing Letters of Reference, University of Oregon, 2015

EA Wehrwein, “Physiology career advising - What will all those physiology graduates do?”, Experimental Biology, 2015

EA Wehrwein, “The Physiology Curriculum - What should be in at the undergraduate level, and what should be out?”, Experimental Biology, 2015

EA Wehrwein, Interactions of peripheral chemoreceptors and ventilation on integrated physiological outcomes in human subjects, Wayne State Departmental Seminar Dec 2014

EA Wehrwein, Immediate effects of Yoga breathing on stress hormones, sympathetic nerve activity, and blood flow, FASEB Summer Conference 2013

EA Wehrwein, Does chemoreceptor dysfunction mediate changes in glycemic control, blood pressure regulation, and cardio-vagal tone in humans? IUPS 2013

EA Wehrwein Guest Lecturer, MSU Pre-Professional Society, Know your options: how to find career and mentoring resources for physiology undergraduates, Nov 2012

EA Wehrwein Guest Lecturer, MSU Physiology Society, Know your options: how to find career and mentoring resources for physiology undergraduates, Oct 2012

EA Wehrwein Guest Lecturer, MSU Physiology Society, Know your options: how to find career and mentoring resources for physiology undergraduates Jan 2012

EA Wehrwein,. Is blood pressure control in humans mediated by the peripheral chemoreceptors? Experimental Biology, 2011

EA Wehrwein, Novel insight into blood sugar regulation in humans: interactions with oxygen and peripheral chemoreceptors, Western Michigan University, Nov 2010

EA Wehrwein, Novel role for the peripheral chemoreceptors in regulating blood glucose, International Symposium on the Autonomic Nervous System, Nov 2010

EA Wehrwein, Novel sites for glucose sensing and regulation: Are the carotid bodies key players in hypoglycemic counterregulation?, Mayo Clinic Endocrine Research Unit Department Seminar, Oct 2010

EA Wehrwein, Novel sites for glucose sensing and regulation: Are the carotid bodies key players in hypoglycemic counterregulation?, Mayo Clinic Physiology & Biomedical Engineering Department Seminar, June 2010

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EA Wehrwein, Navigating the Experimental Biology Meeting, Undergraduate Orientation at Experimental Biology, 2008-2010

EA Wehrwein, Autonomic and Exercise Testing in Healthy Adults Before and After Endoscopic Thoracic Sympathotomy for Hyperhidrosis, International Symposium on the Autonomic Nervous System, Penaz-Wessling Award Talk, Nov 2009

EA Wehrwein, Novel sites for glucose sensing and regulation: Are the carotid bodies key players in hypoglycemic counterregulation?, Mayo Clinic Endocrine Research Unit Metabolism and Diabetes Interest Group, Aug 2009

EA Wehrwein, "Elucidating a role for norepinephrine transporter in hypertension", Dissertation Defense Departmental Seminar, 2008

EA Wehrwein, LM Parker, M Esfahanian, and DL Kreulen, Stellate Ganglionic Norepinephrine Transporter (NET) mRNA from Hypertensive Rats is Unchanged while NET Protein is Increased in Left Stellate Ganglia, FASEB Summer Conference: Neural Control of the Cardiovascular System. July 2007

EA Wehrwein, M Esfahanian, SP Sharma, JM Spitsbergen, V Mocko, M Novotny, GM Swain, and DL Kreulen. Norepinephrine transporter mRNA is present within sympathetic nerve terminals of the heart, 17th International Symposium on the Autonomic Nervous System, Highlights from the Poster Session Award Talk, November 2006

EA Wehrwein, AA Wright, GD Fink, and DL Kreulen. "Characterization of the cardiac norepinephrine transporter in normotensive and hypertensive rats", Michigan Regional Hypertension Conference, October 2005

EA Wehrwein, "Elucidating a role for norepinephrine transporter in hypertension", Dissertation Proposal Departmental Seminar, May 2004

EA Wehrwein, CA Northcott, RD Loberg, SW Watts. "Rho/Rho kinase and phosphoinositide 3-kinase are parallel pathways in the development of spontaneous arterial tone in deoxycorticosterone acetate-salt hypertension". Experimental Biology 2004, Washington D.C.

EA Wehrwein, "Graduate Student Life at Michigan State University", Invited Speaker for Kent State University campus visit to Michigan State University, July 2003

EA Wehrwein, "Graduate Student Life at Michigan State University", Invited Speaker for University of Wisconsin-Whitewater campus visit to Michigan State University, June 2003

EA Wehrwein, and S.W. Watts. "Is the Rho/Rho-kinase pathway downstream of PI3-kinase?", Michigan Regional Hypertension Conference, April 2003

EA Wehrwein and J.M. Spitsbergen. "GDNF is regulated in an activity dependent manner in skeletal and cardiac muscle", Master's Thesis Defense Departmental Seminar, August 2002

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Presentation on behalf of the APS Center for Physiology Education

APS representative to present to stakeholder groups about progress with development of the Center

- APS Council-July Meeting
- APS Council-Fall Retreat
- APS Leadership Retreat
- APS Teaching Section Steering Committee x2
- APS Full Teaching Section
- APS Physiology Educators Committee x2
- APS Interim Advisory Board Quarterly Updates
- Association of Chairs of Departments of Physiology
- Physiology Majors Interest Group

F1000 REVIEWS

1. Gregory Fink and Erica Wehrwein 21 Feb 2014 Review of Regional differences in sympathetic activation in lean and obese normotensive individuals with obstructive sleep apnoea. Grassi G, Seravalle G, Brambilla G, Buzzi S, Volpe M, Cesana F, Dell'oro R, Mancia G. J Hypertens. 2014 Feb; 32(2):383-8

2. Gregory Fink and Erica Wehrwein 27 Nov 2013 Review of: Cardiorespiratory coupling of sympathetic outflow in humans: a comparison of respiratory and cardiac modulation of sympathetic nerve activity to skin and muscle. Fatouleh R, Macefield VG. Exp Physiol. 2013 Sep; 98(9):1327-36

3. Gregory Fink and Erica Wehrwein 20 Nov 2013 Review of Rostroventrolateral medullary neurons modulate glucose homeostasis in the rat. Verberne AJ, Sartor DM. Am J Physiol Endocrinol Metab. 2010 Nov; 299(5):E802-7

5. Gregory Fink and Erica Wehrwein 04 Jul 2013 Review of Chemohypersensitivity and autonomic modulation of venous capacitance in the pathophysiology of acute decompensated heart failure. Burchell AE, Sobotka PA, Hart EC, Nightingale AK, Dunlap ME. Curr Heart Fail Rep. 2013 Jun; 10(2):139-46

6. Gregory Fink and Erica Wehrwein 08 Feb 2013 Review of Spontaneous Bursts of Muscle Sympathetic Nerve Activity Decrease Leg Vascular Conductance in Resting Humans. Fairfax ST, Padilla J, Vianna LC, Davis MJ, Fadel PJ. Am J Physiol Heart Circ Physiol. 2013 Jan 4

7. Gregory Fink and Erica Wehrwein 18 Dec 2012 Review of Individual differences in the cardiovascular responses to tonic muscle pain: parallel increases or decreases in muscle sympathetic nerve activity, blood pressure and heart rate. Fazalbhoy A, Birznieks I, Macefield VG. Exp Physiol. 2012 Oct; 97(10):1084-92

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8. Gregory Fink and Erica Wehrwein 12 Sep 2012 Review of Sites of action of ghrelin receptor ligands in cardiovascular control. Callaghan B, et al. Am J Physiol Heart Circ Physiol. 2012 Aug 10

9. Gregory Fink and Erica Wehrwein 21 Jun 2012 Review of Comparison of blood pressure and sympathetic activity of rabbits in their home cage and the laboratory environment. Lim K, Burke SL, Armitage JA, Head GA. Exp Physiol. 2012 May 21

10. Gregory Fink and Erica Wehrwein 10 Apr 2012 Review of Sympathetic Neural Responses to 24-hour Sleep Deprivation in Humans: Sex Differences. Carter JR, Durocher JJ, Larson RA, Dellavalla JP, Yang H. Am J Physiol Heart Circ Physiol. 2012 Mar 9

11. Gregory Fink and Erica Wehrwein 29 Sep 2011 Review of Effects of renal sympathetic denervation on blood pressure, sleep apnea course, and glycemic control in patients with resistant hypertension and sleep apnea. Witkowski A, et al. Hypertension. 2011 Oct; 58(4):559-65

12. Gregory Fink and Erica Wehrwein 03 Jun 2011 Review of Altered sympathetic reflexes and vascular reactivity in rats after exposure to chronic intermittent hypoxia. Silva AQ, Schreihofer AM. J Physiol (Lond). 2011 Mar 15; 589(Pt 6):1463-76

13. Gregory Fink and Erica Wehrwein 16 Feb 2011 Review of The effects of weight loss versus weight loss maintenance on sympathetic nervous system activity and metabolic syndrome components. Straznicky NE, et al. J Clin Endocrinol Metab. 2011 Mar; 96(3):E503-8

14. Gregory Fink and Erica Wehrwein 05 Jan 2011. Review of Interactions between sympathetic nervous system and endogenous endothelin in patients with essential hypertension. Bruno RM, Sudano I, Ghiadoni L, Masi L, Taddei S. Hypertension. 2011 Jan; 57(1):79-84

15. Gregory Fink and Erica Wehrwein 26 Oct 2010. Insulin enhances the gain of arterial baroreflex control of muscle sympathetic nerve activity in humans. Young CN, Deo SH, Chaudhary K, Thyfault JP, Fadel PJ. J Physiol (Lond). 2010 Sep 15; 588(Pt 18):3593-603

16. Gregory Fink and Erica Wehrwein 23 Aug 2010 Review of Tonic chemoreflex activation contributes to increased sympathetic nerve activity in heart failure-related anemia. Franchitto N, Despas F, Labrunée M, Roncalli J, Boveda S, Galinier M, Senard JM, Pathak A. Hypertension. 2010 Apr; 55(4):1012-7

17. Gregory Fink and Erica Wehrwein 20 Aug 2010 Review of Sustained suppression of sympathetic activity and arterial pressure during chronic activation of the carotid baroreflex. Lohmeier TE, Iliescu R, Dwyer TM, Irwin ED, Cates AW, Rossing MA. Am J Physiol Heart Circ Physiol. 2010 Aug; 299(2):H402-9

18. Gregory Fink and Erica Wehrwein 16 Mar 2010 Review of Carotid baroreceptor stimulation, sympathetic activity, baroreflex function, and blood pressure in hypertensive patients. Heusser K, et al. Hypertension. 2010 Mar; 55(3):619-26

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19. Gregory Fink and Erica Wehrwein 08 Jan 2010 Review of Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. Beetz N, et al. J Clin Invest. 2009 Dec; 119(12):3597-3612

20. Gregory Fink and Erica Wehrwein 04 Jan 2010 Review of Renal sympathetic-nerve ablation for uncontrolled hypertension. Schlaich MP, Sobotka PA, Krum H, Lambert E, Esler MD. N Engl J Med. 2009 Aug 27; 361(9):932-4

21. Gregory Fink and Erica Wehrwein 21 Oct 2009 Review of Real-time imaging of the medullary circuitry involved in the generation of spontaneous muscle sympathetic nerve activity in awake subjects. Macefield VG, Henderson LA. Hum Brain Mapp. 2010 Apr; 31(4):539-49

PROFESSIONAL MEMBERSHIPS (CURRENT AND PAST)

American Physiological Society Member (Primary Affiliate: Teaching Section, Other Affiliations: Neural Control and Autonomic Regulation, Exercise & Environmental)

Physiology Majors Interest Group

American Autonomic Society

Michigan Physiological Society

Human Anatomy and Physiology Society

American Heart Association

Society for Experimental Biology in Medicine

American Society for Pharmacology and Experimental Therapeutics

Midwest Chapter of the American College of Sports Medicine

RESEARCH COLLABORATORS

Chris Pohlod, Autonomic Regulation with Dry Needling and Cranial Manipulation, Michigan State University

Ted Dick, Respiratory Sympathetic Coupling, Case Western

Jason Moser, Psychological impact on Physiological Outcomes, Michigan State University

Michael Joyner, Carotid body integrative function, Mayo Clinic

Paul Fadel and Laurro Vienna, Vascular conductance, University Missouri

Rob Brook, Respiratory Sympathetic Coupling, University Of Michigan

Robb Dunbar, University of Minnesota Rochester, physiology education research

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John W Osborn, University of Minnesota, stellate ganglionectomy survival surgery

Ming-he Huang, University of Texas Medical Branch, NET in situ hybridization in heart and ganglia, localization of NET to intrinsic cardiac adrenergic cells

John M Spitsbergen, Western Michigan University, neurotrophic factor measurements in the heart, regulation of norepinephrine transporter by neurotrophins, and imaging of rat cardiac sympathetic and sensory neurons

Gregory M Swain, Michigan State University, Norepinephrine measurements in the heart using capillary electrophoresis with electrochemical detection

Stephen E DiCarlo, Wayne State University, Research into Physiology Education

Beth A Habecker, Oregon Health and Sciences University, Nisoxetine binding in cardiac membranes

TRAINEES AND MENTORED FACULTY

Mentored Faculty
Aiganym Kazhibayeva, Visiting Educator Scholar from Uzbekistan, 2022

Education Project Mentees:
Samantha Musso
Ally Hopman
Eva Conley
Keeler Steele
Yvonne Ogrodzinski
Jackie Fenn
Michael Steury
Jonathan Rennhack
Kevin Kelly

Master's Students:
Kevin Kelly, Michigan State University, BS/MS Student

Undergraduates Research Mentees: Formal:
Katie Kelly, Michigan State University
Katelynn Adams, Michigan State University
Brian Wegner, Michigan State University
Lauren Newhouse, Michigan State University
Humphrey Peterson-Jones, Michigan State University
Siman Mand, Michigan State University PSL 490, SS13
Justin Drobish, Michigan State University PSL 490, SS13
Alex Allen, Mayo Clinic Summer Student, June-Aug 2010, June-August 2011

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Breann Kluck, Mayo Clinic Summer Student, June-Aug 2010, June-August 2011
Sarah Landin, Winona State University, Fall 2009-Winter 2010
Michelle Freeman, Winona State University, Fall 2009-Winter 2010
John Roger Shepherd, Mayo Clinic Summer Student, Summer 2009-2010
Alex Allen, Mayo Clinic Summer Student, Summer 2009-2010
Mohammad Esfahanian, Michigan State University, Spring 2006-Summer 2008
Carmen Affonso, Michigan State University, Fall 2006-Summer 2008
Joshua D Mastenbrook, Michigan State University, Summer 2006
Anna A Wright, Michigan State University, Spring 2005-Summer 2006
Kory Johnson, Western Michigan University, Fall 2000-01
Suzanne ML Richards, Western Michigan University, Spring 2001
Eric M Roskelley, Western Michigan University, Spring 2000-01

PSL 475L Honors Project Students: Michigan State University
SS23: Hannah Rick, Tim Stokes, Lauren Katch, Kyle Manzella
FS22: Klea Ahmet, Darla Washington, Hanna Peterson
SS22: Andrew Vaniddekinge
FS21: Alexandre Wolf, Rachel Dolce, Anna Kidwell, Andreas Comsa, Ayo Ifatorati, Rachel Dietz, Sarah Broida
SS21: Anwar, Mahreen, Fenn, Shelby Danielle, Gerlach, Casey Anna, Kleinknecht, Paige Christina, Mitchelson, Riley, Forouzandeh, Arezu, Nolan, Peter Thomas, Morgan Lynch, Will Gadbois
FS20: Matt Cederman, Greg Olsen, Kayley Irwin, Kennedy Franklin, Christina Gonzalez
SS20: Agunbiade, Nasirudeen, Suryadevara, Abhijeet, Maini, Rijul Sarika
FS19: Kymberli Maddox, Maggie Gilga, Logan Cole, Manthan Patel, Jack, Alex Tish, Megan Seyerle, Vince Nguyen
SS19: Megan Colligan, Diana Morse
FS 18: IVAN RAKIC, ROBBIE ALEXANDER, SATYA CHITTURI, SARAH POPOWOTZ, BROOKE ONWENU, ANNIE SAVKA, ABBY MEYER
SS18: ERIKA TVEDTEN, SILVIA ALUIA, JACK BRODEUR, KAYLIE CHILES
FS17: Yvonne Ogrodinski, Nicole Desmet, Ashley Summerton, Charnay Glass
SS17: Lucas Wollenman
FS 16: Jason Wisby, Abdul Yassin-Kassab, Luke Schichtel, Cameron Meyer, Blake Reynolds, John Shinners
US 16: Matin Arbab
SS16: Ian Tiilikka
FS15: Kotomi Obayashi, Lindsay Schichtel, Katy Schauer
SS15: Tyler Bonkowski, Claire Baniel
FS 14: Rachel Brock, Tom Mayer, Rachel Petersen, Alyssa Miller, Alicia Spees, Ryan Haag
SS14: Kevin Wheelock, Monica Lapointe, Dhaval Ruwala, Kelly Fenn, Robert McGowan, Adam Hoffhines
FS 13: Brittley Leppien , Dan Chapman
SS13: Andrew Johnson, Caitlyn McCarthy

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FS12: Katelynn Andreen, Roshan Jain, Monika Bhatt, Margaux Hetzman, Rebecca Martin
SS12: Erin DelBene, Sean Farley, Alex Borchert, Sean Benner, Shannon Doud

ENTREPREURNEURIAL PROJECTS PSL 475:
FS22 KLEA AHMET
SS19 JESSICA SAADAH
FS18 DAVID POSAWATZ
SS18 ERIKA TVEDTEN

Post-Baccalaureate, Medical Students, and Technicians:
Keeler Steele, Michigan State University, 2021-present
Yvonne Ogrodzinski, Michigan State University, 2019-present
Valerie VanRyn, Michigan State University, 2016-2019
Jake Pryzblya, Michigan State University, 2014-2016
James Poteracki, Michigan State University, 2013-2016
Jennifer Taylor, Mayo Clinic, July 2011-Nov 2012
Essa Mohammad, Mayo Clinic, Sept 2010-Nov 2012
Suny Caminero, Michigan State University, Fall 2006-Spring 2007
Lindsay M Parker, Michigan State University, Spring 2006-Spring 2008

Teaching Assistants:

Course	Semester	Graduate Teaching Assistants	Undergraduate Prep Learning Assistant	Undergraduate and Postbacc Learning Assistants
PSL 475L	SS12	Derrick Feenstra Jonathan Kasper Satyaki Sengupta	Jamie Everett	
	US12	James Barger	Jamie Everett; Justin Drobish	
	FS12	Jonathan Kasper Satyaki Sengupta	Justin Drobish	
PSL 475L	SS13	Satyaki Sengupta Haritha Duraija	Justin Drobish	
	US13	James Barger	Justin Drobish	
	FS13	Jonathon Rennhack Michael Steury Chao Huang	Bhanu Swamy	
PSL 475L	SS14	Chao Huang Harshini Chakravarthy Julienne Brock	Bhanu Swamy	
	US14	James Barger	Bhanu Swamy; Fehiniti Akande	
PSL 439	US 14	Thomas Turkette		
PSL 475L	FS14	Sarah Keaton	Fehiniti Akande	

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		Natalie Pizzimenti		
PSL 475L	SS15	Jonathon Rennhack Natalie Pizzimenti Jacqueline Fenn	Fehiniti Akande	
	US15	Thomas Turkette	Fehiniti Akande	
PSL 439	US15	Thomas Turkette		
	FS15	Thomas Turkette Jacqueline Fenn	Ryan Haag	
PSL 475L	SS16	Thomas Turkette Michael Steury James Barger	Ryan Haag	
	US16	James Barger	Rachel Rick	
	FS16	Trevor Gohl Jacqueline Fenn	Rachel Rick	Alexis Lockett Lauren Williams
PSL 475L	SS17	Trevor Gohl James Barger	Rachel Rick	Lauren Williams Frances Greathouse Carolyn McDonnell
	US17		Rachel Rick	
	FS17	Bronson Gregory Trevor Gohl	Jeremy Bigalke	Jeremy Bigalke Carolyn McDonnell
PSL 475L	SS18	Trevor Gohl	Rachel Rick	Carolyn McDonnell Nicole Desmet
	FS18	Kait Durga Yvonne Ogrodzinski	Yvonne Ogrodzinski	Carolyn McDonnell Randi Rice Yvonne Ogrodzinski
PSL 475L	SS19	Kait Durga Yvonne Ogrodzinski	Yvonne Ogrodzinski	Carolyn McDonnell Keeler Steele Yvonne Ogrodzinski
	FS19	Kait Durga Yvonne Ogrodzinski	Hannah Zawisa	Keeler Steele Carolyn McDonnell Jake Canfield
PSL 475L	SS20	Kait Durga Yvonne Ogrodzinski	Hannah Zawisa	Keeler Steele Carolyn McDonnell Jake Canfield
PSL 475L	FS 20	Brett Trombley Meesum Syed	Keeler Steele	Keeler Steele Jake Canfield
PSL 475L	SS21	Brett Trombley Meesum Syed	Keeler Steele	Keeler Steele Jake Canfield Kayley Irwin Greg Olsen Matt Cederman Kennedy Franklin
PSL 475L	FS21	Brett Trombley Hannah Rudolph	Keeler Steele	Matt Cederman Kennedy Franklin Jackson Joseph Dana Josifoski

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PSL 475L	FS22	Gokul Murali Alyssa Vadovsky	Lauren Jernstadt	Alexia Bowden Abby Brooks Gabbie Huhn Lauren Jernstadt Akanksha Kapur
PSL 475L	SS23	Gokul Murali Alyssa Vadovsky	Lauren Jernstadt	Harrison Nabors Donny Ellis Nicolette Wise Callie Rose
PSL 475L	FS23	Hanna Peterson	Hanna Peterson	
PSL 475L	SS24	Alyssa Vadovsky	Zal Chinoy	Zal Chinoy Hanna Peterson Tim Stokes
PSL 475L	FS24	Alyssa Vadovsky	Tim Stokes	Greg Mitchell Lauren Batra
PSL 475L	SS25	Alyssa Vadovsky	Greg Mithcell	Greg Mitchell Lauren Batra Sage Malone Eli Cole Nicole Peters

Thesis and Dissertation Committees:
2025-
Emma Zblewski
Alyssa Vadovsky
Hannah Thompson
Samantha Musso (FAST)

2024-
Emma Zblewski
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Hannah Thompson
Samantha Musso (FAST)

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2023-
Jeremy Bigalke
Thomas Turkette
Emma Zblewski
Alyssa Vadovsky

2022-
Jeremy Bigalke
Thomas Turkette
Emma Zblewski

2021-
Jeremy Bigalke
Thomas Turkette
Emma Zblewski (CHM)
Laura Barba Moreno

2020-
Jeremy Bigalke (PhD Montana State University)
Thomas Turkette
Kait Durga
Laura Barba Moreno (International PhD; Universidad Politécnica de Madrid)

2019-
Laura Barba Moreno (International PhD; Universidad Politécnica de Madrid)
Jeremy Bigalke (MS, MTU)

2018-
Christina Druskovich (MS, GVSU)
Jeremy Bigalke (MS, MTU)
Laura Barba Moreno (International PhD; Universidad Politécnica de Madrid)
Ania Pathak

Informal Mentees:
Ida Fonkoue 2015-present
Sushant Ranadive 2012-present
Gabriel Alves 2019-present

Additional Education and training:

Professional Development:

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Regular attendance at MSU teaching workshops and seminars
MSU STEM Alliance
STEM+ Ed @ State

Community Engagement:

MSU Center for Service-Learning & Civic Engagement's faculty workshop, "Community Engaged Teaching & Learning: Getting Started". 10/14/2016

MSU Center for Service-Learning & Civic Engagement's faculty workshop, "Community Engaged Learning" full day Faculty Development workshop & consultations focused on Developing & Sustaining Community Partnerships". 2/17/2017

Fall 2008-Dec 2012 Voluntary selected coursework and additional training at Mayo Clinic

- Specialty training in ADInstruments PowerLab and LabChart
- Core 6000 Responsible Conduct of Research
- CTSC 5190 Alternative Medicine
- Core 6700 Integrative Systems Physiology (audit selected lectures)
- Write Winning Grants Workshop, Dr. David C. Morrison
- Writing for Scientific Publication Workshop, Dr. David C. Morrison
- Individual Development Plan Workshop presented by Dr Phil Clifford
- Regular attendance at Endocrine Research Unit weekly metabolic interest group and weekly seminar, Physiology & Biomedical Engineering seminar, and Center for Translational Science Activities (CTSA) seminar
- Variety of management and communication workshops, Mayo Clinic Professional Development and Human Resources

Other Activities:
Team Trivia Michigan League
Lansing Rowing Club
Great Lakes Alliance-Adopt-a-beach 2017
MSU Swing Dance Society
Mayo Fellows Association
Mayo Research Fellows Association
Rochester MN Parks and Recreation: Volleyball, Softball
Blue Lotus Dance Troupe, Rochester, MN, dancer and 2009 "Rhinestones & Stardust" stage manager
Blue Moon Ballroom Member, Rochester, MN
Mason Co-Recreational Sand Volleyball

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Team Playmakers Running Club- East Lansing, MI
Lansing Paddling Club (kayak and canoe)
Adopt-A-River Program, Volunteer for River Clean-Up, Grand River, Lansing, MI
Michigan State University Sailing Club
Multiple Sclerosis Walk Fund Raiser, Frankenmuth, MI
Public Television Fund Raiser Volunteer, WKAR-TV, Michigan State University
Medical Science Association
Lee Honors College Member
Alpha Lambda Delta National Honor Society- treasurer, member, social committee chair, rush coordinator
Residence Hall Counsel-Floor Representative
Institute for the Study of Race and Ethnic Relations- WMU Student/Faculty Committee on Racism
WMU Karate Club
WMU Swim Club
Kalamazoo City Woman's Softball League-Northern Division
WMU Co-Recreational Volleyball League

Hobbies and other:
Travel (national and international)
Outdoor Adventuring (hiking, climbing, camping, kayaking, downhill & cross country skiing)
Fitness and Sports (running, cycling, weight lifting, swimming, volleyball, softball, yoga)
Dance: Blue Lotus Dance Company (Rochester, MN); Habibi Dancers (Lansing, MI), ballroom (swing, salsa)
Health and Wellness
Regular enrollment in a variety of community education programs