# **CONTACT INFORMATION** Emily E. Schmitt, PhD Assistant Professor Kinesiology & Health, University of Wyoming

Phone: (307) 766-5286 Mobile: (336) 675-7566 Email: eschmit4@uwyo.edu

**Executive Summary** 

My lab at the University of Wyoming aims to better understand the cellular and molecular mechanisms associated with circadian disruption, how the misaligned molecular clock leads to disease, and how exercise can be used to treat disruption. Currently, I am funded to study the molecular mechanisms underlying how timing of exercise can be used as a therapeutic intervention to realign a disrupted circadian clock. My research goals closely align with my teaching responsibilities with the Division of Kinesiology & Health (DKH) and WWAMI Medical Education. In DKH my teaching responsibilities primarily include teaching Exercise Physiology in the undergraduate curriculum, as well as Advanced Exercise Physiology in the graduate curriculum. I am also the block-lead in WWAMI of the Cancer, Hormones, and Blood block where I lead medical students through topics like anemia, blood cancers, solid tumor cancers, and physiological principles related to pituitary, adrenal, and thyroid glands. I also serve as the Research Coordinator for WWAMI medical students guiding them through research opportunities during their medical education journey. In addition to teaching, my time at UW has been spent growing and establishing my role as an independent researcher, mentoring undergraduate, graduate, and medical students in the scientific method related to circadian rhythm disruption and using exercise as an intervention to fix a misaligned molecular clock.

# **EDUCATION AND TRAINING**

2018	Post-Doctoral Training	<b>Toxicology</b> Texas A&M University, College Station, TX Advisor: Weston W. Porter, PhD
2015	PhD	<b>Kinesiology</b> Texas A&M University, College Station, TX Advisor: J. Timothy Lightfoot, PhD
2009	MS	<b>Clinical Exercise Physiology</b> The University of North Carolina at Charlotte, Charlotte, NC Advisor: Michael Turner, PhD
2007	BS	Exercise/Sport Science Elon University, Elon, NC Advisors: Paul Miller, PhD and Walter Bixby, PhD

#### ACADEMIC POSITIONS

2018-present	Assistant Professor
	Kinesiology & Health
	University of Wyoming, Laramie, WY
2018-present	Adjunct Assistant Professor
	WWAMI; Rehabilitation Medicine, School of Medicine
	University of Washington, Seattle, WA
2015-2018	Postdoctoral Fellow
	Toxicology, College of Veterinary Medicine and Biomedical Sciences
	Texas A&M University, College Station, TX
2014-2015	Director of Athlete Testing
	Huffines Institute for Sports Medicine
	Texas A&M University, College Station, TX
2011-2015	Teaching Assistant
	Physical Education Activity Program
	Texas A&M University, College Station, TX
2009-2011	Clinical Exercise Physiologist
	Strides to Strength, Presbyterian Hospital
	Charlotte, NC
2007-2009	Graduate Assistant, Health & Wellness Coordinator
	Mecklenburg County Senior Centers
	Charlotte, NC
2006-2007	Research Assistant
	Health & Human Performance
	Elon, NC

### HONORS AND AWARDS

- 2022 UWSOM Research Mentorship Award
- 2021 WyCOA Faculty Travel Award
- 2020 Top Professor Nomination, University of Wyoming Mortar Board
- 2017 Top Poster Presentation, Texas Circadian Biology & Medicine Meeting
- 2017 1<sup>st</sup> Place Postdoctoral Flash Talk
- 2015 Outstanding Graduate Student of the Year in Kinesiology
- 2012 Outstanding Graduate Assistant Nominee in Physical Education Program

### FUNDED GRANTS AND CONTRACTS

### Funded Grants as PI: Research

Total Funded (\$612,460)

100		
1.	Wyoming Sensory Biology COBRE Mini-Grant in Data Science for Brain Health	11/01/2023-06/30/2024
	"The Role of Exercise in Controlling Central Mediators of Circadian Rhythm"	\$8,000
2.	Wyoming COBRE 3-year Project Lead (Sensory Biology)	8/1/2023-7/31/2026
	"The Role of Exercise in Controlling Central Mediators of Circadian Rhythm"	(\$150,000/year) \$450,000
3.	Wyoming COBRE 1-year Pilot Project (Sensory Biology)	8/1/2023-7/31/2024
	"The Role of Exercise in Controlling Central Mediators of Circadian Rhythm"	\$75,000
	Declined due to Scientific Overlap (See above Grant #1)	
4.	Wyoming NIH INBRE Thematic Research Project	5/1/2021-4/30/2023
	"Physical Activity as a Novel Tool to Reset the Misaligned Molecular Clock"	\$150,000
5.	Wyoming NIH INBRE Equipment Grant	5/1/2020-4/30/2021
	Small Equipment Grant for Purchase of SubCue DataLoggers	\$2,500
6.	Montana INBRE Tech Access Grant	12/1/2021-6/1/2022

# Funded Grants as Co-PI: Research

Tot	tal Funded (\$909,390)	
1.	NIH/NICHD R21 Pru (PI), Schmitt and Bruns (Co-I)	9/11/2023-6/30/2025
	"PGRMC proteins as biomarkers of fertility and overall health status"	\$397,375
2.	Wyoming INBRE NOSI Application NOT-GM-23-034 Schmitt, Bruns, Bedford (Co-Is)	9/1/2023-8/31/2024
	"The neurodevelopment of voluntary urination in mice"	\$486,000
3.	IDeA National Resource for Quantitative Proteomics Voucher Schmitt and Bruns (Co-I)	7/1/2022-11/1/2022
	"The cardiac molecular clock as a novel driver of circadian rhythm"	\$3,015
4.	College of Health Sciences Faculty Grant in Aid Schmitt, Johnson, Bruns (Co-I)	6/1/2020-5/31/2021
	"High Intensity Interval Training Effects on Arginine Vasopressin Circadian Rhythm"	\$3,000
5.	Jackson Aging Center Pilot Award Schmitt and Bruns (Co-I)	
6.	Wyoming NIH INBRE Equipment Grant Schmitt, Johnson, Bruns (Co-I)	5/1/2019-4/30/2020
	Small Equipment Grant for Purchase of Fluorescent Microscope for UW K&H Investigator	s \$20,000
	nded Grants as PI: Teaching	
	tal Funded (\$10,000)	
1.	Wyoming NASA Space Grant Consortium, Faculty Education Enhancement Grant	7/1/2023-6/30/2024
	Schmitt (PI), Johnson (Co-I)	
	"On-line Asynchronous Classroom Curriculum Development Project Proposal"	\$10,000
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	Ident Grants	
	tal Funded (\$27,000)	C /1 /2022 0 /1 /2022
1.	Wyoming INBRE Undergraduate Research Fellowship Wyatt, Cole. Role: Mentor	6/1/2023-9/1/2023 \$6,000
r	"The Effect of Exercise on Circadian Disruption in Mice"	30.000
	DNACCNA Student Desearch Crant Nolson Cole Doles Monter	
۷.	RMACSM Student Research Grant Nelson, Cole. Role: Mentor	5/1/2023-4/30/2024
	"Lifelong Exercise to Project Against a Broken Clock"	5/1/2023-4/30/2024 \$1,000
	"Lifelong Exercise to Project Against a Broken Clock" Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023
3.	"Lifelong Exercise to Project Against a Broken Clock" Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor "The Benefits of Exercise on Circadian Rhythm and Fertility"	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000
3.	"Lifelong Exercise to Project Against a Broken Clock" Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor "The Benefits of Exercise on Circadian Rhythm and Fertility" RMACSM Student Research Grant Marcello, Nick. Role: Mentor	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000 1/1/2022-5/1/2022
3. 4.	<ul> <li>"Lifelong Exercise to Project Against a Broken Clock"</li> <li>Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor</li> <li>"The Benefits of Exercise on Circadian Rhythm and Fertility"</li> <li>RMACSM Student Research Grant Marcello, Nick. Role: Mentor</li> <li>"What Can the Central Clock Tell Us?"</li> </ul>	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000 1/1/2022-5/1/2022 \$1,000
3. 4.	<ul> <li>"Lifelong Exercise to Project Against a Broken Clock"</li> <li>Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor</li> <li>"The Benefits of Exercise on Circadian Rhythm and Fertility"</li> <li>RMACSM Student Research Grant Marcello, Nick. Role: Mentor</li> <li>"What Can the Central Clock Tell Us?"</li> <li>RMACSM Student Research Grant Koplin, Eva. Role: Mentor</li> </ul>	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000 1/1/2022-5/1/2022 \$1,000 5/1/2021-4/30/2022
3. 4. 5.	<ul> <li>"Lifelong Exercise to Project Against a Broken Clock"</li> <li>Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor</li> <li>"The Benefits of Exercise on Circadian Rhythm and Fertility"</li> <li>RMACSM Student Research Grant Marcello, Nick. Role: Mentor</li> <li>"What Can the Central Clock Tell Us?"</li> <li>RMACSM Student Research Grant Koplin, Eva. Role: Mentor</li> <li>"Protective Effects of Maternal Exercise Against Endocrine Disrupting Chemical Exposure</li> </ul>	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000 1/1/2022-5/1/2022 \$1,000 5/1/2021-4/30/2022 "\$1,000
3. 4.	<ul> <li>"Lifelong Exercise to Project Against a Broken Clock"</li> <li>Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor</li> <li>"The Benefits of Exercise on Circadian Rhythm and Fertility"</li> <li>RMACSM Student Research Grant Marcello, Nick. Role: Mentor</li> <li>"What Can the Central Clock Tell Us?"</li> <li>RMACSM Student Research Grant Koplin, Eva. Role: Mentor</li> <li>"Protective Effects of Maternal Exercise Against Endocrine Disrupting Chemical Exposure</li> <li>Wyoming INBRE Undergraduate Research Fellowship O'Connor, Aedian. Role: Mentor</li> </ul>	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000 1/1/2022-5/1/2022 \$1,000 5/1/2021-4/30/2022 "\$1,000 10/1/2021-5/1/2022
3. 4. 5. 6.	<ul> <li>"Lifelong Exercise to Project Against a Broken Clock"</li> <li>Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor</li> <li>"The Benefits of Exercise on Circadian Rhythm and Fertility"</li> <li>RMACSM Student Research Grant Marcello, Nick. Role: Mentor</li> <li>"What Can the Central Clock Tell Us?"</li> <li>RMACSM Student Research Grant Koplin, Eva. Role: Mentor</li> <li>"Protective Effects of Maternal Exercise Against Endocrine Disrupting Chemical Exposure</li> <li>Wyoming INBRE Undergraduate Research Fellowship O'Connor, Aedian. Role: Mentor</li> <li>"Acclimation to Moderate Altitude Induces Physiological Adaptations in Mice"</li> </ul>	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000 1/1/2022-5/1/2022 \$1,000 5/1/2021-4/30/2022 "\$1,000 10/1/2021-5/1/2022 \$6,000
3. 4. 5.	<ul> <li>"Lifelong Exercise to Project Against a Broken Clock"</li> <li>Wyoming INBRE Undergraduate Research Fellowship Sapuppo, Ashleen. Role: Mentor</li> <li>"The Benefits of Exercise on Circadian Rhythm and Fertility"</li> <li>RMACSM Student Research Grant Marcello, Nick. Role: Mentor</li> <li>"What Can the Central Clock Tell Us?"</li> <li>RMACSM Student Research Grant Koplin, Eva. Role: Mentor</li> <li>"Protective Effects of Maternal Exercise Against Endocrine Disrupting Chemical Exposure</li> <li>Wyoming INBRE Undergraduate Research Fellowship O'Connor, Aedian. Role: Mentor</li> </ul>	5/1/2023-4/30/2024 \$1,000 10/1/2022-5/1/2023 \$6,000 1/1/2022-5/1/2022 \$1,000 5/1/2021-4/30/2022 "\$1,000 10/1/2021-5/1/2022

# **Grants in Review**

# PUBLICATIONS

\*Student Author, <sup>#</sup>Emily Schmitt as the Corresponding Author Emily Schmitt as first and/or corresponding author: 4 since joining University of Wyoming

# **Refereed Journals**

1. O'Connor A\*, Hatzenbiler DM\*, Flom LT, Bobadilla AC, Bruns DR, **Schmitt EE**<sup>#</sup> (2023). Physiological and Morphometric Differences in Resident Moderate Altitude versus Sea Level Mice. *Aerospace Medicine and Human Performance. Accepted August 2023. In Press* 

- 2. Yusifov A, Borders M, DeHoff M, Polson S, **Schmitt EE**, Bruns DB. (2023). Exercise During the Juvenile Period Protects Against Isoproterenol-Induced Cardiac Dysfunction Later in Life. *Journal of Applied Physiology*.
- 3. Herzl E, Schmitt EE, Shearrer G, Keith JF. (2023). The Effects of a Western vs. High-Fiber Unprocessed Diet on Health Outcomes in Mice Offspring. *Nutrients.*
- 4. Yusifova M\*, Yusifov A, Polson S, Todd WD, **Schmitt EE**^, Burns DB^. (2023). Voluntary wheel running exercise does not attenuate circadian and cardiac dysfunction caused by conditional deletion of BMAL1. *Journal of Biological Rhythms*. ^co-last
- 5. Fullerton ZS, McNair BD, Marcello NA\*, **Schmitt EE**, Bruns DB. (2022). Chronic exposure to high altitude hypoxia promotes loss of muscle mass that is not rescued by metformin. *High Altitude Medicine Biology*.
- 6. Johnson A, **Schmitt EE**, French J, Johnson E. (2022). Uneven but conservative pacing is associated with performance during up and downhill running. *International Journal of Sports Physiology and Performance*.
- 7. **Schmitt EE**, McNair BD, Polson SM, Cook RF, Bruns DR. (2022). Mechanisms of exercise-induced cardiac remolding differ between young and aged hearts. *Exercise and Sport Science Reviews*.
- 8. Yusifov A, Chhatre VE, Koplin EK\*, **Schmitt EE**, Woulfe KC, Bruns DR. (2021). Transcriptomic analysis of cardiac gene expression across the life course in male and female mice. *Physiological Reports*.
- 9. Yusifov A, Chhatre VE, Zumo JM, Cook RF, McNair BD, **Schmitt EE**, Woulfe KC, Bruns DR. (2021). Cardiac response to adrenergic stress differs by sex and across the lifespan. *Geroscience*.
- 10. Bruns DR, Yusifova M\*, Marcello NA\*, Green CJ\*, Walker WJ\*, **Schmitt EE**<sup>#</sup>. (2020). The Peripheral Circadian Clock and Exercise: Lessons from Young and Old Mice. *Journal of Circadian Rhythms*.
- 11. McNair BD, Marcello NA\*, Smith DT, **Schmitt EE**, Bruns DR. (2020). Changes in Muscle Mass and Composition by Exercise and Hypoxia as Assessed by DEXA in Mice. *Medicina*.
- 12. Brown KD, Waggy ED, Nair S, Robinson TJ, **Schmitt EE**, Bruns DR, Thomas DP. (2020). Sex Differences in Cardiac AMP-Activated Protein Kinase Following Exhaustive Exercise. *Sports Medicine International Open*
- 13. Schmitt EE<sup>#</sup>, Johnson EC, Yusifova M<sup>\*</sup>, Bruns DR. (2019). The Renal Molecular Clock: Broken by Aging and Restored by Exercise. *AJP Renal*.
- 14. Pearson S, Sarkar T, McQueen C, Elswood J, **Schmitt EE**, Wall S, Scribner K, Wyatt G, Barhoumi R, Behbod F, Rijnkels M, Porter W. (2018). ATM-dependent activation of SIM2s regulates homologous recombination and epithelial-mesenchymal transition. *Oncogene*.
- 15. McQueen CM, **Schmitt EE**<sup>^</sup>, Roy Sarkar T, Elswood J, Metz RP, Earnest D, Rijnkels M, Porter WW. (2018). PER2 Regulation of Mammary Gland Branching Morphogenesis. *Development*. ^co-first
- 16. Morris D, Popp J, Tang L, Gibbs H, **Schmitt EE**, Chaki S, Yeh A, Porter W, Burghardt R, Barhoumi R, Rivera G. (2017). Nck is required for breast carcinoma progression and metastasis. *Molecular Biology of the Cell*.
- 17. Schmitt EE, Barhoumi R, Metz RP, Porter WW. (2017). Circadian Regulation of Benzo[a]Pyrene Metabolism and DNA Adduct Formation in Breast Cells and the Mouse Mammary Gland. *Molecular Pharmacology*.
- 18. Schmitt EE, Vellers HL, Porter WW, Lightfoot JT. (2016). Environmental Endocrine Disruptor Affects Voluntary Physical Activity in Mice. *Medicine & Science in Sports & Exercise*.
- 19. Turner MJ, **Schmitt EE**, Hubbard-Turner T. (2016). Weekly Physical Activity Levels of Older Adults Regularly Using a Fitness Facility. *Journal of Aging Research*.
- 20. Ferguson DP, Dangott LF, Vellers HL, **Schmitt EE**, Lightfoot JT. (2015). Differential Protein Expression in the Nucleus Accumbens of High and Low Active Mice. *Behavioral Brain Research*.
- 21. Ferguson DP, **Schmitt EE**, Lightfoot JT. (2013). Vivo-Morpholinos Induced Transient Knockdown of Physical Activity Related Proteins. *PLoS ONE*.
- 22. Ferguson DP, Dangott LJ, **Schmitt EE**, Vellers HL, Lightfoot JT. (2013). Differential Skeletal Muscle Proteome of High and Low Active mice. *Journal of Applied Physiology*.

# **Publications in Review**

# **Book Chapters**

1. Schmitt EE and Vellers HL. The Routledge Handbook of Sport and Exercise Systems Genetics. Chapter 11: Environmental Factors that May Affect the Genetic Regulation of Activity (2019).

# **INVITED TALKS**

- "From Bench to Bedside: Using an Animal Model to Better Understand How Circadian Disruption Impacts Human Health" Institute of Translational Health Sciences, Clinical and Translational Research Pathway, WWAMI, 2023 Remote
- 2. "Effect of Exercise on Disrupted Circadian Rhythm in Mice" American Chemical Society Northwest Regional Meeting 2023, Bozeman, MT.
- 3. "Physical Activity as a Novel Tool to Reset the Misaligned Molecular Clock" College of Health Sciences Research Day, 2023. Laramie, WY.
- 4. "Physical Activity as a Novel Tool to Reset the Misaligned Molecular Clock" Wyoming, INBRE Annual Conference, 2023. Laramie, WY.
- 5. "Circadian Disruption Impacts Female Fertility". Animal Science Seminar, 2022. University of Wyoming, Laramie, WY.
- 6. "Exercise to Reset and Strengthen the Molecular Clock" COBRE Neuroscience Seminar Series, 2022. University of Wyoming, Laramie, WY.
- 7. "Effects of Exercise on Realigning a Disrupted Molecular Clock" Society for Research on Biological Rhythms, 2022. Data-Blitz Presentation. Amelia Island, FL.
- 8. "Physical Activity as a Novel Tool to Reset the Misaligned Molecular Clock" Wyoming, INBRE Annual Conference, 2022. Laramie, WY.
- 9. "Socially Distanced Science: Relying on the Mouse Model to Study Nocturia" College of Health Sciences Research Day, 2021. Remote.
- 10. "Aging and the Molecular Clock" The Jackson Laboratory, Aging Interest Group Meeting, 2019. Remote.
- 11. "Effects of Physical Activity and the Molecular Clock on Polyaromatic Hydrocarbon Metabolism" University of Utah, 2019. Salt Lake City, UT.
- 12. "Effects of Physical Activity and the Molecular Clock on Polyaromatic Hydrocarbon Metabolism" Molecular Biology Seminar Series, 2018. Laramie, WY.
- 13. "Back to the Bench: A Basic Science Approach to Studying Human Health" Division of Kinesiology & Health Seminar, 2018. Laramie, WY.
- 14. "Effects of Physical Activity and the Molecular Clock on Polyaromatic Hydrocarbon Metabolism" Toxicology Seminar Series, 2018. College Station, TX.
- 15. "Circadian Regulation of Benzo[a]Pyrene Metabolism and DNA Adduct Formation in Breast Cells and the Mouse Mammary Gland" Three Minute Thesis, CVM Research Symposium, 2018. College Station, TX.
- 16. "Circadian Regulation of Benzo[a]Pyrene Metabolism and DNA Adduct Formation in Breast Cells and the Mouse Mammary Gland" Gordon Conference: Cellular and Molecular Mechanisms of Toxicity, 2017. Andover, NH.
- 17. "Endocrine Disruption and the Regulation of Physical Activity in Mice" Department Seminar, Exercise Physiology, 2015. College Station, TX.

# ABSTRACTS AND POSTER PRESENTATIONS

\*Student Author, #Emily Schmitt as the Corresponding Author

- Pereira VM, Pradhanang S, Chenchar AM, Polson S, Burns DR, Schmitt EE, Bashir R, Sawan SA, Nair S. Platycodon Grandifloras Reduces Weight Gain and Attenuates Hepatic Steatosis in a Diet-Induced Mouse Model of Obesity. American Society for Pharamacology and Experimental Therapeutics. Annual Meeting, 2023, St. Louis, Missouri
- 2. Sapuppo AM\*, Earhart KM\*, Schuldies AL\*, **Schmitt EE**. Effects of Exercise on Circadian Rhythm Disruption and Reproduction. University of Wyoming Undergraduate Research Day, 2023. Laramie, WY
- 3. Nelson CF\*, Todd WD, Wyatt CR\*, **Schmitt EE**. Lifelong Exercise to Protect Against a Broken Clock. College of Health Sciences Research Day, 2023. Laramie, WY.
- 4. Sapuppo AM\*, Earhart KM\*, Schuldies AL\*, **Schmitt EE**. Effects of Exercise on Circadian Rhythm Disruption and Reproduction. Rocky Mountain ACSM, 2023. Colorado Spring, CO. Undergrad poster winner.

- 5. Nelson CF\*, Todd WD, Wyatt CR\*, **Schmitt EE**. Lifelong Exercise to Protect Against a Broken Clock. Rocky Mountain ACSM, 2023. Colorado Spring, CO.
- 6. Earhart KM\*, Britz S\*, Pru JK, Schmitt EE. Circadian Disruption Impacts Female Reproduction. Rocky Mountain ACSM, 2023. Colorado Spring, CO.
- 7. Pereira MV, Pradhanang S, Chenchar AM, Polson S, Bruns DB, Schmitt EE, Nair S. Platycodon grandifloras reduces weight gain and attenuates hepatic steatosis in a diet-induced mouse model of obesity. American Society for Pharmacology and Experimental Therapeutics, 2023. Philadelphia, PA.
- 8. LeMaster B\*, Cloninger J\*, Bedford N, Bruns DR, **Schmitt EE**<sup>#</sup>. Exercise as a possible treatment for nocturia via circadian realignment. Western Medical Conference, 2023. Carmel, CA.
- 9. Britz S, Earhart K\*, Pru J, **Schmitt EE<sup>#</sup>.** Circadian Disruption Impacts Female Fertility. Western Medical Conference, 2023. Carmel, CA.
- 10. Schmitt EE<sup>#</sup>, Sholten ET<sup>\*</sup>, McCoy E<sup>\*</sup>, Marcello N<sup>\*</sup>, Todd WD. Effects of Exercise on Realigning a Disrupted Molecular Clock. Society for Research on Biological Rhythms, 2022. Amelia Island, FL
- O'Connor A\*, Bruns DR, Vaccaro L, Bobadilla AC, Schmitt EE<sup>#</sup>. Acclimation to Moderate Altitude Induces Physiological Adaptations in Mice. WY-INBRE Conference and Undergraduate Research & Inquiry, 2022. Laramie, WY.
- 12. Scholten ET\*, McCoy E\*, **Schmitt EE**<sup>#</sup>. Effects of Exercise on Realigning a Disrupted Molecular Clock. Spokane WWAMI Research Day, 2021. Spokane, WA
- 13. McCoy E\*, Scholten ET\*, **Schmitt EE**\*. Effects of Exercise on Realigning a Disrupted Molecular Clock. INBRE undergraduate research forum, 2021. Laramie, WY
- 14. Nelson RN\*, Koplin EK\*, Polson SP, Bruns DP, Schmitt EE\*. The use of high frequency ultrasound for in vivo pregnancy to monitor and assess fetal development after endocrine disruption. Wyoming WWAMI Research Day, 2021. Laramie, WY
- 15. Bruns DB, DeHoff MA, Yusifov A, Polson, SM, Cook, RF, **Schmitt EE**, Woulfe, KC. Exercise during the juvenile period protects against cardiac dysfunction later in life. Gerontological Society of America Annual Conference, 2021. Remote.
- 16. Blechschmid TH, Hartung CM, **Schmitt EE**, Bruns DR, Carrico CP, Johnson EC. Mechanisms of nocturia in older adults and the potential for exercise to alleviate them. Rocky Mountain ACSM, 2021. Remote.
- 17. Yusifova M, Marcello NA\*, Polson SM, Cook RF, **Schmitt EE**<sup>#</sup>, Bruns DR. Genetic deletion of BMAL1 in cardiac myocytes disrupts the cardiac molecular clock. Rocky Mountain ACSM, 2021. Remote.
- 18. Fullerton ZS, McNair BD, Marcello NA\*, Sewell TE, **Schmitt EE**, Bruns DR. Exposure to high altitude promotes muscle loss that is not rescued by metformin. College of Health Sciences Research Day, 2021. Remote.
- 19. DeHoff MA, Yusifov A, Cook RF, **Schmitt EE**, Nair S, Smith DT, Bruns DR. Exercise during childhood protects against cardiac dysfunction later in life. Rocky Mountain ACSM, 2021. Remote.
- 20. Graves H\*, Culnan BM\*, Bruns DR, **Schmitt EE**<sup>#</sup>. Treadmill training improves aerobic capacity in aged male mice compared to voluntary wheel running. Rocky Mountain ACSM, 2021. Remote.
- 21. Koplin EK\*, Bruns DR, **Schmitt EE**<sup>#</sup>. Changes in voluntary wheel running during stages of pregnancy in the mouse. Rocky Mountain ACSM, 2021. Remote.
- 22. Marcello NA\*, Bruns DR, Schmitt EE<sup>#</sup>. Disruption of circadian rhythm by simulated jet lag in mice. Rocky Mountain ACSM, 2021. Remote.
- 23. Yusifov A, Chhatre V, Koplin EK\*, **Schmitt EE**, Woulfe KC, Bruns DR. Transcriptomic Analysis of Cardiac Gene Expression Across the Life-Course in Male and Female Mice. Experimental Biology, 2021. Remote
- 24. Shorthill SK, Cook RF, McNair BD, Polson SM, **Schmitt EE**, Bruns DR. Voluntary wheel running at high, moderate, and low altitudes differs in male versus female mice. Rocky Mountain ACSM, 2021. Remote.
- 25. Schmitt EE<sup>#</sup>, Bruns DR. Treadmill Training Improves Aerobic Capacity in Aged Male Mice Compared to Voluntary Wheel Running, Gerontological Society of America National Meeting, 2021. Remote
- 26. **Schmitt EE**<sup>#</sup>, Bruns DR. Circadian Interest Group. Aging, the Molecular Clock, and Exercise Podium Presentation. Gerontological Society of America National Meeting, 2019. Austin, TX.
- 27. Hibbs C\*, Yusifova M, McNair BD, Bruns DR, **Schmitt EE**<sup>#</sup>. Circadian patterns of free wheel running in young and old mice. Gerontological Society of America Annual Conference, 2019. Austin, TX

- 28. Ostler IW, Cook R, McNair BD, **Schmitt EE**, Coste S, Bruns DR. The impact of voluntary exercise on cardiac remodeling in young and old mice. WY-INBRE Conference and Undergraduate Research & Inquiry, 2019. Laramie, WY.
- Schmitt EE<sup>#</sup>, Johnson EC, Loseke J, Zamora M, Hibbs C<sup>\*</sup>, Smith D. Gene Expression of Peripheral Blood Mononuclear Cells During Heat Acclimation in Firefighters. High Plains Intermountain Center Conference, 2019. Seattle, WA.
- 30. **Schmitt EE,** Barhoumi R, McQueen C, Porter WW. Circadian Regulation of AhR Induced CYP1A1 Gene Expression is Dependent Upon p53 Binding Activity. Society of Toxicology, 2018. San Antonio, TX.
- 31. Schmitt EE, Barhoumi R, Metz RP, Porter WW. Circadian Regulation of Benzo[a]Pyrene Metabolism and DNA Adduct Formation in Breast Cells and the Mouse Mammary Gland Annual Toxicology Regulatory Science Symposium, 2017. College Station, TX.
- 32. Schmitt EE, Barhoumi R, Metz RP, Porter WW. Circadian Regulation of Benzo[a]Pyrene Metabolism and DNA Adduct Formation in Breast Cells and the Mouse Mammary Gland. CTEHR Clocks Symposium, Tic Tox: Circadian Rhythms and the Environment, 2016. College Station, TX.
- 33. Schmitt EE, Barhoumi R, Metz RP, Porter WW. Porter. Circadian Regulation of Benzo[a]Pyrene Metabolism and DNA Adduct Formation in Breast Cells and the Mouse Mammary Gland. TAMU Post-Doctoral research symposium, 2016. College Station, TX.
- 34. Schmitt EE, Barhoumi R, Metz RP, Porter WW. Circadian Regulation of Benzo[a]Pyrene Metabolism and DNA Adduct Formation in Breast Cells and the Mouse Mammary Gland. The Aryl Hydrocarbon Receptor as a Central Mediator of Health and Disease Conference, 2016. Rochester, NY.
- 35. **Schmitt EE**, Porter WW, Lightfoot JT. Endocrine-Disruption and the Regulation of Physical Activity and Mammary Gland Development in Mice. American College of Sports Medicine, 2015. San Diego, CA.
- 36. **Schmitt EE**, Vellers HL, Irwin CD. Lightfoot JT. Endocrine-disruption and Regulation of Physical Activity in Mice. American College of Sports Medicine, 2014. Orlando, FL.
- 37. **Schmitt EE**, Porter WW, Lightfoot JT. Endocrine-Disruption and the Regulation of Physical Activity and Mammary Gland Development in Mice. Breast Cancer Retreat, 2014. Lake Conroe, TX.
- 38. **Schmitt EE**, Ferguson DP, Lightfoot JT. Potential Wash-out of Vmat2 Gene Silencing by Exercise Exposure. American College of Sports Medicine, 2012. San Francisco, CA.
- 39. Downey PT, Ballard TM, Schmitt EE, Nebus PL. Cancer Rehabilitation: Observed Trends of Cancer Survivors' Physical Activity Levels Prior to Diagnosis and When Starting the Strides to Strength Group Exercise Program. Medicine & Science in Sports & Exercise. American College of Sports Medicine, 2012. San Francisco, CA.
- 40. **Schmitt EE**, Ferguson DP, Lightfoot JT. Knockdown of Vmat2 in mouse right striatum and physical activity. Experimental Biology, 2012. San Diego, CA.
- 41. **Schmitt EE**, Hubbard TJ, Turner M. Fitness Facility Use Does Not Increase Step Activity in Independent Living Older Adults. American College of Sports Medicine, 2010. Baltimore, MD.
- 42. Ferguson DP, Moore-Harrison TL, Bowen RS, Hall KJ, **Schmitt EE**, Hamilton AT, Mosher A, Lightfoot JT. Heart rate and core temperature responses of pit crew athletes during elite automobile races. American College of Sports Medicine, 2009. Seattle, WA.
- 43. Schmitt EE, Pyden C, Miller P. Relationships Between Treadmill Running Performance and Preference and Tolerance of Exercise Intensity. Southeast American College of Sports Medicine, 2007. Charlotte, NC.

# STUDENT RESEARCH SUPERVISION

# **Graduate Student Advisees**

- 1. Chris Folsom, MS Kinesiology and Health, 2023-
- 2. Shay Nelson, MS Kinesiology and Health, 2023-
- 3. Nathan Hunt, MS Kinesiology and Health, 2023-
- 4. Cole Nelson, MS Kinesiology and Health, 2022-
- 5. Kylie Earhart, MS Kinesiology and Health, 2022-2023
- 6. Samantha Britz, MD WWAMI Medical Education, 2025
- 7. Justin Colinger, MD WWAMI Medical Education, 2025

- 8. Bensen LeMaster, MD WWAMI Medical Education, 2025
- 9. Mackenzie Amrine, MS Kinesiology and Health, 2021-2022
- 10. Nicholas Marcello, MS Kinesiology and Health, 2020-2022
- 11. Eva Koplin, MS Kinesiology and Health, 2020-2022
- 12. Evan Scholten, MD WWAMI Medical Education, 2024
- 13. Rikki Nelson, MD WWAMI Medical Education, 2024
- 14. Carly Hibbs, MS Kinesiology and Health, 2018-

### **Undergraduate Student Advisees (Research)**

- 1. Maggie Gazda, BS Kinesiology and Health, 2023-
- 2. Lainee Allison, BS Kinesiology and Health, 2023-
- 3. Sherry Negaard, BS Kinesiology and Health, 2023-
- 4. Hanna Crockett, BS Kinesiology and Health, 2023-
- 5. Gabby Clutter, BS Kinesiology and Health, 2023-
- 6. Alyssa Bedard, BS Kinesiology and Health, 2023-
- 7. Morgan Jaquez, BS Kinesiology and Health, 2023-2023
- 8. Karla Pitha, BS Kinesiology and Health, 2023-
- 9. Cole Wyatt, BS Microbiology, INBRE Undergraduate Fellow, 2023-
- 10. Kelcey Anderson, BS Kinesiology and Health, 2023-2023
- 11. Joshua Posten, BS Kinesiology and Health, 2022-2023
- 12. Shiqi (Abby) Deng, SUS Exchange Student, 2022-2023
- 13. Shay Nelson, BS Kinesiology and Health, 2022-2023
- 14. Aubri Schuldies, BS Kinesiology and Health, 2022-2023
- 15. Nathan Hunt, BS Kinesiology and Health, 2022-2023
- 16. Connor Kasarda, BS Computer Science, 2022-2023
- 17. Brooklyn Prince, BS Molecular Biology, 2022-2023
- 18. Aedian O'Connor, BS Physiology, INBRE Undergraduate Fellow, 2022-2023
- 19. Ashleen Sapuppo, BS Physiology, INBRE Undergraduate Fellow 2022-
- 20. Dallin Jones, BS Kinesiology and Health, 2021-2022
- 21. Michael Jace Smith, BS Kinesiology and Health, 2021-2022
- 22. Kendahl Coy, BS Kinesiology and Health, 2021-2022
- 23. Brady Arnoldi, BS Kinesiology and Health, 2021-2022
- 24. Tara Kortlever, BS Kinesiology and Health, 2021-2022
- 25. Chad Wiebelhaus, BS Kinesiology and Health, 2021-2022
- 26. Justyn Christensen, BS Kinesiology and Health, 2021-2022
- 27. Gabriel Cruz, BS Kinesiology and Health, 2021-2022
- 28. Marissa Arnold, BS Kinesiology and Health, 2021-2022
- 29. Hunter Graves, BS Kinesiology and Health, 2020-2021
- 30. Brienna Culnan, BS Kinesiology and Health, 2020-2021
- 31. Taylor Devries, BS Kinesiology and Health, 2020-2021
- 32. Elijah McCoy, BS Kinesiology and Health, INBRE Undergraduate fellow 2020-2021
- 33. Michelle Nguyen, BS Kinesiology and Health, 2020-2022
- 34. Faith Friend, BS Kinesiology and Health, 2020-2022
- 35. Sydney Beijer, BS Kinesiology and Health, 2020-2022
- 36. Kylie Earhart, BS Kinesiology and Health, 2022
- 37. Michael Doyle, BS Kinesiology and Health, 2019-2020
- 38. Connor Assay, BS Kinesiology and Health, 2020-2021
- 39. Brianna Specht, BS Kinesiology and Health, 2020-2022
- 40. Krik Unland, BS Kinesiology and Health, 2019-2020
- 41. Mackenzie Bennett, BS Kinesiology and Health, 2019-2020

- 42. Aaron Koehler, BS Kinesiology and Health, 2020
- 43. Bryce Benton, BS Kinesiology and Health, 2019-2020
- 44. Riley Patterson, BS Physiology, 2019-2020
- 45. Kelsey Faircloth, BS Kinesiology and Health, 2019-2020
- 46. Joshua Willoughby, BS Kinesiology and Health, 2019-2020
- 47. Dean Hatzenbiler, BS Kinesiology and Health, 2019-2020
- 48. Mackenzie Bennett, BS Kinesiology and Health, 2018-2019
- 49. Mackenzie Amrine, BS Kinesiology and Health, 2019-2020
- 50. Logan Dahill, BS Kinesiology and Health, 2019-2020
- 51. Dillon Clift, BS Kinesiology and Health, 2019-2020
- 52. Andrew Monroe, BS Kinesiology and Health, 2019-2020
- 53. Uriah Gracia-Salinas, BS Kinesiology and Health, 2019-2020
- 54. Hunter Sylte, BS Kinesiology and Health, 2019-2020
- 55. Nicholas Marcello, BS Kinesiology and Health, 2018-2020
- 56. Hailey Wilkinson, BS Kinesiology and Health, 2018-2019
- 57. Brenna McGuinness, BS Kinesiology and Health, 2018-2019
- 58. Rachel Goff, BS Kinesiology and Health, 2018-2019

### **GRADUATE THESIS AND DISSERTATION COMMITTEE MEMBERSHIPS**

- 1. Jace Smith, MS Kinesiology and Health, 2022-
- 2. Hannah Hagen, MS Kinesiology and Health, 2023-
- 3. Elizabeth Straight, MS Kinesiology and Health, 2022-
- 4. Bailee Smith, MS Kinesiology and Health, 2022-
- 5. Jimmy Bautista, MS Kinesiology and Health, 2022-
- 6. Christopher Mancuso, PhD Clinical Psychology, 2022-
- 7. Kevin Miller, PhD Biomedical Sciences, 2021-
- 8. Dania Sinzu-Prieto, MS Animal Science, 2022-
- 9. Vitoria Mattos Pereira, PhD Biomedical Sciences, 2021-
- 10. Aykhan Yusifov, PhD Biomedical Sciences, 2019-2022
- 11. Aaron Koehler, MS Kinesiology and Health 2020-2022
- 12. Josh Kuehmichel, Co-Chair, MS Kinesiology and Health, 2022
- 13. Elizabeth Herzl, MS Nutrition, 2022
- 14. Zachary Fullerton, MS Kinesiology and Health, 2022
- 15. Tyler Blechschmid, MS Kinesiology and Health, 2021
- 16. Andrew Johnson, MS Kinesiology and Health, 2021
- 17. Mackenzie DeHoff, MS Kinesiology and Health, 2021
- 18. Mushu Yusifova, Co-Chair, MS Kinesiology and Health, 2021
- 19. Aaron Koehler, Co-Chair, MS Kinesiology and Health, 2021
- 20. Ben McNair, MS Kinesiology and Health, 2020
- 21. Josh Loseke, Co-Chair, MS Kinesiology and Health, 2020

### **TEACHING EXPERIENCE**

Semester and Year	Course Prefix	Course Title	Enrollment	Credits	On-	Contribution
	and Number				Campus/	if Team
					Distance	Taught
Fall 2023	HM 6730	Cancer,	20	4	On	n/a
		Hormones,			Campus	
		and Blood				
Summer 2023	KIN 3023	Physiology	28	3	Distance	n/a
		of Exercise				

Spring 2023	KIN 3021	Physiology of Exercise	26	3	On Campus	n/a
Fall 2022	HM 6730	Cancer, Hormones, and Blood	20	4	On Campus	n/a
Spring 2022	HM 6640	Blood and Cancer	20	4	On Campus	n/a
Spring 2022	HM 6650	Energetics and Homeostasis	20	4	On Campus	n/a
Fall 2021	KIN 5041-01	Advanced Exercise Physiology	5	3	On Campus	n/a
Fall 2021	KIN 3021	Physiology of Exercise	68	3	On Campus	n/a
Fall 2021	KIN 3022	Physiology of Exercise Lab	68	1	On Campus	n/a
Spring 2021	HM 6640	Blood and Cancer	20	4	On Campus	n/a
Spring 2021	HM 6650	Energetics and Homeostasis	20	4	On Campus	n/a
Fall 2020	KIN 5586-02	Advanced Exercise Physiology	12	3	On Campus	n/a
Fall 2020	KIN 3021	Physiology of Exercise	78	3	On Campus	n/a
Fall 2020	KIN 3022	Physiology of Exercise Lab	74	1	On Campus	n/a
Spring 2020	HM 6640	Blood and Cancer	20	4	On Campus	n/a
Spring 2020	HM 6650	Energetics and Homeostasis	20	4	On Campus	n/a
Fall 2019	KIN 5586-02	Advanced Exercise Physiology	10	3	On Campus	n/a
Fall 2019	KIN 3021	Physiology of Exercise	76	3	On Campus	n/a
Fall 2019	KIN 3022	Physiology of Exercise Lab	70	1	On Campus	n/a
Spring 2019	HM 6640	Blood and Cancer	20	4	On Campus	n/a
Spring 2019	HM 6650	Energetics and Homeostasis	20	4	On Campus	n/a

Fall 2018	KIN 3021	Physiology	73	3	On	n/a
		of Exercise			Campus	
Fall 2018	KIN 3022	Physiology of Exercise	70	1	On Campus	n/a
		Lab			campus	

# **GUEST LECTURES**

- 1. FYS 2020-2023: Lecture on my schooling and career experiences.
- 2. KIN 5041, Dr. Johnson's Advanced Environmental Physiology class: Lecture on Circadian Rhythms and the Environment. I also did another lecture on Exercise in Polluted Environments.
- 3. KIN 2050, Dr. Alisa Siceloff's Socio-Culture Aspects of Physical Activity class: Lecture on Circadian Rhythms and Timing of Exercise as Entrainment.
- 4. HELD 5586-43, Lacey Gaechter's Environmental Health class. Lecture on Introduction to Toxicology.
- 5. ZOO 5735, Dr. William 'Trey' Todd's Advanced Topics in Physiology: Circadian Physiology. Lecture on Circadian Rhythms and Timing of Exercise as Entrainment.

Year	Number of Undergraduate Advisees	Number of Graduate Advisees
2023	22	4
2022	0	3
2021	8	3
2020	16	3
2019	14	1
2018	19	1

# ADVISING

# UNIVERSITY SERVICE

University of Wyoming

- 1. 2020-present, Radiation Safety Committee
- 2. 2022, Zoology & Physiology / Animal Science R1 Faculty Search Committee

College of Health Sciences

- 1. 2020-present, Scholarship Committee
- 2. 2019-2021, Interprofessional Committee Member

Division of Kinesiology and Health and WWAMI

- 1. 2022, Hiring Committee for Staff/front office position
- 2. 2019-present, Wyoming WWAMI Coordinator for Student Research
- 3. 2019-present, PEK Faculty Representative
- 4. 2019-present, Student Bowl Coordinator for Rocky Mountain ACSM
- 5. 2018-2021, Graduate Recruitment Initiative (GRI) committee. Planning of GRI weekend (budget + activities)
- 6. 2020, Hiring Committee for Anatomy position/WWAMI

# **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

- 1. 2022-present, Society for the Study of Reproduction
- 2. 2021-present, Society for Research on Biology Rhythms
- 3. 2018-present, American Heart Association Member
- 4. 2007-present, American College of Sports Medicine

# SERVICE TO THE DISCIPLINE

1. 2023 University of Wyoming, NASA, Graduate Fellowship Grant Reviewer

- 2. 2019-present, Rocky Mountain American College of Sports Medicine Member and Wyoming Faculty Representative
- 3. 2019-present, Mountain West IDeA Clinical and Translational Research Infrastructure Network (CTR-IN) Grant Reviewer
- 4. 2019-2021, Gerontological Society of America abstract reviewer
- 5. 2018-present, Manuscript Reviewer for Current Biology, PloS One, Medicine & Science in Sport & Exercise, Journal of Applied Physiology

# **PROFESSIONAL DEVELOPMENT**

- 1. 2020, Cares Teaching
- 2. 2020, ECTL webinar in Facilitating Synchronous Discussions
- 3. 2018, WWAMI faculty development session on small group case-based learning

# **COMMUNITY SERVICE/OUTREACH**

- 1. 2019-present, Walk with a Doc, Laramie, WY
- 2. 2021, Ivinson Hospital, Cardiac Rehab, invited community speaker
- 3. 2019-2022, NASI Presentation on using mice as clinical models
- 4. 2019, SUS Presentation on Circadian Rhythms
- 5. 2019, Health Sciences High School student presentation on using mice as clinical models