

# Sean A. Newsom, Ph.D.

Associate Professor  
School of Exercise, Sport, and Health Sciences  
College of Health  
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## A. EDUCATION AND EMPLOYMENT INFORMATION

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### Employment Information

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Associate Professor (with Indefinite Tenure)   Kinesiology School of Exercise, Sport, and Health Sciences College of Health Oregon State University, Corvallis, OR	2021-Present
Assistant Professor   Kinesiology School of Biological and Population Health Sciences College of Public Health and Human Sciences Oregon State University, Corvallis, OR	2015-2021

### Other Positions and Appointments

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Valley Fellow Oregon State University, Corvallis, OR	2022-2025
Visiting Scholar   Molecular Medicine Program University of Utah, Salt Lake City, UT Host: Katsu Funai, Ph.D.	2022

### Education and Training

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Postdoctoral Fellow	Division of Endocrinology, Metabolism and Diabetes University of Colorado School of Medicine, Aurora, CO Mentor: Bryan C. Bergman, Ph.D.	2014-2015
Postdoctoral Fellow	Department of Pediatrics – Division of Neonatology University of Colorado School of Medicine, Aurora, CO Mentor: Jacob E. Friedman, Ph.D.	2012-2014
Ph.D.	Kinesiology – Exercise Physiology University of Michigan, Ann Arbor, MI Mentor: Jeffrey F. Horowitz, Ph.D.	2007-2012
M.S.	Health and Exercise Science – Exercise and Nutrition Colorado State University, Fort Collins, CO Mentor: Christopher Bell, Ph.D.	2005-2007
B.S.	Kinesiology – Exercise Science Michigan State University, East Lansing, MI Mentor: Christopher J. Womack, Ph.D.	2000-2004

### Certifications

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2016-21 Advanced Cardiovascular Life Support (ACLS) Provider | American Heart Association

## Professional Development

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- 2012-13 Responsible Conduct of Research | University of Colorado School of Medicine  
*Interactive 9-part series related to ethical research practices*
- 2013 Grant Writing Approach | University of Colorado School of Medicine  
*Interactive 1-day session dedicated to biomedical sciences grant writing*
- 2013-14 Colorado Mentor Training Program | University of Colorado School of Medicine  
*Interactive 7-part series related to effective communication between mentors and mentees*
- 2014 Laboratory Management | University of Colorado School of Medicine  
*Interactive 1-day session dedicated to biomedical sciences laboratory management*
- 2014 Grant Writer's Seminar and Workshop | Oregon State University  
*Interactive 1-day session followed by assisted grant proposal development*
- 2017 Workshop on High Resolution O2k-FluorRespirometry | Oroboros Instruments  
*Comprehensive 5-day course on mitochondrial measurements using O2k instruments*
- 2017 Isotope Tracers in Metabolic Research | National Institutes of Health  
*Interactive 5-day course in isotope tracer methodology for metabolic research*
- 2017 Visiting Scholar | Hospital for Sick Kids, Toronto, Canada  
*Trained with Amira Klip, Ph.D. as part of my KL2 career development*
- 2018 Visiting Scholar | Oregon Health & Science University, Portland, OR  
*Trained with Charles Roberts, Ph.D. as part of my KL2 career development*
- 2018 Grant Writer's Seminar and Workshop | Oregon Health & Science University  
*Interactive 1-day session with trainees and junior faculty*
- 2018 Design Studio | Oregon Health & Science University  
*Interactive review of preliminary draft of a federal grant proposal*
- 2019 Navigating Bias in Working and Learning Environments | Oregon State University  
*Interactive workshop to develop skills for recognizing and responding to bias incidents*
- 2019 Baking New Research Ideas | Oregon State University  
*Interactive review of preliminary draft of a federal grant proposal*
- 2020 Kognito: Recognizing and Supporting Students in Distress | Oregon State University  
*Interactive training to identify and assist students experiencing mental health distress*
- 2020 Keep Teaching Workshop | Oregon State University  
*Interactive workshop to enhance remote learning delivery and efficacy*
- 2020 Social Justice Education Initiative Tier 1 Session 1 | Oregon State University  
*Educational workshop to promote social awareness and justice on campus*
- 2021 National Academy of Kinesiology Social Justice Imperative Meeting  
*National meeting to address social issues in the field of Kinesiology*
- 2021 An Evening with Tamika D. Mallory: Real Activism | Oregon State University  
*Lecture to promote social awareness and justice*

- 2021 Reckoning with Race and Racism in America with Michael Eric Dyson | Oregon State University  
*Lecture to promote social awareness and justice*
- 2022-23 Research Impact and Advancement Academy | Oregon State University  
*Interactive course to promote research impact and advancement*
- 2023 Developing an Online Course | Oregon State University  
*Six-week course to enhance online teaching ability*

### Professional Memberships

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American College of Sports Medicine  
 American Diabetes Association  
 American Physiological Society

### B. TEACHING, ADVISING AND OTHER ASSIGNMENTS

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#### Credit Courses – Oregon State University

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<u>Term</u>	<u>Course</u>	<u>Credits</u>	<u>Role</u>	<u>Enrollment</u>
2015-Fall	KIN 324 Exercise Physiology	4	Instructor	79
2016-Spring	KIN 324 Exercise Physiology	4	Instructor	70
2016-Fall	KIN 324 Exercise Physiology	4	Instructor	83
2016-Fall	KIN 533 Energetics and Biochemistry of Exercise	3	Co-Instructor	6
2017-Fall	KIN 324 Exercise Physiology	4	Instructor	128
2018-Winter	KIN 324 Exercise Physiology	4	Instructor	62
2018-Fall	KIN 324 Exercise Physiology	4	Instructor	127
2018-Fall	KIN 533 Energetics and Biochemistry of Exercise	3	Instructor	6
2019-Fall	KIN 324 Exercise Physiology	4	Instructor	102
2020-Winter	KIN 324 Exercise Physiology	4	Instructor	57
2020-Winter	KIN 533 Energetics and Biochemistry of Exercise	3	Instructor	6
2020-Spring	KIN 481 Analysis of Critical Issues in Kinesiology (Ecampus)	3	Instructor	22
2020-Fall	KIN 324 Exercise Physiology	4	Instructor	97
2021-Winter	KIN 531 Physiology of Physical Activity and Inactivity	3	Instructor	7
2021-Winter	KIN 324 Exercise Physiology	4	Instructor	75
2021-Spring	KIN 481 Analysis of Critical Issues in Kinesiology (Ecampus)	3	Instructor	20
2021-Fall	KIN 324 Exercise Physiology	4	Instructor	103
2021-Fall	KIN 111	2	Co-Instructor	25
2022-Fall	KIN 324 Exercise Physiology	4	Instructor	94
2022-Fall	KIN 111	2	Co-Instructor	25
2023-Fall	KIN 324 Exercise Physiology	4	Instructor	103
2023-Fall	KIN 324 Exercise Physiology (Ecampus)	4	Instructor	39

#### Independent Study – Oregon State University

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<u>Term</u>	<u>Course</u>	<u>Student</u>	<u>Credits</u>
2016-Fall	NUTR 603 Thesis	Sarah Ehrlicher	5
2017-Winter	KIN 601 Research and Scholarship	Harrison Stierwalt	6
2017-Winter	NUTR 603 Thesis	Sarah Ehrlicher	6
2017-Spring	NUTR 603 Thesis	Sarah Ehrlicher	4
2017-Summer	NUTR 603 Thesis	Sarah Ehrlicher	3
2017-Fall	NUTR 603 Thesis	Sarah Ehrlicher	12

2017-Fall	KIN 401 Research and Scholarship	Emily Burney	3
2017-Fall	KIN 401 Research and Scholarship	Bergen Sather	6
2017-Fall	NUTR 603 Thesis	Sarah Ehrlicher	12
2018-Winter	NUTR 603 Thesis	Sarah Ehrlicher	12
2018-Spring	NUTR 603 Thesis	Sarah Ehrlicher	1
2018-Fall	NUTR 603 Thesis	Sarah Ehrlicher	12
2019-Winter	NUTR 603 Thesis	Sarah Ehrlicher	12
2019-Spring	NUTR 603 Thesis	Sarah Ehrlicher	12
2019-Fall	KIN 401 Research and Scholarship	Jackson Brim-Edwards	2
2019-Fall	NUTR 603 Thesis	Sarah Ehrlicher	12
2019-Fall	KIN 603 Thesis	Erin McGowan	3
2019-Fall	KIN 603 Thesis	Phillip Batterson	5
2020-Winter	KIN 401 Research and Scholarship	Jackson Brim-Edwards	2
2020-Winter	NUTR 603 Thesis	Sarah Ehrlicher	12
2020-Winter	KIN 603 Thesis	Erin McGowan	2
2020-Winter	KIN 401 Research and Scholarship	Victoria Boechler	3
2020-Spring	NUTR 603 Thesis	Sarah Ehrlicher	12
2020-Spring	KIN 603 Thesis	Erin McGowan	5
2020-Spring	KIN 601 Research and Scholarship	Phillip Batterson	6
2020-Spring	KIN 401 Research and Scholarship	Jackson Brim-Edwards	1
2020-Fall	KIN 603 Thesis	Erin McGowan	5
2020-Fall	KIN 601 Research and Scholarship	Erin McGowan	6
2021-Winter	KIN 603 Thesis	Erin McGowan	6
2021-Spring	KIN 603 Thesis	Erin McGowan	9
2021-Fall	KIN 401 Research and Scholarship	Michael Murphy	3
2021-Fall	KIN 603 Thesis	Erin McGowan	8
2022-Winter	KIN 603 Thesis	Erin McGowan	8
2022-Spring	KIN 603 Thesis	Erin McGowan	9
2022-Spring	KIN 401 Research and Scholarship	Michael Murphy	3
2022-Fall	KIN 603 Thesis	Erin McGowan	12
2022-Fall	KIN 603 Thesis	Jackson Brim-Edwards	4
2023-Winter	KIN 603 Thesis	Erin McGowan	12
2023-Winter	KIN 603 Thesis	Jackson Brim-Edwards	6
2023-Spring	KIN 503 Thesis	Jackson Brim-Edwards	6

## Curriculum Development

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2015	Created all new course materials for KIN 324 Exercise Physiology, including use of the current edition of the textbook and enhanced focus on human health outcomes and applications.
2016	Developed successful Category II Proposal for a new course: KIN 531 Physiology of Physical Activity and Inactivity.
2016	Co-created all new course materials for KIN 533 Energetics and Biochemistry, including enhanced focus on reductionist human research study design and interpretation.
2020	Created all new course materials for KIN 531 Physiology of Physical Activity and Inactivity, a core course for the Master of Public Health in Physical Activity program.
2023	Developed all new course content for KIN 324 Exercise Physiology (Ecampus), bringing into alignment with in-seat offering.

2023      Redeveloped course content for KIN 324 Exercise Physiology (in-seat), enhancing active learning opportunities and aligning with Ecampus offering.

### Student Evaluation

Course	Term	Year	Number of Evaluations/ Enrollment	Question 1* (Newsom/OSU)	Question 2 (Newsom/OSU)
KIN 324	Fall	2015	50 / 79	5.8 / 5.0	5.9 / 5.2
KIN 324	Spring	2016	47 / 68	5.8 / 5.0	5.9 / 5.2
KIN 324	Fall	2016	59 / 82	5.8 / 5.0	5.9 / 5.3
KIN 533**	Fall	2016	5 / 6	5.3 / 5.0	5.7 / 5.3
KIN 324	Fall	2017	80 / 128	5.7 / 5.1	5.8 / 5.3
KIN 324	Winter	2018	27 / 62	5.8 / 5.0	6.0 / 5.2
KIN 324	Fall	2018	61 / 127	5.8 / 5.1	5.9 / 5.4
KIN 533	Fall	2018	5 / 6	6.0 / 5.1	6.0 / 5.4
KIN 324	Fall	2019	42 / 101	5.5 / 5.1	5.8 / 5.4
KIN 324	Winter	2020	20 / 55	5.9 / 5.1	6.0 / 5.4
KIN 533	Winter	2020	4 / 6	5.8 / 5.1	6.0 / 5.4
KIN 481 E	Spring	2020	3 / 22	6.0 / 5.6	5.8 / 5.6
KIN 324	Fall	2020	25 / 97	5.2 / 5.2	5.4 / 5.5
KIN 324	Winter	2021	20 / 55	5.7 / 5.2	5.8 / 5.5
KIN 531	Winter	2021	6 / 7	5.2 / 5.2	6.0 / 5.5
KIN 481 E	Spring	2021	6 / 20	5.7 / 5.3	5.7 / 5.5
KIN 324	Fall	2021	19 / 103	5.8 / 5.5	5.9 / 5.7
KIN 111	Fall	2021	2 / 25	6.0 / 5.5	6.0 / 5.7
KIN 324	Fall	2022	24 / 93	5.9 / 5.4	5.9 / 5.6
KIN 111	Fall	2022	9 / 24	5.9 / 5.4	6.0 / 5.6
KIN 324	Fall	2023	17 / 103	5.7 / 5.4	5.7 / 5.6
KIN 324 E	Fall	2023	10 / 39	5.7 / 5.4	5.9 / 5.6

\*Median scores for Question 1: "This course as a whole was..." and Question 2: "The instructor's contribution to the course was..." with ratings of "1=very poor, 2=poor, 3=fair, 4= good, 5=very good and 6=excellent"

\*\*Co-taught course with single evaluation; scores are not solely reflective of my instruction; E = Ecampus

### Peer Evaluation

#### Students and Postdoctoral Trainees

##### Ph.D. Committee Chair or Co-Chair\*

<i>Student</i>	<i>Program</i>	<i>Year</i>
Sarah Ehrlicher*	Nutrition	2016-20 (graduated)
Harrison Stierwalt*	Kinesiology	2016-20 (graduated)
Erin McGowan*	Kinesiology	2019-23 (graduated)
Phillip Batterson*	Kinesiology	2019-23 (graduated)

##### Ph.D. Committee Member

<i>Student</i>	<i>Program</i>	<i>Year</i>
Staci Bronson	Kinesiology	2016-20 (graduated)
Félix Alberto Morales-Palomo	Universidad de Castilla-La Mancha	2018 (graduated)
Alexa Pullicin	Food Science and Technology	2019-23 (graduated)
Aaron Seipel	Kinesiology	2021-Present
Monica Vidal-Franco	Biochemistry and Biophysics	2021-Present

Jaemyung Kim	Kinesiology	2021-Present
Nathan Goslin-Klemme	Kinesiology	2022-Present

#### **M.S. Committee Chair or Co-Chair\***

<u>Student</u>	<u>Program</u>	<u>Year</u>
Michael Murphy	Kinesiology	2022-Present
Jackson Brim-Edwards	Kinesiology	2022-Present

#### **M.S. Committee Member**

<u>Student</u>	<u>Program</u>	<u>Year</u>
Aaron Seipel	Kinesiology	2015-18 (graduated)

#### **Other Graduate Committee Member**

<u>Student</u>	<u>Program</u>	<u>Year</u>
Kira Nesser	Nutrition MSN-PD	2020-22 (graduated)
Sumayah Aryan	Nutrition MSN-PD	2023-Pres

#### **Graduate Council Representative**

<u>Student</u>	<u>Program</u>	<u>Year</u>
Sanket Chiplunkar	Biomedical Sciences	2016-18 (graduated)
Vera Lattier (Chih-Ning Chang)	Molecular and Cellular Biology	2017-18 (graduated)
Brandy Nagamine	Comparative Health Sciences	2017-21 (graduated)
Ramila Gulieva	Bioengineering	2019-21
Hamzah Alzanbaki	Bioengineering	2023-Pres

#### **Undergraduate Honors Thesis Committee Chair or Co-Chair\***

<u>Student</u>	<u>Program</u>	<u>Year</u>
Bergen Sather*	Biology and Public Health	2015-18 (graduated)
Emily Burney*	Public Health	2016-18 (graduated)
Victoria Boechler*	Kinesiology	2018-20 (graduated)
Isabel Brinck*	Biochemistry and Biophysics	2018-21 (graduated)

#### **Undergraduate Honors Thesis Committee Member**

<u>Student</u>	<u>Program</u>	<u>Year</u>
Tora Cobb	Chemistry	2015-16 (graduated)
Kevin Le	Kinesiology	2018 (graduated)
Lydia Bastian	Biochemistry & Molecular Biology	2020 (graduated)
Kevin Sy	Biochemistry & Molecular Biology	2022 (graduated)
Alanna Celaya	Public Health	2022-23 (graduated)

#### **Other Undergraduate Mentorship or Co-Mentorship\***

<u>Student</u>	<u>Program</u>	<u>Year</u>
Bergen Sather*	Undergraduate Research Awards Program (URAP)	2016
Bergen Sather*	Undergraduate Research, Innovation, Scholarship and Creativity Award (URISC)	2016
Bergen Sather*	Undergraduate Research Awards Program (URAP)	2017
Emily Burney*	Undergraduate Research Awards Program (URAP)	2017
Bergen Sather*	Summer Undergraduate Research Experience (SURE)	2017
Emily Burney*	Undergraduate Research, Innovation, Scholarship and Creativity Award (URISC)	2017-18
Ryan Wong*	Undergraduate Research Assistant	2017-18
Emily Burney*	DeLoach Work Scholarship	2018

Alysha Everett*	Undergraduate Research Assistant	2018
Bailey Sahnov*	Undergraduate Research Assistant	2018
Blake Nelson*	Undergraduate Research Assistant	2018-19
Catherine Du*	Undergraduate Research, Scholarship, and the Arts (URSA Engage)	2018-19
	Undergraduate Research, Scholarship, and the Arts (URSA Engage)	2018-19
Jason Hashimoto*	Undergraduate Research, Scholarship, and the Arts (URSA Engage)	2018-19
Jacqueline Oropeza-Castro*	Undergraduate Research Assistant	2018-19
Victoria Boechler*	Undergraduate Research Assistant	2018-20
Jackson Brim-Edwards*	Undergraduate Research Assistant	2018-20
Jackson Brim-Edwards*	Experiential Learning Laboratory Assistant	2019
Rachel Meighan*	Undergraduate Research Assistant	2020-21
Avery Ingram*	Journal Article Review & Discussion	2020-21
Michael Murphy	Undergraduate Research Assistant	2021-22
Amber Jackson	Undergraduate Research Assistant	2022
Isaac Burgess	Undergraduate Research Assistant	2022-23
Stephanie Matsumoto	Undergraduate Research Assistant	2022
Sara Sanders	Undergraduate Research Assistant	2022-23
Sara Sanders	Experiential Learning Laboratory Assistant	2023
Kabyanjali Amatya	STEM Leaders Program	2022-23
Justin Sheasby	Undergraduate Research Assistant	2023-24
Maleah Trujillo-Herrera	STEM Leaders Program	2023-24
Seth Cain	Undergraduate Research Assistant	2024
Takoda Wheeler	Undergraduate Research Assistant	2024
Michelle Vintero	Undergraduate Research Assistant	2024

### Visiting Scholar Mentorship

<u>Student</u>	<u>Program</u>	<u>Year</u>
Félix Alberto Morales-Palomo	Universidad de Castilla-La Mancha	2018

## C. SCHOLARSHIP AND CREATIVE ACTIVITY

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### Authorship Notations

<sup>1</sup>Contributed to hypothesis and/or study design

<sup>2</sup>Collected and/or analyzed data

<sup>3</sup>Interpreted data

<sup>4</sup>Critical review and revision of manuscript

<sup>5</sup>Primary author of manuscript

<sup>6</sup>Senior author of manuscript

### Advisee Notations

\*Graduate student advisee at Oregon State University

\*\*Undergraduate student advisee at Oregon State University

### Refereed Journal Articles

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1. **Newsom SA**<sup>1,2,3,5</sup>, RJ Paxton, GM Rynn and C Bell. Oxidative stress and thermic effect of feeding in overweight and obese adults. *Obesity* 16(8): 1749-1754, 2008 PMID:18551121
2. **Newsom SA**<sup>1,2,3,5</sup>, S Schenk, KM Thomas, MP Harber, ND Knuth, N Goldenberg and JF Horowitz. Energy deficit after exercise augments lipid mobilization but does not contribute to the exercise-induced increase in insulin sensitivity. *J Appl Physiol* 108(3):554-560, 2010 PMID:20044472

3. **Newsom SA**<sup>1,2,3,5</sup>, JC Richards, TK Johnson, JN Kuzma, MC Lonac, RJ Paxton, G Rynn, WF Voyles and C Bell. Short-term sympathoadrenal inhibition augments the thermogenic response to beta-adrenergic receptor stimulation. *J Endocrinol* 206(3):307-315, 2010 PMID:20603265
4. **Newsom SA**<sup>1,2,3,5</sup>, S Schenk, M Li, AC Everett and JF Horowitz. High fatty acid availability after exercise alters the regulation of muscle lipid metabolism. *Metabolism* 60(6):852-859, 2011 PMID:20870251
5. Paxton RJ, MP Malcolm, **SA Newsom**<sup>1,2,3,4</sup>, JC Richards, GM Rynn and C Bell. Sympathetic responses to repetitive trans-spinal magnetic stimulation. *Clin Auton Res* 21(2):81-87, 2011 PMID:21113641
6. **Newsom SA**<sup>1,2,3,5</sup>, AC Everett, A Hinko and JF Horowitz. A single session of low intensity exercise is sufficient to enhance insulin sensitivity into the next day in obese adults. *Diabetes Care* 36(9):2516-2522, 2013 PMID:23757424
7. Boyle KE, **SA Newsom**<sup>2,3,4</sup>, RC Janssen, M Lappas and JE Friedman. Skeletal muscle MnSOD, mitochondrial complex II and SIRT3 enzyme activities are decreased in maternal obesity during human pregnancy and gestational diabetes mellitus. *J Clin Endocr Metab* 98(10):E1601-E1609, 2013 PMID:23956348
8. Thorn SR, K Baquero, **SA Newsom**<sup>1,2,3,4</sup>, KC El Kasmi, BC Bergman, GI Shulman, KL Grove and JE Friedman. Maternal insulin resistance programs juvenile hepatic steatosis and inflammation. *Diabetes* 63(10):2702-2013, 2014 PMID:24705404
9. Van Pelt, DW, **SA Newsom**<sup>1,2,3,4</sup>, S Schenk and JF Horowitz. Systemic fatty acid availability and skeletal muscle inflammatory pathway activation may contribute to the variability in insulin sensitivity found in obesity. *Int J Obes* 39(1):149-155, 2015 PMID: 24785103
10. **Newsom SA**<sup>1,2,3,5</sup>, AC Everett, S Park, DW Van Pelt, A Hinko and JF Horowitz. Lipid mixtures containing a high proportion of saturated fatty acids only modestly impair insulin signaling in cultured muscle cells. *PLoS One* 10(3):e0120871, 2015 PMID:25793412
11. **Newsom SA**<sup>1,2,3,5</sup>, JT Brozinick, K Kiseljak-Vassiliades, AN Strauss, SD Bacon, AA Kerege, HH Bui, P Sanders, P Siddall, T Wei, M Thomas, MS Kuo, T Nemkov, A D'Alessandro, KC Hansen, L Perreault and BC Bergman. Skeletal muscle phosphatidylcholine and phosphatidylethanolamine are related to insulin sensitivity and respond to acute exercise in humans. *J Appl Physiol* 120(11):1355-1363, 2016 PMID:27032901
12. **Newsom SA**<sup>2,3,4</sup>, BF Miller, KL Hamilton, SE Ehrlicher\*, HD Stierwalt\* and MM Robinson. Long-term rates of mitochondrial protein synthesis are increased in mouse skeletal muscle with high fat feeding regardless of insulin sensitizing treatment. *Am J Physiol Endocrinol Metab* 313(5):E552-E562, 2017 PMID: 28698283
13. Perreault L, **SA Newsom**<sup>2,3,4</sup>, A Strauss, A Kerege, D Kahn, K Harrison, J Snell-Bergeon, T Nemkov, A D'Alessandro, M Jackman, P MacLean and BC Bergman. Intracellular Localization of Diacylglycerols and Sphingolipids Influence Insulin Sensitivity, Mitochondrial Function in Human Skeletal Muscle. *JCI Insight* 3(3) pii:96805, 2018 PMID:29415895
14. Dasari S, **SA Newsom**<sup>1,2,3,4</sup>, SE Ehrlicher\*, HD Stierwalt\* and MM Robinson. Remodeling of skeletal muscle proteome with high-fat diet involves greater changes to  $\beta$ -oxidation than electron transfer proteins in mice. *Am J Physiol Endocrinol Metab* 315(4):E425-E434, 2018 PMID:29812987
15. Ehrlicher SE\*, Stierwalt HD\*, S Dasari, **SA Newsom**<sup>1,2,3,4</sup> and MM Robinson. Skeletal muscle autophagy remains responsive to hyperinsulinemia and hyperglycemia at higher plasma insulin concentrations in insulin-resistant mice. *Physiol Rep* 6(14):e13810, 2018 PMID:30047243



16. Stierwalt HD\*, SE Ehrlicher\*, BC Bergman, MM Robinson and **SA Newsom**<sup>1,2,3,6</sup>. Insulin-stimulated Rac1-GTP binding is not impaired by palmitate treatment in L6 myotubes. *Physiol Rep* 6(24):e13956, 2018 PMID:30592185
17. Sachs S, S Zarini, DE Kahn, KA Harrison, L Perreault, T Phang, **SA Newsom**<sup>1,2,3,4</sup>, A Strauss, A Kerege, JA Schoen, DH Bessesen, T Schwarzmayr, E Graf, D Lutter, J Krumsiek, S Hofmann and BC Bergman. Intermuscular adipose tissue (IMAT) directly modulates skeletal muscle insulin sensitivity in humans. *Am J Physiol Endocrinol Metab* 316(5):E866-E879, 2019 PMID:30620635
18. Robinson MM, BK Sather\*\*, ER Burney\*\*, SE Ehrlicher\*, HD Stierwalt\*, MA Franco and **SA Newsom**<sup>1,2,3,5,6</sup>. Robust intrinsic differences in mitochondrial metabolism between L6 and C2C12 cells. *Am J Physiol Cell Physiol* 217(2):C339-C347, 2019 PMID:31091142
19. Axton ER, LM Beaver, L St. Mary, L Truong, CR Logan, SSpagnoli, MC Prater, RM Keller, M Garcia-Jaramillo, SE Ehrlicher, HD Stierwalt, **SA Newsom**, MM Robinson, RL Tanguay, JF Stevens and NG Hord. Nitrate treatment, but not nitrite, lowered the oxygen cost of exercise, and decreased glycolytic intermediates while increasing fatty acid metabolites in exercised zebrafish. *J Nutr* 149(12):2120-2132, 2019 PMID:31495890
20. Kia K\*, Fitch SM\* and **SA Newsom**<sup>1,2,3,4</sup> and JH Kim. Effect of whole-body vibration exposures on physiological stresses: Mining Heavy Equipment Applications. *Applied Ergonomics* 85(5):103065, 2020 PMID:32174353
21. Ehrlicher SE\*, HD Stierwalt\*, BF Miller, **SA Newsom**<sup>1,2,3,4</sup> and MM Robinson. Mitochondrial adaptations to exercise and high-fat diet-induced obesity do not require Bcl2-mediated autophagy but occur with BNIP3/Parkin activation. *FASEB J* 34(3):4602-4618, 2020 PMID:32030805
22. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**<sup>1,2,3,6</sup>. Regulation of skeletal muscle long-chain acyl-CoA synthetases by diet and exercise. *Med Sci Sports Exerc* 52(3):569-576, 2020 PMID:31524824
23. Boyle KE, MJR Heerwagen, **SA Newsom**<sup>2,3,4</sup>, RC Janssen and JE Friedman. Maternal fat-1 transgene protects offspring from excess weight gain, oxidative stress, and reduced fatty acid oxidation in response to high-fat diet. *Nutrients* 12(3):E767, 2020 PMID:32183350
24. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**<sup>1,2,3,6</sup>. Long-chain acyl-CoA synthetases relate to fat oxidation and storage in skeletal muscle of lean humans. *Med Sci Sports Exerc* 53(3):624-632, 2021 PMID:32796254
25. Kahn DE, L Perreault, E Macias, S Zarini, **SA Newsom**<sup>1,2,3,4</sup>, A Strauss, A Kerege, KA Harrison, J Snell-Bergeon, and BC Bergman. Subcellular localization and composition of intramuscular triglyceride influence insulin sensitivity in humans. *Diabetologia* 64(1):168-180, 2021 PMID:33128577
26. Broussard JL, L Perreault, E Macias, **SA Newsom**<sup>2,3,4</sup>, A Strauss, A Kerege, K Harrison, HH Bui, P Milligan, K Roth, T Nemkov, A D'Allesandro, JT Brozinick and BC Bergman. Sex differences in insulin sensitivity are related to muscle tissue acylcarnitine but not subcellular lipid distribution in people with obesity. *Obesity* 29(3):550-561, 2021 PMID: 33624435
27. **Newsom SA**<sup>1,2,3,4</sup>, Stierwalt HD\*, SE Ehrlicher\*, MM Robinson. Substrate-specific respiration of skeletal muscle mitochondria after 1-hour of moderate cycling in sedentary adults. *Med Sci Sports Exerc* 53(7):1375-1384, 2021 PMID: 34127633
28. Ehrlicher SE\*, HD Stierwalt\*, **SA Newsom**<sup>1,2,3,4</sup> and MM Robinson. Short-term high-fat feeding does not alter mitochondrial lipid respiratory capacity but triggers mitophagy response in skeletal muscle of mice. *Frontiers in Physiology* doi:10.3389/fendo.2021.651211, 2021 PMID:33868178

29. Nash MJ, E Dobrinskikh, **SA Newsom**<sup>1,2,3,4</sup>, I Messaoudi, RC Janssen, KM Aagaard, CE McCurdy, M Gannon, P Kievet, JE Friedman, SR Wesolowski. Maternal western diet exposure increases periportal fibrosis beginning in utero in nonhuman primate offspring. *JCI Insight* 6(24):e154093, 2021 PMID:34935654
30. Pullicin AJ, **SA Newsom**<sup>1,2,3,4</sup>, MM Robinson and J Lim. Use of c-peptide as a measure of cephalic phase insulin release in humans. *J Phys Beh* 255:113940, 2022, PMID:35961609
31. McGowan EM\*, SE Ehrlicher\*, HD Stierwalt\*, MM Robinson and **SA Newsom**<sup>1,2,3,6</sup>. Impact of 4 weeks of western diet and aerobic exercise training on whole-body phenotype and skeletal muscle mitochondrial respiration in male and female mice. *Physiol Rep* 10(24):e15543, 2022, PMID:36541261
32. Batterson PM\*, EM McGowan\*, HD Stierwalt\*, SE Ehrlicher\*\*, **SA Newsom**<sup>1,2,3,4</sup> and MM Robinson. Two weeks of high-intensity interval training increases skeletal muscle mitochondrial respiration via complex-specific remodeling in sedentary humans. *J Appl Physiol* 134(2):339-355, 2023, PMID:36603044
33. Batterson PM\*, EM McGowan\*, HD Stierwalt\*, SE Ehrlicher\*\*, **SA Newsom**<sup>1,2,3,4</sup> and MM Robinson. High-Fat Diet Increases Electron Transferring Flavoprotein Synthesis and Lipid Respiration in Skeletal Muscle During Exercise Training in Female Mice. *Physiol Rep* 11(20):e15840, 2023, PMID:37857571

### Invited Review Articles

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1. **Newsom SA**<sup>1,5</sup>, KE Boyle and JE Friedman. Sirtuin 3: A major control point for obesity-related metabolic diseases? *Drug Discov Today Dis Mech* 10(1-2):e35-e40, 2013 PMID:23997790

### Other Invited Articles

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1. Stierwalt HD\* and **Newsom SA**<sup>6</sup>. Active Voice: Uncovering Important Regulators of Skeletal Muscle Fat Metabolism. Published March 2, 2021 in the American College of Sports Medicine (ACSM) Sports Medicine Bulletin.

### Book Chapters

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1. **Newsom SA**<sup>1,5</sup> and S Schenk. Interaction between lipid availability, endurance exercise and insulin sensitivity. *Medicine and Sports Science: Physical Activity and Diabetes*. Goedecke J, Ojuka EO (Eds). Karger Medical and Scientific Publishers, Basel, Switzerland. Vol. 60, 2014 PMID: 25226801

### Manuscripts in Review

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1. McKenna CF, Stierwalt HD\*, SE Ehrlicher\*, MM Robinson, BC Bergman and **SA Newsom**<sup>1,2,3,6</sup>. Intramuscular diacylglycerol accumulates with acute hyperinsulinemia in insulin resistant phenotypes. *Am J Physiol Endocrinol Metab*
2. Newsom SA<sup>1,4</sup> and MM Robinson. Recent advances in understanding the interaction on skeletal muscle between exercise and frontline drugs for treating hyperglycemia. *Physiol Rep*

### Manuscripts in Progress

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1. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**<sup>1,2,3,6</sup>. Insulin-stimulated Rac1 activation is not enhanced after exercise in skeletal muscle of lean humans. Target journal: *J Physiol*
2. McGowan EM\*, PM Batterson\*, MC Murphy\*\*, J Brim-Edwards, P Siripoksup, K Funai, MM Robinson and **SA Newsom**<sup>1,2,3,6</sup>. Empagliflozin enhances skeletal muscle insulin action via inhibition of mitochondrial complex I. Target journal: *Diabetes*

3. McGowan EM\*, PM Batterson\*, MC Murphy\*\*, MM Robinson and **SA Newsom**<sup>1,2,3,6</sup>. Empagliflozin has limited impact on skeletal muscle insulin action in female mice. Target journal: *Am J Physiol Reg*

### Peer-reviewed Conference Proceedings

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1. Fitch SM\*, K Kia\*, **SA Newsom**<sup>1,2,3,4</sup>, J Kim. Physiological and Muscular Stress Associated with Multi-axial Whole-Body Vibration Exposure in Mining Heavy Equipment Vehicle Environment. Human Factors and Ergonomics Society 2019 International Annual Meeting

### Presented Abstracts

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1. **Newsom SA**, RJ Paxton, LM Trombley, WF Voyles and C Bell. Use of clonidine to treat hypertension: implications for regulation of resting metabolism. North American Association for the Study of Obesity – 2006
2. **Newsom SA**, RJ Paxton, LM Trombley, WF Voyles and C Bell. Use of clonidine to treat hypertension: implications for regulation of resting metabolism. American College of Sports Medicine Rocky Mountain Chapter – 2006
3. Paxton RJ, MP Malcolm, **SA Newsom**, GM Rynn, HW Maddox, D Strevey, SK Little, JC Richards, RJ Supon, KR Heulin and C Bell, Manipulation of the sympathetic nervous system with repetitive trans-spinal magnetic stimulation in healthy adult humans. American College of Sports Medicine Rocky Mountain Chapter – 2006
4. Maddox HW, **SA Newsom**, RJ Paxton, GM Rynn, MK Tran, DR Strevey, SK Little and C Bell. Influence of ascorbic acid on the thermic effect of feeding in overweight and obese adults. American College of Sports Medicine Rocky Mountain Chapter - 2006
5. Bell C, **SA Newsom**, RJ Paxton, HW Maddox, GM Rynn, MK Tran, DR Strevey and SK Little. Influence of ascorbic acid on the thermic effect of feeding in overweight and obese adults. North American Association for the Study of Obesity – 2007
6. Paxton RJ, MP Malcolm, **SA Newsom**, GM Rynn, HW Maddox, D Strevey, SK Little, JC Richards, RJ Supon, KR Heulin and C Bell, Manipulation of the sympathetic nervous system with repetitive trans-spinal magnetic stimulation in healthy adult humans. Federation of American Societies for Experimental Biology – 2008
7. **Newsom SA**, S Schenk and JF Horowitz. Fat oxidation tracks with fatty acid availability at low but not high plasma fatty acid concentrations. Federation of American Societies for Experimental Biology Annual Meeting – 2008
8. **Newsom SA**, RJ Paxton, JC Richards, GM Rynn, WF Voyles and C Bell. Influence of Short-Term Inhibition of sympathetic nervous system activity on thermogenic response to beta-adrenergic receptor stimulation. North American Association for the Study of Obesity – 2008
9. **Newsom SA**, KM Thomas, S Schenk, MP Harber, ND Knuth, N Goldenberg and JF Horowitz. Reducing dietary fat from meals after exercise enhances muscle glycogen resynthesis. Integrative Biology of Exercise – 2008
10. **Newsom SA**, KM Thomas, S Schenk, MP Harber, ND Knuth, N Goldenberg and JF Horowitz. Energy deficit after exercise may not contribute to the exercise-induced increase in insulin sensitivity. International Biochemistry of Exercise Conference – 2009
11. **Newsom SA**, KM Thomas, S Schenk, MP Harber, ND Knuth, N Goldenberg and JF Horowitz. Energy deficit after exercise may not contribute to the exercise-induced increase in insulin sensitivity. Exercise in

the Management and Prevention of Metabolic Disease symposium at the Karolinska Institute of Stockholm, Sweden – 2009

12. Tracy B, C Bell, C Feldman, L Hitchcock, **S Newsom**, R Paxton, J Richards, W Voyles and S Welsh. Reduced motor output fluctuations with sympathetic inhibition: potential age-related differences. Society for Neuroscience – 2009
13. **Newsom SA**, S Schenk, M Li, AC Everett and JF Horowitz. Elevated fatty acid availability after exercise increases intramyocellular triglyceride content by enhancing capacity for fatty acid flux into skeletal muscle. Federation of American Societies for Experimental Biology – 2010
14. **Newsom SA**, S Schenk, MP Harber, CF Burant and JF Horowitz. Insulin sensitivity is lowest in obese women with high rates of fatty acid uptake. American College of Sports Medicine Conference on the Integrative Physiology of Exercise – 2010
15. **Newsom SA**, AC Everett and JF Horowitz. A single session of exercise improves insulin sensitivity in obese adults: effects of exercise intensity. American College of Sports Medicine – 2011
16. **Newsom SA**, AC Everett, A Hinko and JF Horowitz. Improved insulin sensitivity the day after a modest session of exercise in obese adults. American College of Sports Medicine – 2012
17. **Newsom SA**, AC Everett, A Hinko and JF Horowitz. The severe impairment in insulin signaling with palmitate in cultured muscle cells not found with physiologic mixtures of fatty acids. American Diabetes Association Scientific Sessions – 2012
18. Park S, JP Gumucio, A Hinko, **SA Newsom** and JF Horowitz. Insulin signaling in myotubes derived from obese adults was not impaired in response to a mixture of fatty acids resembling that found in human plasma. Integrative Biology of Exercise – 2012
19. Thorn SR, **SA Newsom**, R Aikens, RC Janssen, K Baquero, DL Takahashi, A Kostrba, KL Grove and JE Friedman. Exposure to maternal high fat diet suppresses mitochondrial number and SIRT3 in non-human primate fetal liver: Further evidence for lipotoxicity in utero. Keystone Symposia Conference – Diabetes: New Insights into Mechanism of Disease and its Treatment – 2013
20. Van Pelt, DW, **SA Newsom**, S Schenk and JF Horowitz. Systemic fatty acid availability and skeletal muscle inflammatory pathway activation may contribute to the variability in insulin sensitivity found in obesity. Federation of American Societies for Experimental Biology – 2013
21. Boyle KE, **SA Newsom**, RC Janssen, M Lappas and JE Friedman. Decreased Sirt3 activity contributes to oxidative stress and mitochondrial dysfunction in skeletal muscle of obese women during pregnancy. American Diabetes Association Scientific Sessions – 2013
22. Thorn SR, **SA Newsom**, R Aikens, RC Janssen, K Baquero, DL Takahashi, A Kostrba, KL Grove and JE Friedman. Maternal resveratrol supplementation reverses fetal hepatic lipid accumulation during maternal high fat diet exposure in non-human primate: Effects on mitochondrial activity and stress signals. Endocrinology Society – 2013
23. **Newsom SA**, CM Castorena, RC Janssen, GD Cartee and JE Friedman. No evidence for impaired hepatic mitochondrial acetylation with acute high fat diet-induced insulin resistance and hepatic lipid accumulation. Keystone Symposia Conference – Obesity: A Multisystems Perspective – 2014
24. Danjun MA, **SA Newsom**, X Zhang, Y Qi, JF Horowitz and Z Yi. Exercise regulation on skeletal muscle phosphoproteome in obese insulin resistant adults. American Diabetes Association Scientific Sessions – 2014

25. **Newsom SA**, AK Kerege, L Perreault and BC Bergman. Improved skeletal muscle diacylglycerol localization and composition after a single session of exercise. American Diabetes Association Scientific Sessions – 2015
26. Sather BK\*\*, CM Castorena, GD Cartee and **SA Newsom**. Influence of diacylglycerol on cytoskeleton and insulin signaling. Oregon State University Celebration of Undergraduate Excellence – 2016
27. Stierwalt HD\*, **SA Newsom** and MM Robinson. High fat diet-induced insulin resistance is not associated with impaired mitochondrial respiration or increased H<sub>2</sub>O<sub>2</sub> emission in mouse skeletal muscle. American Diabetes Association Scientific Sessions – 2017
28. Ehrlicher SE\*, **SA Newsom** and MM Robinson. Long-term rates of skeletal muscle mitochondrial protein synthesis are increased with high fat feeding but not changed with insulin sensitizing treatment in mice. American Diabetes Association Scientific Sessions – 2017
29. Sather BK\*\*, SE Ehrlicher\*, HD Stierwalt\*, MM Robinson and **SA Newsom**. Impaired cytoskeletal signaling as a mechanism of skeletal muscle insulin resistance. Oregon State University Celebration of Undergraduate Excellence – 2017
30. Burney ER\*\*, BK Sather\*\*, SE Ehrlicher\*, HD Stierwalt\*, **SA Newsom** and MM Robinson. Skeletal muscle autophagy remains responsive to insulin despite the development of insulin resistance. Oregon State University Celebration of Undergraduate Excellence – 2017
31. Stierwalt HD\*, BC Bergman, MM Robinson and **SA Newsom**. Identifying lipids as regulators of skeletal muscle Rac1 using targeted lipidomics. Mayo Metabolomics Symposium – 2017
32. Ehrlicher SE\*, S Dasari, **SA Newsom** and MM Robinson. Intact autophagy signaling and remodeling of the mitochondrial proteome towards enhanced lipid metabolism in skeletal muscle of high fat fed mice. Mayo Metabolomics Symposium – 2017
33. Sather BK\*\*, SE Ehrlicher\*, ER Burney\*\*, MM Robinson and **SA Newsom**. Characterizing and comparing cellular respiration and mitochondrial metabolism in C2C12 and L6 myoblasts. Oregon State University College of Science Awards – 2017
34. Stierwalt HD\*, BC Bergman, MM Robinson and **SA Newsom**. Regulation of skeletal muscle Rac1 by lipids in obesity-related insulin resistance. American College of Sports Medicine Northwest Annual Meeting – 2018
35. Ehrlicher SE\*, S Dasari, **SA Newsom** and MM Robinson. Skeletal muscle mitochondrial remodeling and autophagy activation in high fat fed and exercise trained mice. American College of Sports Medicine Northwest Annual Meeting – 2018
36. Stierwalt HD\*, BC Bergman, SE Ehrlicher\*, MM Robinson and **SA Newsom**. Transient activation of skeletal muscle Rac1 in obesity-related insulin resistance. American Diabetes Association Scientific Sessions – 2018
37. Ehrlicher SE\*, HD Stierwalt\*, **SA Newsom** and MM Robinson. Mitochondrial function in high fat fed and exercise trained mice unable to induce autophagy. American Diabetes Association Scientific Sessions – 2018
38. **Newsom SA**, L Perreault, A Kerege, K Harrison, D Kahn, T Nemkov, A D'Alessandro and BC Bergman. Metabolic signatures of insulin resistance in human skeletal muscle are exacerbated with insulin stimulation. American Diabetes Association Scientific Sessions – 2018
39. Broussard JL, L Perreault, **SA Newsom**, DE Kahn, A Kerege, KA Harrison and BC Bergman. Sex differences in insulin sensitivity are related to muscle tissue acylcarnitines and serum

lysophosphatidylcholines but not subcellular lipid distribution in humans. American Diabetes Association Scientific Sessions – 2018

40. Zarini S, L Perreault, **SA Newsom**, DE Kahn, A Kerege, KA Harrison and BC Bergman. Deoxysphingolipids – novel skeletal muscle lipids related to insulin resistance in humans that decrease insulin sensitivity in vitro. American Diabetes Association Scientific Sessions – 2018
41. Wong R\*\*, HD Stierwalt\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**. Identifying the role of complex II in beta-oxidation using high resolution respirometry. Oregon State University Summer Undergraduate Research Symposium – 2018
42. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**. Post-exercise insulin sensitivity is unrelated to metabolic flexibility or fat oxidation capacity in lean humans. Integrative Physiology of Exercise – 2018
43. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**. Regulation of skeletal muscle long chain acyl coenzyme A synthetase by diet and exercise. Annual Meeting for the Northwest American College of Sports Medicine – 2019
44. Brim-Edwards J\*\*, HD Stierwalt\*, MM Robinson and **SA Newsom**. Verification of glucose values measured by a handheld glucometer during insulin sensitivity testing in sedentary humans. Oregon State University Celebration of Undergraduate Excellence – 2019
45. Boechler V\*\*, SE Ehrlicher\*, HD Stierwalt\*, **SA Newsom** and MM Robinson. Involvement of autophagy in electron transfer flavoprotein adaptations during exercise and high fat feeding in skeletal muscle of mice. Oregon State University Celebration of Undergraduate Excellence – 2019
46. Hashimoto J\*\*, SE Ehrlicher\*, HD Stierwalt\*, **SA Newsom** and MM Robinson. Mitochondrial supercomplex analysis in skeletal muscle of younger and older mice. Oregon State University Celebration of Undergraduate Excellence – 2019
47. Kahn DE, Zarini S, L Perreault, **SA Newsom**, KA Harrison and BC Bergman. Intramuscular triglyceride subcellular localization is related to insulin sensitivity in humans. American Diabetes Association Scientific Sessions – 2019
48. Broussard JL, DE Kahn, **SA Newsom**, DE Kahn, JT Brozinick, H Bui, KD Roth, L Perreault and BC Bergman. Improvement in sphingolipids after combined weight loss and exercise training in adults with obesity and prediabetes. American Diabetes Association Scientific Sessions – 2019
49. Ehrlicher SE\*, HD Stierwalt\*, BF Miller, **SA Newsom** and MM Robinson. Obesity does not impair mitochondrial efficiency or adaptations to exercise training in autophagy deficient mice. FASEB Regulation of Glucose Metabolism Conference – 2019
50. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**. *Increased insulin sensitivity following moderate-intensity exercise is not mediated by enhanced Rac1 activation*. New Insights into the Biology of Exercise Keystone Symposia – 2020
51. Ehrlicher SE\*, HD Stierwalt\*, **SA Newsom**, MM Robinson. High-fat feeding does not impair exercise-induced mitophagy in skeletal muscle of mice. Keystone Symposium on New Insights into the Biology of Exercise – 2020
52. McGowan, EM\*, SE Ehrlicher\*, HD Stierwalt\*, **SA Newsom** and MM Robinson. Western diet and exercise training increase mitochondrial lipid respiration in male but not female mice. American Colleges of Sports Medicine Annual Meeting – 2020
53. Batterson PM\*, HD Stierwalt\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**. No change to muscle mitochondrial fat oxidation or ETF abundance following exercise in healthy adults. American College of Sports Medicine Annual Meeting – 2020

54. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**. Long-chain acyl-CoA synthetases relate to fat oxidation and storage in skeletal muscle of lean humans. American College of Sports Medicine Annual Meeting – 2020
55. Zarini S, JT Brozinick, L Perreault, **SA Newsom**, DE Kahn, A Keregy, KA Harrison and BC Bergman. Serum dihydroceramides predict insulin sensitivity in humans and cause insulin resistance in vitro. American Diabetes Association Scientific Sessions – 2020
56. Stierwalt HD\*, SE Ehrlicher\*, MM Robinson and **SA Newsom**. AMPK signaling, not Rac1 activation contribute to the insulin sensitizing effects of exercise following moderate-intensity exercise in humans. Integrative Physiology of Exercise – 2020
57. Batterson PM\*, EM McGowan\*, **SA Newsom** and MM Robinson The Influence of High-Fat Feeding and Exercise Training on Substrate-Specific Mitochondrial Respiration in Skeletal Muscle of Female Mice. Federation of American Societies for Experimental Biology Annual Meeting – 2021
58. McGowan EM\*, PM Batterson\*, MM Robinson and **SA Newsom**. Empagliflozin Lowers Mitochondrial Respiration and Skeletal Muscle Sphingolipid Content in Female Mice Fed Western Diet. Federation of American Societies for Experimental Biology Annual Meeting – 2021
59. Batterson PM\*, EM McGowan\*, HD Stierwalt\*, SE Ehrlicher\*, **SA Newsom** and MM Robinson. Seven sessions of high-intensity interval training increased respiration of lipid and non-lipid substrates in skeletal muscle mitochondria in lean adults. Samaritan Health Services Regional Scholarly Symposium – 2021
60. McGowan EM\*, PM Batterson\*, MC Murphy\*\*, MM Robinson and **SA Newsom**. Empagliflozin treatment improves skeletal muscle insulin signaling in male mice. International Biochemistry of Exercise Meeting – 2022
61. Batterson PM\*, EM McGowan\*, HD Stierwalt\*, SE Ehrlicher\*, **SA Newsom** and MM Robinson. Short-term high-intensity interval training increases skeletal muscle mitochondrial respiratory capacity through complex specific remodeling in humans. International Biochemistry of Exercise Meeting – 2022
62. McGowan EM\*, PM Batterson\*, MC Murphy\*\*, MM Robinson and **SA Newsom**. Empagliflozin has direct effects on skeletal muscle that improve insulin action. American College of Sports Medicine Northwest Chapter Meeting – 2023
63. Batterson PM\*, EM McGowan\*, HD Stierwalt\*, SE Ehrlicher\*, AK Borowik, BF Miller, **SA Newsom** and MM Robinson. High-fat diet increased synthesis and function of electron transferring flavoprotein in skeletal muscle during aerobic training of female mice. American College of Sports Medicine Northwest Chapter Meeting – 2023
64. McGowan EM\*, PM Batterson\*, MC Murphy\*\*, MM Robinson and **SA Newsom**. Empagliflozin has direct effects on skeletal muscle that improve insulin action. American College of Sports Medicine Meeting – 2023
65. Batterson PM\*, EM McGowan\*, HD Stierwalt\*, SE Ehrlicher\*, AK Borowik, BF Miller, **SA Newsom** and MM Robinson. High-fat diet increased synthesis and function of electron transferring flavoprotein in skeletal muscle during aerobic training of female mice. American College of Sports Medicine Meeting – 2023
66. McKenna C, K Zemski Berry, S Zarini, D Kahn, L Perreault, **SA Newsom**, J Snell-Bergeon and BC Bergman. Acute hyperinsulinemia alters intramuscular 1,2-DAG species across metabolic phenotypes. American Diabetes Association – 2023

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## Invited Presentations

1. Health 101: A 60 Minute Guide to Physical Activity and Nutrition. University of Michigan Air Force ROTC Annual Health and Wellness Lecture – 2007
2. Metabolic research at the Michigan Clinical Research Unit: Horowitz Lab Studies. Michigan Clinical Research Unit Continuing Education Seminar Series – 2010
3. Fatty acid partitioning: A major determinant of insulin sensitivity? Colorado State University Health and Exercise Science Seminar Series – 2012
4. Sirtuin 3: A therapeutic target for treatment of fatty liver? University of Colorado School of Medicine Division of Endocrinology, Metabolism and Diabetes Endocrine Research Conference – 2013
5. Improving metabolic health through translational science and refocused lifestyle interventions. Oregon State University School of Biological and Population Health Sciences Seminar Series – 2014
6. Altered skeletal muscle diacylglycerol localization and composition after exercise. University of Colorado School of Medicine Nutrition Seminar Series – 2014
7. Reshaping physical activity prescriptions for the treatment of insulin resistance. Linus Pauling Institute Diet and Optimum Health Conference – 2015
8. Lipid signaling in skeletal muscle responses to acute exercise. Symposium on Cell Signaling in Muscle and Tendon, American College of Sports Medicine Annual Meeting – 2016
9. Diacylglycerol regulation of skeletal muscle insulin signaling in obesity. Oregon State University Nutrition Seminar Series – 2016
10. Reframing physical activity prescriptions for improved metabolic health. Moore Family Center Food, Nutrition and Health Update – 2016
11. Translational metabolism research at Oregon State University. Oregon State University Nutrition Seminar Series – 2017
12. Translational metabolism research at Oregon State University. University of Oregon Human Physiology Seminar Series – 2017
13. Using acute exercise to identify novel treatment strategies for insulin resistance. American College of Sports Medicine Northwest Annual Meeting – 2018
14. Role of Rac1 in skeletal muscle insulin action and its regulation by lipids. Oregon State University College of Pharmacy Seminar Series – 2018
15. Reframing physical activity as a treatment for insulin resistance and type 2 diabetes. 44<sup>th</sup> Annual Oregon State University Gerontology Conference – 2020 (Postponed due to COVID-19)
16. Mechanisms underlying improved insulin sensitivity after exercise. 65<sup>th</sup> Annual Western Society for Kinesiology & Wellness Conference – 2020
17. Reframing physical activity as a treatment for insulin resistance and type 2 diabetes. 44<sup>th</sup> Annual Oregon State University Gerontology Conference – 2021
18. Translational Metabolism Research: Effective collaborations between Samaritan Health Services and Oregon State University. 4<sup>th</sup> Annual Samaritan Regional Scholarly Symposium – 2021
19. Modifying Metabolism: Small Choices, Big Results. Oregon State University College of Public Health and Human Sciences Public Health Insider – October, 2022



20. Muscle matters: New mechanisms explain how SGLT2 inhibitors improve glucose metabolism. American College of Sports Medicine Northwest Chapter Meeting – February, 2023
21. New drugs, new tricks: SGLT2 inhibitors improve skeletal muscle insulin action. A session in the invited symposium Unanticipated Targets: New evidence that Metformin and SGLT2 Inhibitors Regulate Skeletal Muscle at the Annual American College of Sports Medicine Meeting – June, 2023
22. New mechanisms explain how SGLT2 inhibitors improve glucose metabolism. Department of Health and Exercise Science at Colorado State University Seminar Series – September, 2023
23. Promoting metabolic health via inhibition: Discovering new benefits of existing medications. Oregon State University Science Pub – April 2024

## Grant Funding

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### Current

Valley Fellow Seed Funds (PI: Newsom) 06/2023-06/2024  
Title: *Novel use of SGLT2 inhibitors to improve human health*  
Purpose: To advance my ongoing research program and promote transdisciplinary partnerships, leveraging my ongoing work regarding SGLT2 inhibitors.  
Role: Principal Investigator  
Total Funds: \$50,000

NIDDK R01 DK132128 (PI: Newsom) 05/2022-04/2025  
Title: *Use of SGLT2 inhibition to improve skeletal muscle metabolism in prediabetes*  
Purpose: To identify the efficacy and mechanisms of SGLT2 inhibition on regulation of skeletal muscle metabolism among overweight and obese adults with prediabetes.  
Role: Principal Investigator  
Total Funds: \$891,000

### Pending

AFAR Glenn Foundation Discovery Award LOI (PI: Newsom) Submitted 03/2024  
Title: *Lifespan extension and improved skeletal muscle function with SGLT2 inhibitor treatment*  
Purpose: To determine the ability and underlying mechanism for SGLT2 inhibitors to extend lifespan and improve skeletal muscle function with aging.  
Role: Principal Investigator  
Total Funds: \$525,000

NIDCD R01 DC021961 (PI: Lim) Submitted 10/2023  
Title: *Oral glucose sensing in humans*  
Purpose: To determine how our gustatory system responds to glucose and glucose-containing carbohydrates.  
Role: Co-Investigator  
Total Funds: \$2,226,029

NIOSH R01 OH012729-01 (PI: Kim) Submitted 10/2023  
Title: *Development of a non-invasive wearable sensor system for monitoring physical and heat exposures among agricultural workers*  
Purpose: To develop a wearable monitoring system that tracks exposure and biomedical responses, to provide agricultural workers with important health risk information based on physical, heat, and physiological stress.  
Role: Co-Investigator  
Total Funds: \$1,730,284

### Completed

Medical Research Foundation New Investigator Grant (PI: Newsom) 07/2021-06/2023  
Title: *Impact of SGLT2 inhibition on skeletal muscle metabolism*  
Purpose: To identify the impact of SGLT2 inhibition in diet-induced obese mice on regulation of skeletal muscle fat metabolism, including mitochondrial fat oxidation and intracellular fat accumulation.  
Role: Principal Investigator  
Requested Funds: \$50,000

John. C. Erkkila, M.D. Endowment for Health and Human Performance 07/2021-12/2022  
(PI: Robinson/Newsom)  
Title: *Role of insulin on mitochondrial fuel oxidation in skeletal muscle during obesity*  
Purpose: To identify the role of hyperinsulinemia as a mechanistic driver of skeletal muscle mitochondrial substrate metabolism in obesity.  
Role: Co-Principal Investigator  
Total Funds: \$25,000

John. C. Erkkila, M.D. Endowment for Health and Human Performance 09/2020-12/2022  
(PI: Newsom/Robinson)  
Title: *Insulin-mediated skeletal muscle lipid accumulation in obesity*  
Purpose: To identify the role of hyperinsulinemia as a mechanistic driver of excessive skeletal muscle lipid accumulation in obesity.  
Role: Co-Principal Investigator  
Total Funds: \$25,000

Industry Partner Research Award (PI: Lim) 12/2018-06/2022  
Title: *Sensory mechanisms underlying preabsorptive glycemic responses*  
The goal of this collaborative project is to identify mechanisms responsible for the cephalic-phase insulin response following starch ingestion.  
Role: Consultant  
Direct Funds: \$418,075

John. C. Erkkila, M.D. Endowment for Health and Human Performance 07/2019-06/2021  
(PI: Robinson/Newsom)  
Title: *Use of exercise to restore mitochondrial protein turnover in obesity*  
Purpose: To identify impairments in mitochondrial protein turnover as a consequence of obesity that can be reversed by exercise activity.  
Role: Co-Principal Investigator  
Total Funds: \$25,000

Alpha Foundation AFC618 (PI: Kim/Newsom) 08/2017-10/2019  
Title: *Effects of Whole-Body Vibration Exposure on Physiological Stresses in Mining Heavy Equipment Vehicle Operators*  
Purpose: To investigate mechanisms of musculoskeletal injury resulting from occupational whole-body vibration exposures in humans.  
Role: Co-Principal Investigator  
Total Funds: \$150,000

KL2TR002370 (PI: Jacoby) 09/2017-09/2019  
NIH/NCATS Mentored Career Development Award  
Title: *Mechanisms of lipid-related skeletal muscle insulin resistance in obesity*  
Purpose: To identify impairments in insulin-stimulated cytoskeletal remodeling in skeletal muscle of obese humans and to determine whether a single session of exercise is sufficient to reverse these impairments.  
Role: PI/KL2 Scholar  
Direct Funds: \$200,000

John. C. Erkkila, M.D. Endowment for Health and Human Performance 07/2017-06/2018  
(PI: Newsom/Robinson)

Title: *Use of Exercise to Understand and Reverse Obesity-related Insulin Resistance*

Purpose: To investigate mechanisms of exercise improvements to skeletal muscle insulin signaling in humans.

Role: Co-Principal Investigator

Total Funds: \$25,000

Collins Medical Trust Medical Research Grant (PI: Newsom/Robinson) 11/2016-11/2017

Title: *Novel and reversible mechanisms of skeletal muscle insulin resistance in human obesity*

Purpose: To identify impairments in insulin-stimulated cytoskeletal remodeling in skeletal muscle of obese humans and to determine whether a single session of exercise is sufficient to reverse these impairments.

Role: Co-Principal Investigator

Total Funds: \$30,000

Nutrition Obesity Research Center Pilot & Feasibility Grant (PI: Newsom) 09/2014-08/2015

University of Colorado School of Medicine

*Exercise-induced skeletal muscle diacylglycerol localization and composition*

Purpose: To determine whether a single session of exercise is sufficient to favorably alter skeletal muscle diacylglycerol localization and composition.

Role: Principal Investigator

Total Funds: \$20,000

T32 DK07658 (PI: Krebs) 05/2014-04/2015

NIH/NIDDK Nutrition Research Fellowship Training Grant

*Exercise-induced skeletal muscle diacylglycerol localization and composition*

Purpose: To determine whether a single session of exercise is sufficient to favorably alter skeletal muscle diacylglycerol localization and composition.

Role: PI/Postdoctoral Fellow (Research)

Funds: NIH Stipend

F32 DK095509 (PI: Newsom) 05/2012-04/2014

NIH/NIDDK Ruth L. Kirschstein National Research Service Award

*Role of Sirt3 in modulation of lipotoxicity in liver*

Purpose: To determine whether rescuing Sirt3 activity in the face of caloric excess may be sufficient to rescue liver function and attenuate the progression of metabolic disease.

Role: PI/Postdoctoral Fellow (Research)

Funds: NIH Stipend

Rackham Predoctoral Fellowship (PI: Newsom) 09/2010-08/2011

University of Michigan Rackham Graduate School

*Effects of acute exercise and nutrient intake on muscle fat metabolism and insulin resistance in obesity*

Purpose: To understand regulation of insulin action after exercise and enhance exercise and dietary lifestyle programs aimed at maximizing metabolic benefits of each exercise session in obese individuals.

Role: Predoctoral Fellow (Research)

Funds: Stipend/Tuition

**Not Funded** – Submitted at Oregon State University

Novo Nordisk Co-Creation Greenhouse Award (PI: Newsom) Submitted 09/2023

Title: *Targeting mitochondrial complex I as a mechanism to improve skeletal muscle insulin action*

Purpose: To test suppression of mitochondrial complex I via SGLT2 inhibitor treatment as a mechanism to improve skeletal muscle insulin action.

Role: Principal Investigator

Total Requested Funds: \$50,000

NIDDK R01 DK134780 (PI: Robinson) Submitted 03/2023

Title: *Mechanisms by which SGLT2 inhibitor treatment regulates skeletal muscle fuel metabolism*

Purpose: To provide new understanding of the mechanisms and therapeutic potential of using SGLT2 inhibition as a treatment for impairments to skeletal muscle metabolism associated with weight gain and obesity.

Role: Co-Investigator

Total Funds: \$2,281,672

Scored 28<sup>th</sup> percentile; awarded \$50,000 in supportive R56 funding.

NIDCD R01 DC020925 (PI: Lim)

Submitted 06/2022

Title: *Oral glucose sensing in humans and mice: mechanisms and functions*

Purpose: To identify mechanisms responsible for, and functions of, cephalic-phase insulin response following starch ingestion.

Role: Co-Investigator

Total Requested Funds: \$2,321,717

NIDDK R01 DK134780-01 (PI: Robinson)

Submitted 02/2022

Title: *Mechanisms by which SGLT2 inhibitor treatment regulates skeletal muscle fuel metabolism*

Purpose: To identify the mechanisms of SGLT2 inhibition on regulation of skeletal muscle metabolism in mouse models of insulin resistance.

Role: Co-Investigator

Requested Funds: \$1,850,430

Scored 41<sup>st</sup> percentile

John. C. Erkkila, M.D. Endowment for Health and Human Performance

Submitted 02/2022

(PI: Newsom/Robinson)

Title: *Do SGLT2 inhibitors lower skeletal muscle mitochondrial adaptations to exercise?*

Purpose: To determine the interaction between SGLT2 inhibitors and exercise on regulation of skeletal muscle mitochondrial metabolism

Role: Co-Principal Investigator

Total Funds: \$25,000

NIOSH R01 OH012149-01 (PI: Kim)

Submitted 02/2021

Title: *Effects of multi-axial whole-body vibration on biomechanical and physiological stress among off-road vehicle operators*

Purpose: To investigate mechanisms of musculoskeletal injury resulting from occupational whole-body vibration exposures in humans, including the ability of engineering interventions to attenuate biomechanical and physiological stresses.

Role: Co-Investigator

Requested Funds: \$2,030,491

NIH/NIDDK R01 (PI: Robinson) Grant#13221095

Submitted 10/2020

Title: *Regulation of mitochondrial fuel flexibility in skeletal muscle during obesity*

Purpose: To identify how skeletal muscle mitochondria exert control over regulation of fuel selection, how such regulation is altered during development of obesity, and how mitochondrial flexibility can be enhanced by exercise training.

Role: Co-Investigator

Requested Funds: \$1,921,338

Medical Research Foundation New Investigator Grant (PI: Newsom)

Submitted 08/2020

Title: *Impact of SGLT2 inhibition on skeletal muscle metabolism*

Purpose: To identify the impact of SGLT2 inhibition in diet-induced obese mice on regulation of skeletal muscle fat metabolism, including mitochondrial fat oxidation and intracellular fat accumulation.

Role: Principal Investigator

Requested Funds: \$50,000

NIH/NIDDK R01 Grant#13131739 (PI: Robinson)

Submitted 06/2020

Title: *Insulin and exercise regulation of skeletal muscle mitophagy during obesity*

Purpose: To identify impairments in mitochondrial protein turnover as a consequence of obesity that can be reversed by exercise activity.

Role: Co-Investigator

Requested Funds: \$1,814,150

NIOSH R01 OH012149-01 (PI: Kim)

Submitted 06/2020

Title: *Effects of multi-axial whole-body vibration on biomechanical and physiological stress among off-road vehicle operators*

Purpose: To investigate mechanisms of musculoskeletal injury resulting from occupational whole-body vibration exposures in humans, including the ability of engineering interventions to attenuate biomechanical and physiological stresses.

Role: Co-Investigator

Requested Funds: \$1,998,114

NIH/NIDDK R01 DK126854-01 (PI: Newsom)

Submitted 02/2020

Title: *Mechanisms and reversal of skeletal muscle lipid accumulation during obesity*

Purpose: To provide critical insight into the role of hyperinsulinemia as a mechanistic driver of excessive skeletal muscle lipid accumulation in obesity use of SGLT2 inhibition as an approach to reverse lower muscle lipid content in obesity.

Role: Principal Investigator

Requested Funds: \$2,215,933

NIH/NIDDK R01 DK12855-01 (PI: Robinson)

Submitted 10/2019

Title: *Optimizing skeletal muscle mitochondrial lipid oxidation during obesity and insulin resistance*

Purpose: To provide critical and much needed insight into the regulation of skeletal muscle ETF function in humans, including the impact of obesity, T2D and exercise training on ETF activity and regulatory mechanisms.

Role: Co-Investigator

Requested Funds: \$2,457,831

ADA Innovative Clinical or Translational Science Award (PI: Robinson)

Submitted 07/2019

Title: *Reversible regulation of muscle fat oxidation in type 2 diabetes*

Purpose: To provide critical and much needed insight into the regulation of skeletal muscle ETF function in humans, including the impact of obesity, T2D and exercise training on ETF activity and regulatory mechanisms.

Role: Collaborating Investigator

Requested Funds: \$600,000

Medical Research Foundation New Investigator Grant (PI: Newsom)

Submitted 08/2019

Title: *Identifying mechanisms and reversal of excessive skeletal muscle lipid accumulation in obesity*

Purpose: To identify the role of insulin as a mechanism for skeletal muscle lipid accumulation in obesity.

Role: Principal Investigator

Requested Funds: \$50,000

OCTRI Pathways to Independence Award (PI: Newsom)

Submitted 01/2019

Title: *Identifying mechanisms of impaired skeletal muscle insulin action in obesity*

Purpose: To identify mechanisms responsible for impaired insulin-stimulated activation of p21-activated protein kinase (PAK1) in response to obesity.

Role: Principal Investigator

Requested Funds: \$20,000

Collins Medical Trust Medical Research Grant (PI: Robinson/Newsom)

Submitted 12/2018

Title: *Exercise as an approach to reverse suppression of mitochondrial protein breakdown in obesity*

Purpose: To identify impairments in mitochondrial protein turnover as a consequence of obesity that can be reversed by exercise activity.

Role: Co-Principal Investigator

Requested Funds: \$30,000

Pew Scholars Program in the Biomedical Sciences (PI: Newsom) Submitted 10/2017  
Title: *Using Exercise to Identify Novel Therapeutic Treatment Strategies*  
Purpose: To identify candidate molecules, proteins and pathways that mediate the improvement in skeletal muscle insulin action after exercise.  
Role: Principal Investigator  
Requested Funds: \$300,000

Medical Research Foundation New Investigator Grant (PI: Newsom) Submitted 05/2017  
Title: *Rac1 as a mechanism of skeletal muscle insulin resistance in obesity*  
Purpose: To identify the role of Rac1 in skeletal muscle insulin resistance in obesity.  
Role: Principal Investigator  
Requested Funds: \$40,000

Medical Research Foundation New Investigator Grant (PI: Newsom) Submitted 11/2016  
Title: *Rac1 as a mechanism of skeletal muscle insulin resistance in obesity*  
Purpose: To identify the role of Rac1 in skeletal muscle insulin resistance in obesity.  
Role: Principal Investigator  
Requested Funds: \$40,000

#### **D. SERVICE & VOLUNTEERISM**

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##### **Faculty Mentorship**

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2022- Colin Mulligan, Ph.D. | Instructor of Kinesiology, Oregon State University

##### **Program, School and College**

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2016 Table Host | CPHHS Ovation  
*Facilitated discussion among students, preceptors and donors*

2017 Table Host | CPHHS Ovation  
*Facilitated discussion among students, preceptors and donors*

2017 Small Group Member | Kinesiology Graduate Student Evaluation Policies and Procedures  
*Revised the process for evaluating and reporting graduate student progress*

2017-18 Committee Member | Kinesiology Experiential Learning Coordinator Search  
*Evaluated candidates to fill Experiential Learning Coordinator position in Kinesiology*

2017-18 Committee Member | CPHHS Curriculum Committee  
*Reviewed curriculum changes and proposal for the College*

2018 Presenter | CPHHS Board of Trustees Dinner  
*Described aims and purpose of my research to trustees and University leadership*

2018 Peer Evaluator | CPHHS Peer Teaching Observation  
*Evaluated teaching and course materials for peer instructor*

2018 Poster Judge | CPHHS Annual Graduate Student Research Poster Session  
*Served as judge for graduate student research posters*

2018 Committee Member | CPHHS Strategic Planning

*Contributed to 5-year planning related to research goals and tactics for the College*

- 2018 Host Laboratory | CPHHS Undergraduate Research Program  
*Provided 2-part research learning opportunity for undergraduate students*
- 2019 Poster Judge | CPHHS Annual Graduate Student Research Poster Session  
*Served as judge for graduate student research posters*
- 2019 Peer Evaluator | CPHHS Peer Teaching Observation  
*Evaluated teaching and course materials for peer instructor*
- 2019 Faculty Volunteer | CPHHS Undergraduate Recruitment Initiative  
*Called and email prospective undergraduate students in Kinesiology program*
- 2019-20 Committee Member | CPHHS Graduate Quantitative Methods and Analysis Committee  
*Reviewed graduate-level quantitative methods curriculum for the College*
- 2019-21 Committee Member | Kinesiology Graduate Program Committee  
*Reviewed, reformed and optimized graduate program and curriculum in Kinesiology*
- 2021-22 Committee Member | Department of Recreational Sports & Physical Activity Office Task Force  
*Contributed to discussions to optimize integration of DRS and PAC*
- 2021-23 Committee Member | BPHS Personnel Committee  
*Reviewed applications for promotion, tenure and annual merit considerations*
- 2023- Committee Member | School of Kinesiology Personnel Committee  
*Reviewed applications for promotion, tenure and annual merit considerations*
- 2023-24 Faculty Member | College of Health Faculty Research Advisory Taskforce  
*Advise and improve research-related processes and opportunities in College of Health*
- 2024 Co-Chair | College of Health Strategic Plan Taskforce  
*Lead the development and revision of the 2024-2030 College of Health Strategic Plan.*

## **University**

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- 2016-17 Committee Member | Institutional Review Board LEAN Team  
*Revised institutional human participant research review process*
- 2018-19 Faculty Mentor | Faculty Student Mentoring Program  
*Served as a faculty mentor for students new to Oregon State University as part of a pilot program connecting students with faculty*
- 2019 Invited Participant | Research Office Review of HRPP and IRB  
*Provided feedback regarding Human Research Protection Program and the Institutional Review Board to HRP Consulting Group*
- 2019-20 Faculty Mentor | Faculty Student Mentoring Program  
*Served as a faculty mentor for students new to Oregon State University as part of program connecting students with faculty*
- 2020-22 Faculty Representative | Recreational Sports Advisory Board  
*Served as a faculty representative for institutional decisions pertaining to Oregon State University recreational sport activities and facilities.*

- 2020-21 Faculty Mentor | Beaver Connect Mentoring Program  
*Served as a faculty mentor for students new to Oregon State University as part of program connecting students with faculty*
- 2023-24 Committee Member | Integrated Health and Biotechnology Taskforce  
*Developed actionable strategies to promote Integrated Health and Biotechnology as part of OSU Strategic Plan*

## **Profession**

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### **Regular Reviewer for Professional Journals**

*Journal of Applied Physiology* – Editorial Advisory Board 2019-21  
*Diabetes* – Editorial Board 2023-25

### **Ad hoc Reviewer for Professional Journals**

*Applied Physiology, Nutrition, and Metabolism*  
*American Journal of Physiology – Endocrinology and Metabolism*  
*American Journal of Physiology – Regulatory, Integrative and Comparative Physiology*  
*Biochimica et Biophysica Acta*  
*Clinical Diabetes*  
*Diabetes*  
*Diabetes, Obesity and Metabolism*  
*Diabetic Medicine*  
*Endocrine*  
*Endocrinology*  
*Experimental Gerontology*  
*Experimental Physiology*  
*International Journal of Sports Medicine*  
*Journal of Applied Physiology*  
*Journal of Endocrinology*  
*Journal of Kinesiology and Wellness*  
*Journal of Sport Sciences*  
*Medicine & Science Sports & Exercise*  
*Molecular and Cellular Endocrinology*  
*Molecular Nutrition and Food Research*  
*Nutrients*  
*PLoS One*  
*Physiological Genomics*  
*Physiological Reports*  
*Prostaglandins and Other Lipid Mediators*  
*Scientific Reports*  
*Translational Journal of the American College of Sports Medicine*

### **Regular Reviewer for Granting Agencies**

2018-20 American College of Sports Medicine Research Review Committee  
2021-23 American College of Sports Medicine Research Review Committee

### **Ad hoc Reviewer for Granting Agencies**

2013 Central Michigan University Early Career Research Grant  
2014 University of Michigan Nicholas Leoni Endowment Fund  
2017 American College of Sports Medicine Research Review Committee  
2018 Oregon Clinical & Translational Research Institute TL1 Review Committee  
2019 Oregon Clinical & Translational Research Institute TL1 Review Committee



2020 NIH Integrative Physiology of Obesity and Diabetes (IPOD) Study Section Early Career Reviewer  
2023 NIH Physiology of Obesity and Metabolic Disease (POMD) Study Section  
2024 Washington University Diabetes Research Center  
2024 NIH Human Studies of Diabetes and Obesity (HSDO) Study Section

### **Other Professional Service**

- 2016 Research Symposium Chair | American Diabetes Association  
*Chaired "All things in-between – The extracellular matrix and insulin resistance" session at the annual Scientific Sessions meeting in New Orleans, LA*
- 2017 Thematic Poster Moderator | American Diabetes Association  
*Moderated highlighted "Integrated Physiology – Muscle" posters at the annual Scientific Sessions meeting in San Diego, CA*
- 2017 Planning Committee Advisor | American Diabetes Association  
*Generated symposia comprising Exercise content for the 2018 Scientific Sessions annual meeting in Orlando, FL*
- 2018 Poster Presentation Judge | American College of Sports Medicine Northwest  
*Evaluated doctoral student research poster presentations at the annual meeting in Bend, OR*
- 2018 Planning Committee Advisor | American Diabetes Association  
*Generated symposia comprising Exercise content for the 2019 Scientific Sessions annual meeting in San Francisco, CA*
- 2019 Abstract Review | American Diabetes Association  
*Reviewed abstracts comprising Exercise content for the 2019 Scientific Sessions annual meeting in San Francisco, CA*
- 2019-20 Integration Task Force | American College of Sports Medicine  
*Identified opportunities and suggested initiatives creating cross-disciplinary collaboration among the various facets of the American College of Sports Medicine.*
- 2022 President's Cup Judge | American College of Sports Medicine  
*Judged graduate student presentations at the American College of Sports Medicine Annual Meeting in San Diego, CA.*

### **E. AWARDS**

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2004 Outstanding Senior Award | Michigan State University Department of Kinesiology  
2004 High Honor Graduate | Michigan State University  
2007 First Place Abstract and Oral Presentation | Rocky Mountain American College of Sports Medicine  
2008 Outstanding Graduate Student Instructor Nominee | University of Michigan  
2009 Student's Choice Graduate Student Teacher of the Year | University of Michigan School of Kinesiology  
2009 Shirley Cooper International Research Travel Award | University of Michigan School of Kinesiology  
2010 Rackham Graduate School Predoctoral Fellowship | University of Michigan  
2011 Paul A. Hunsicker Memorial Award | University of Michigan School of Kinesiology  
2012 Charles M. Tipton National Student Research Award | American College of Sports Medicine  
2012 Ruth L. Kirschstein National Research Service Award (F32) | NIH-NIDDK  
2014 Postdoctoral Trainee Fellowship (T32) | NIH-NIDDK  
2018 Loan Repayment Program | NIH-NCATS  
2020 Young Scholar Award Nominee | Western Society for Kinesiology & Wellness  
2022 Valley Fellow | Oregon State University  
2023 Fellow of the American College of Sports Medicine (FACSM)