

Curriculum Vitae

Anna E. Stanhewicz, Ph.D.

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EDUCATION

Ph.D. Kinesiology, May 2014

The Pennsylvania State University, University Park, PA
Dissertation: *Aging Cutaneous Microvasculature: Mechanisms and Novel Intervention Strategies*

M.S. Physiology, August 2011

The Pennsylvania State University, University Park, PA
Thesis: *Local Tetrahydrobiopterin Augments Reflex Cutaneous Vasodilation in Aged Human Skin*

B.S. Kinesiology, August 2009

University of Rhode Island, Kingston, RI
Specialization: *Exercise Science*
Suma cum Laude

POSITIONS

- 2019 - **Assistant Professor** Department of Health and Human Physiology, College of Liberal Arts and Sciences, University of Iowa
- 2014 - 2019 **Post-Doctoral Fellow** Department of Kinesiology, College of Health and Human Development, Pennsylvania State University
- 2014 - 2015 **Adjunct Graduate Faculty** Department of Kinesiology, Bloomsburg University of Pennsylvania
- 2010 – 2012 **Graduate Teaching Assistant** Department of Biology, Pennsylvania State University
- 2009 – 2014 **Graduate Research Assistant**
Thermal and Microvascular Physiology Laboratory, Department of Kinesiology, Pennsylvania State University

UNIVERSITY CENTER AFFILIATIONS

- 2019 - **Fraternal Order of Eagles Diabetes Research Center**, Carver College of Medicine, University of Iowa

2013 - 2019 **Center for Healthy Aging**, Penn State College of Health and Human Development
2016 - 2019 **Center for Women's Health Research**, Penn State College of Medicine

HONORS AND AWARDS

Awards

- 2023 New Investigator Award
EEP Section, American Physiological Society
- 2022 Honors Mentoring Award
University of Iowa Honors Program
- 2022 Dale J. Benos Early Career Professional Service Award
American Physiological Society
- 2022 CANTROL Environmental Systems New Investigator Research Award
EEP Section, American Physiological Society
- 2018 AJP Regu New Investigator Review Award
American Journal of Physiology – Regulatory, Integrative & Comparative
Physiology
- 2017 ET-15 Young Investigator Award
Endothelin 15 Conference Chairs
- 2016 CANTROL Environmental Systems Postdoctoral Research Award
EEP Section, American Physiological Society
- 2015 Caroline tum Suden Professional Opportunity Award (postdoctoral)
American Physiological Society
- 2014 Gatorade Pre-Doctoral Award
EEP Section, American Physiological Society
- 2013 Rigel Pharmaceutical Pre-Doctoral Award
EEP Section, American Physiological Society
- 2013 Graduate Student Endowment
College of Health and Human Development, Pennsylvania State University
- 2012 Doctoral Student Research Award
American College of Sports Medicine, Mid Atlantic Regional Chapter
- 2012 Graduate Research Award
Department of Kinesiology, Pennsylvania State University
- 2011 Caroline tum Suden Professional Opportunity Award (predoctoral)
American Physiological Society
- 2009 Presidents Award for Student Excellence
Department of Kinesiology, College of Human Science and Services, University of
Rhode Island
- 2009 Undergraduate Research Grant
University of Rhode Island

Fellowships and Scholarships

- 2018 American Physiological Society Early Career Advocacy Fellowship
APS Science Policy Committee, APS Office of Science Policy
- 2009 Virginia S. Shirley Memorial Graduate Scholarship
Graduate Degree Program in Physiology, Pennsylvania State University
- 2009 University Graduate Fellowship

- The Graduate School, Pennsylvania State University
2009 NEACSM Undergraduate Scholarship
American College of Sports Medicine, New England Chapter
2007 Centennial Scholarship
University of Rhode Island

EXTRAMURAL RESEARCH FUNDING

2023 – 2028 **NIH R01 HL169201**

The Role of Oxidative Stress in Reduced Microvascular Function After Gestational Diabetes

Total Award: \$3,035,471

Role: PI

2023 – 2026 **AHA 23TPA1077588**

<https://doi.org/10.58275/AHA.23TPA1077588.pc.gr.174270>

Impacts of Biological Sex and Inflammation on Microvascular Endothelial Function in Young Adult E-cigarette Users

Total Award: \$299,937

Role: PI

2022 – 2025 **AHA CDA 937990**

Mechanisms of Aspirin Therapy in the Prevention and Treatment of Maternal Vascular Dysfunction Following Preeclampsia

Total Award: \$231,000

Role: PI

2018 - 2023 **NIH K99/R00 HL138133**

Role of Angiotensin II and Chronic Inflammation in Persistent Microvascular Dysfunction Following Preeclamptic Pregnancy

Total Award: \$943,110

Role: PI

2015 - 2018 **NIH F32 HL129677**

Microvascular Mechanisms Underlying Persistent Vessel Dysfunction Following Preeclampsia

Total Award: \$168,421

Role: PI

2015 **ACSM Research Endowment Grant**

Skin Sympathetic Nerve Activity and Attenuated Reflex Vasodilation in Older Adults

Total Award: \$10,000

Role: PI

INTERNAL RESEARCH FUNDING

2022 **UI Fraternal Order of Eagles Diabetes Research Center Catalyst Grant**

The Role of Oxidative Stress in Microvascular Insulin Resistance Following Gestational Diabetes

Total Award: \$100,000

Role: PI

2021 **UI Environmental Health Science Research Center Pilot Grant**
NIH P30 ES005605
Mechanisms of Microvascular Dysfunction in Young Adult E-Cigarette Users
Total Award: \$40,000
Role: PI

2020 **UI Fraternal Order of Eagles Diabetes Research Center P&F Grant**
Role of Oxidative Stress in Microvascular Dysfunction Following Gestational Diabetes
Total Award: \$5,000
Role: PI

2017 **PSU Center for Human Evolution and Diversity Research Endowment Grant**
The Effects of UV Radiation on Cutaneous Endothelial Function in Subjects Differing in Skin Pigment
Total Award: \$19,954
Role: Co-PI

PUBLICATIONS

Original Research Articles

1. Banks NF, Rogers EM, **Stanhewicz AE**, Whitaker KM, Jenkins NDM. Resistance exercise lowers blood pressure and improves vascular endothelial function in individuals with elevated blood pressure or stage I hypertension. *AJP Heart and Circ.* 2024 Jan 1;326(1):H256-H269.
2. Schwartz KS, Lang JL, **Stanhewicz AE**. Angiotensin II type 2 receptor-mediated dilation is greater in the cutaneous microvasculature of premenopausal women compared to men. *Journal of Applied Physiology.* 2023 Dec 1;135(6):1236-1242.
3. Halstead KM, Wetzel EM, Cho JL, **Stanhewicz AE**. Sex differences in oxidative stress-mediated reductions in microvascular endothelial function in young adult e-cigarette users. *Hypertension.* 2023 Dec;80(12):2641-2649.
4. Turner CG, **Stanhewicz AE**, Nielsen KE, Otis J, Feresin RG, Wong BJ. Effects of biological sex and oral contraceptive pill use on cutaneous microvascular endothelial function and nitric oxide-dependent vasodilation in humans. *Journal of Applied Physiology.* 2023 Apr 1;134(4):858-867.
5. Turner CG, **Stanhewicz AE**, Nielsen KE, Wong BJ. Microvascular endothelial function following cessation of long-term oral contraceptive pill use: A case report. *Experimental Physiology.* 2023 Jan;108(1):5-11
6. Dillon GA, **Stanhewicz AE**, Serviente C, Flores VA, Stachenfeld N, Alexander LM. Seven days of statin treatment improves nitric-oxide mediated endothelial-dependent cutaneous microvascular function in women with endometriosis. *Microvascular Research.* 2022 Nov; 144:104421

7. **Stanhewicz AE**, Schlarmann RL, Brustkern KM, Jalal DI. Oxidative stress contributes to reductions in microvascular endothelial- and nitric oxide-dependent dilation in women with a history of gestational diabetes. *Journal of Applied Physiology*. 2022 Aug; 133(2):361-370
8. Pyevich M, Alexander LM, **Stanhewicz AE**. Women with a history of preeclampsia have preserved sensory nerve-mediated dilation in the cutaneous microvasculature. *Experimental Physiology*. 2022 Feb;107(2):175-182.
9. **Stanhewicz AE**, Dillon GA, Serviente C, Alexander LM. Acute systemic inhibition of inflammation augments endothelium-dependent dilation in women with a history of preeclamptic pregnancy. *Pregnancy Hypertension*. 2022 Mar; 27:81-86.
10. Dillon GA, **Stanhewicz AE**, Serviente C, Greaney JL, Alexander LM. Hydrogen sulfide-dependent microvascular vasodilation is improved following chronic sulfhydryl-donating antihypertensive pharmacotherapy in hypertensive adults. *AJP Heart and Circ*. 2021 Oct 1;321(4):H728-H734.
11. Greaney JL, **Stanhewicz AE**, Wolf ST, Kenney WL. Thermoregulatory reflex control of cutaneous vasodilation in healthy aging. *Temperature*. 2020 Oct; 8(2):176-187
12. **Stanhewicz AE**, Wong BJ. Counterpoint: Investigators should not control for menstrual cycle phase when performing studies of vascular control that include women. *J Appl Physiol*. 2020 Nov 1;129(5):1117-1119.
13. **Stanhewicz AE**, Alexander LM. Local angiotensin 1-7 administration improves microvascular endothelial function in women who have had preeclampsia. *Am J Physiol Regul Integr Comp Physiol*. 2020 Jan; 318(1): R148-R155
14. Alba BK, **Stanhewicz AE**, Dey P, Bruno RS, Kenney WL, Alexander LM. Controlled feeding of an 8-day high dairy cheese diet prevents sodium-induced endothelial dysfunction in the cutaneous microcirculation of healthy older adults through reductions in superoxide. *J Nutr*. 2020 Jan 1; 150(1): 55-63.
15. Greaney JL, **Stanhewicz AE**, Kenney WL. Chronic statin therapy is associated with enhanced cutaneous vascular responsiveness to sympathetic outflow during passive heat stress. *J Physiol*. 2019 Sep; 597(18): 4743-4755
16. Wolf ST, Berry CT, **Stanhewicz AE**, Kenney LE, Ferguson SB, Kenney WL. Sunscreen or simulated sweat minimizes the impact of acute ultraviolet radiation on cutaneous microvascular function in healthy humans. *Exp Physiol*. 2019 Jul; 104(7):1136-1146
17. Wolf ST, **Stanhewicz AE**, Clark MM, Chevront SN, Kenefick RW, Kenney WL. Age-related differences in water and sodium handling following commercial hydration beverage ingestion. *J Appl Physiol*. 2019 Apr; 126(4): 1042-1048
18. Clarke MM, **Stanhewicz AE**, Wolf ST, Chevront SN, Kenefick RW, Kenney WL. A randomized trial to assess beverage hydration index in healthy older adults. *Am J Clin Nutr*. 2019 Jun; 109(6):1640-1647
19. Wolf ST, **Stanhewicz AE**, Jablonski N, Kenney WL. Acute ultraviolet radiation exposure attenuates nitric oxide-mediated vasodilation in the cutaneous microvasculature of healthy humans. *J Appl Physiol*. 2018 Oct; 125(4):1232-1237
20. **Stanhewicz AE**, Jandu S, Santhanam L, Alexander LM. Alterations in endothelin type B receptor contribute to microvascular dysfunction in women who have had preeclampsia. *Clinical Science*, 2017 Nov; 131(23):2777-2789.

21. **Stanhewicz AE**, Jandu S, Santhanam L, Alexander LM. Increased sensitivity to angiotensin II contributes to endothelial dysfunction in women who have had preeclampsia. *Hypertension*. 2017 Aug; 70(2): 382-389.
22. **Stanhewicz AE**, Greaney JL, Alexander LM, Kenney WL. Folic acid supplementation increases cutaneous vasodilator sensitivity to sympathetic nerve activity in older adults. *Am J Physiol Regul Integr Comp Physiol*.. 2017 May; 312(5):R681-R688.
23. **Stanhewicz AE**, Greaney JL, Alexander LM, Kenney WL. Blunted increases in skin sympathetic nerve activity are related to attenuated reflex vasodilation in aged human skin. *J Appl Physiol*. 2016 Dec; 121(6):1354-1362.
24. **Stanhewicz AE**, Alba BK, Kenney WL, Alexander LM. Dairy cheese consumption ameliorates single-meal sodium-induced cutaneous microvascular dysfunction by reducing ascorbate-sensitive oxidants in healthy older adults. *Br J Nutr*. 2016 Aug; 116(4):658-65.
25. Alba BK, **Stanhewicz AE**, Kenney WL, Alexander LM. Acute dairy milk ingestion does not augment NO-dependent vasodilation in the cutaneous microcirculation. *Br J Nutr*. 2016 Jul; 116(2):204-10.
26. **Stanhewicz AE**, Alexander LM, Kenney WL. Chronic oral sapropterin increases reflex vasodilation in aged humans: a pilot study. *Ann Sports Med and Research*. 2016 Feb 5.
27. Greaney JL, **Stanhewicz AE**, Proctor DM, Alexander LM, Kenney WL. Impairments in central cardiovascular function contribute to attenuated reflex vasodilation in aged skin. *J Appl Physiol*. 2015 Dec; 119(12): 1411-20.
28. **Stanhewicz AE**, Alexander LM, Kenney WL. Folic acid improves microvascular function in aged humans through nitric oxide-dependent mechanisms. *Clinical Science*. 2015 Jul; 129(2): 159-67.
29. Greaney JL, **Stanhewicz AE**, Kenney WL, Alexander LM. Impaired increases in skin sympathetic nerve activity contribute to age-related decrements in reflex cutaneous vasoconstriction. *J. Physiol*. 2015 May; 593(9): 2199-211.
30. Greaney JL*, **Stanhewicz AE***, Kenney WL, Alexander LM. Lack of limb or sex difference in the cutaneous vascular responses to exogenous norepinephrine. *J Appl Physiol*. 2014 Dec; 117(12):1417-23.
31. **Stanhewicz AE***, Greaney JL*, Kenney WL, Alexander LM. Sex- and limb-specific differences in the nitric oxide-dependent cutaneous vasodilation in response to local heating. *AJP-Regu*. 2014 Oct; 307(7): R914-9.
32. Greaney JL, **Stanhewicz AE**, Kenney WL, Alexander LM. Muscle sympathetic nerve activity during cold stress and isometric exercise in healthy older adults. *J Appl Physiol*. 2014 Sep; 117(6): 648-57.
33. **Stanhewicz AE**, Ferguson SB, Bruning RS, Alexander LM. Laser speckle contrast imaging: a novel method for assessment of cutaneous blood flow in perniosis. *JAMA Dermatology*. 2014 Jun; 150(6):658-60.
34. **Stanhewicz AE**, Alexander LM, Kenney WL. Oral sapropterin augments reflex vasoconstriction in aged human skin through noradrenergic mechanisms. *J Appl Physiol*. 2013 Oct 1;115(7):1025-31
35. **Stanhewicz AE**, Alexander LM, Kenney WL. Oral sapropterin acutely augments reflex vasodilation in aged human skin through nitric oxide-dependent mechanisms. *J Appl Physiol*. 2013 Oct 1;115(7):972-8
36. **Stanhewicz AE**, Bruning RS, Smith CJ, Kenney WL, Holowatz LA. Local tetrahydrobiopterin administration augments reflex cutaneous vasodilation through nitric

oxide-dependent mechanisms in aged human skin. *J. Appl Physiol.* 2012 Mar; 112(5):791-797.

37. Bruning RS, Santhanam L, **Stanhewicz AE**, Smith CJ, Berkowitz DE, Kenney WL, Holowatz LA. Endothelial nitric oxide synthase mediates cutaneous vasodilation during local heating and is attenuated in middle-aged human skin. *J Appl Physiol.* 2012 Jun;112(12):2019-26
38. Smith CJ, Santhanam L, Bruning RS, **Stanhewicz AE**, Berkowitz DE, Holowatz LA. Upregulation of inducible nitric oxide synthase contributes to attenuated cutaneous vasodilation in essential hypertensive humans. *Hypertension.* 2011 Nov; 58(5):935-42.

Invited Reviews

1. **Stanhewicz AE**, Nuckols VR, Pierce GL. Maternal Microvascular Dysfunction During Preeclamptic Pregnancy. *Clinical Science.* 2021 May;135(9):1083-1101.
2. Turner CG, **Stanhewicz AE**, Wong BJ. Female sex hormone effects on the vasculature: considering the validity of restricting study inclusion to low-hormone phases. *Frontiers in Physiology.* 2020 Oct; 11:596507
3. **Stanhewicz AE**, Wenner MM, Stachenfeld NS. Sex differences in endothelial function important to vascular health and overall cardiovascular disease risk across the lifespan. *Am J Physiol – Heart Circ Physiol.* 2018 Dec; 315(6): H1569-1588
4. **Stanhewicz, AE** Residual vascular dysfunction in women with a history of preeclampsia. *Am J Physiol Regul Integr Comp Physiol.* 2018 Dec; 315(6): R1062-1071
5. **Stanhewicz AE**, Kenney WL. Role of folic acid in nitric oxide bioavailability and vascular endothelial function. *Nutrition Reviews.* 2017 Jan; 75(1):61-70.
6. **Stanhewicz AE**, Kenney WL. Determinants of water and sodium intake and output. *Nutrition Reviews.* 2015 73 (suppl 2): 73-82.
7. Kenney WL, **Stanhewicz AE**, Bruning RS, Alexander LM. Blood Pressure Regulation III: What Happens When One System Must Serve Two Masters: Temperature and Pressure Regulation? *EurJApplPhysiol.*2014 Mar; 114(3): 467-79.

Invited Editorials/Letters to the Editor

1. **Stanhewicz AE**, Schwartz KS, Lee R. Commentary on: Increased stiffness of omental arteries from late pregnant women at advanced maternal age. 2023 Nov 30; 43(11):BSR20231291.
2. Turner CG, **Stanhewicz AE**, Nielsen KE, Otis JS, Feresin RG, Wong BJ. Reply to Colburn and Stachenfeld. *J Appl Physiol.* 2023 Aug 1;135(2):487-488.
3. Turner CG, **Stanhewicz AE**, Nielsen KE, Wong BJ. Reply to Letter to the Editor in Response to: Microvascular endothelial function following cessation of long-term oral contraceptive pill use. *Exp Physiol.* 2023 Aug;108(8):1095-1097.

Published Abstracts

1. Schwartz KS, Jalal DI, **Stanhewicz AE**. Six weeks oral losartan treatment improves endothelium-dependent dilation in normotensive women with a history of preeclampsia. *Hypertension* 2023
2. Del Vecchio AR, Schwab AI, Edwards DG, Fancher IS, **Stanhewicz AE**, Wenner MM. The Role of Angiotensin-(1-7) in Regulating Vascular Endothelial Function in Postmenopausal Women. *Hypertension* 2023

3. Hernandez PV, Halstead K, Schwartz KS, Brustkern KM, Jalal DI, **Stanhewicz AE**. Oxidative stress contributes to attenuated insulin-mediated dilation in the microvasculature of women with a history of gestational diabetes. *Physiology* 2023
4. Halstead K, Wetzel EM, Brustkern KM, **Stanhewicz AE**. Sex differences in oxidative stress-mediated reductions in microvascular endothelial function in young e-cigarette users. *Physiology* 2023
5. Schwartz KS, Lang JA, **Stanhewicz AE**. Angiotensin II type 2 receptor-mediated dilation is greater in the cutaneous microvasculature of premenopausal women compared to men. *Physiology* 2023
6. **Stanhewicz AE**, Schlarman RL, Brustkern KM, Jalal DI. Oxidative stress contributes to microvascular endothelial dysfunction in women with a history of gestational diabetes. *FASEB* 2022
7. Pyevich M, Alexander LM, **Stanhewicz AE**. Women with a History of Preeclampsia Have Preserved Neurogenically-Mediated Dilation in the Cutaneous Microvasculature *FASEB* 2021
8. Turner C, **Stanhewicz AE**, Wong BJ. Endothelium-Independent, but Not Endothelium-Dependent, Human Microvascular Vasodilation Differs Between Young, Healthy Females and Males. *FASEB* 2021
9. **Stanhewicz AE.**, Dillon, G. A., Serviente, C. A., Alexander, L. M. Acute Systemic Inhibition of Inflammation Augments Endothelium-dependent Dilation in Women with a History of Preeclamptic Pregnancy *FASEB* 2020
10. Dillon, G. A., Greaney, J., **Stanhewicz, AE.**, Serviente, C. A., Alexander, L. M. Hydrogen Sulfide-dependent Cutaneous Vasodilation is Improved Following Chronic Sulfhydryl-donating Antihypertensive Pharmacotherapy in Hypertensive Adults. *FASEB* 2020
11. Wolf, S. T., Greaney, J., **Stanhewicz, AE.**, Kenney, W. L. The Nitric Oxide Contribution to Reflex Cutaneous Vasodilation During Intradermal Microdialysis is Similar When Quantified Either Within or Between Sites. *FASEB* 2020
12. **Stanhewicz, AE.**, Serviente, C. A., Dillon, G. A., Stachenfeld, N., Taylor, H., Alexander, L. M. Microvascular endothelium-dependent vasodilation is impaired in women with endometriosis and improved with acute atorvastatin treatment. *Society for Reproductive Investigation* 2020
13. Serviente, C., Alexander, L. M., Greaney, J., **Stanhewicz, AE.**, Alexander, L. M. (2019). Pharmacologically lowering blood pressure may not improve conduit artery endothelial function in hypertensive adults. *Circulation* 2019
14. JL Greaney, **AE Stanhewicz**, WL Kenney. Statin Therapy Enhances Reflex Cutaneous Vasodilation in Formerly Hypercholesterolemic Older Adults by Improving Neurovascular Coupling *FASEB* 2019
15. GA Dillon, JL Graney, **AE Stanhewicz**, LM Alexander. Cutaneous Microvascular Function in Hypertensive Adults is not Altered Following 16-weeks of Pharmacological Antihypertensive Treatment. *FASEB* 2019
16. CW Berry, IN Hill, ST Wolf, **AE Stanhewicz**, WL Kenney. Skin Erythema and Blood Flow Responses to Acute Ultraviolet Radiation Exposure *FASEB* 2019
17. ST Wolf, **AE Stanhewicz**, NG Jablonski, SB Ferguson, WL Kenney. The Modulating Effects of Sunscreen and Simulated Sweat on Ultraviolet Radiation Induced Microvascular Dysfunction in the Human Cutaneous Vasculature. *FASEB* 2019

18. ST Wolf, **AE Stanhewicz**, N Jablonski, and WL Kenney. Acute Ultraviolet Radiation Exposure Attenuates Nitric Oxide-Mediated Vasodilation in the Cutaneous Microvasculature of Healthy Humans. *MSSE 2018*
19. BK Alba, **AE Stanhewicz**, RS Bruno, WL Kenney and LM Alexander. Inclusion of Dairy Cheese in an 8-Day Controlled Dietary Intervention Prevents Sodium-Induced Endothelial Dysfunction in the Cutaneous Microcirculation of Healthy Older Adults. *FASEB 2018*
20. **AE Stanhewicz** and LM Alexander. Local Angiotensin 1-7 Administration Augments Microvascular Endothelial Function in Women Who Have Had Preeclampsia. *FASEB 2018*
21. **AE Stanhewicz** and LM Alexander. Attenuated Endothelin Type B Receptor-Mediated Dilation Contributes to Endothelial Dysfunction in the Microvasculature of Women Who Have Had Preeclampsia. *Endothelin-15, Prague, Czech Republic, 2017*
22. **AE Stanhewicz**, L Santhanam, and LM Alexander. Role of Endothelin Type B Receptors in Microvascular Dysfunction Post-partum in Women Who Have Had Preeclampsia. *FASEB 2017*
23. BK Alba, **AE Stanhewicz**, WL Kenney, and LM Alexander. Dairy Cheese Ingestion Does Not Improve Acute Sodium-induced Cutaneous Microvascular Dysfunction through Arginase or Inducible Nitric Oxide Synthase Mechanisms. *FASEB 2017*
24. **AE Stanhewicz**, L Santhanam, and LM Alexander. Increased Angiotensin II Sensitivity Contributes to Microvascular Endothelial Dysfunction in Women Who Have Had Preeclampsia. *American Heart Association Scientific Sessions, New Orleans, LA 2016*
25. JL Greaney, **AE Stanhewicz**, LM Alexander and WL Kenney. Folic Acid Supplementation Enhances Reflex Vasodilation in Aged Skin by Improving Arteriolar Sensitivity to Sympathetic Nerve Activity. *FASEB SRC, Saxtons River, VT 2016*
26. **AE Stanhewicz**, and LM Alexander. Endothelium-dependent Vasodilation is Attenuated in the Microvasculature of Formerly Preeclamptic Women. *Women's Health Research Day, Hershey, PA 2016*
27. **AE Stanhewicz**, JL Greaney, LM Alexander, and WL Kenney. Blunted Increases in Skin Sympathetic Nerve Activity Contribute to Attenuated Reflex Vasodilation in Aged Human Skin. *FASEB 2016*
28. **AE Stanhewicz**, BK Alba, WL Kenney, and LM Alexander. Macronutrients and Proteins in Cheese Reduce Acute Dietary Sodium-induced Endothelial Dysfunction in the Cutaneous Microcirculation. *FASEB 2015*
29. JL Greaney, **AE Stanhewicz**, WL Kenney, and LM Alexander. Reflex Control of Cutaneous Vasoconstriction during Whole-body Cooling in Aged Humans. *FASEB 2015*
30. **AE Stanhewicz**, LM Alexander, and WL Kenney. Folic Acid Supplementation Improves Microvascular Function in Aged Skin Through NO-dependent Mechanisms. *FASEB 2014*
31. **AE Stanhewicz**, LM Alexander, and WL Kenney. Acute Oral Sapropterin Augments NO-dependent Reflex Vasodilation in Aged Human Skin. *FASEB 2013*
32. **AE Stanhewicz**, WL Kenney, FACSM and LM Alexander, FACSM. Acute Oral Supplementation with Sapropterin Augments NO-dependent Reflex Vasodilation in Aged Human Skin. *IJES 2012*

33. CC Conlon, **AE Stanhewicz**, and LM Alexander, FACSM. A Novel Method for Assessing Cutaneous Reactive Hyperemia with Laser Speckle Contrast Imagery. *IJES2012*
34. **AE Stanhewicz**, LA Holowatz, FACSM and WL Kenney, FACSM. Reflex Cutaneous Vasodilation is Preserved in Human Skin Through Middle Age. *MSSE 2012*
35. **AE Stanhewicz**, RS Bruning, CJ Smith, WL Kenney LA Holowatz. Acute Local Tetrahydrobiopterin Supplementation Augments Reflex Cutaneous Vasodilation in Aged Human Skin. *FASEB 2011*
36. RS Bruning, **AE Stanhewicz**, CJ Smith, WL Kenney, LA Holowatz. iNOS is not involved in attenuated endothelium-dependent vasodilation in middle-aged human skin. *FASEB 2011*.
37. CJ Smith, RS Bruning, **AE Stanhewicz**, LA Holowatz. Upregulation of iNOS contributes to attenuated eNOS-dependent cutaneous vasodilation in essential hypertensive humans. *FASEB 2011*.

INVITED PRESENTATIONS

- 2023 Gestational Diabetes and Future Cardiovascular and Metabolic Health
NIH NIA Workshop 'The Long-Term Costs of Reproduction on Aging', Bethesda, MD
- 2023 Cutaneous Microvascular Endothelial Dysfunction in Young Adult E-Cigarette Users
North American Vascular Biology Annual Meeting, Newport, RI
- 2023 Role of Oxidative Stress in Microvascular Dysfunction after Gestational Diabetes
University of Nebraska Medical Center, Cellular and Integrative Physiology Seminar
- 2023 Preparing Training Grants and Career Development Awards
Pennsylvania State University, Pathways to Healthy Aging (T32) Seminar Series
- 2023 Preeclampsia and Lifetime Chronic Disease Risk
Internal Medicine Grand Rounds; Carver College of Medicine, Iowa City, IA
- 2023 Role of Oxidative Stress in Attenuating Microvascular Endothelial Function after Gestational Diabetes
University of Wisconsin, Madison, WI
- 2022 Role of Oxidative Stress in Attenuating Microvascular Endothelial Function after Gestational Diabetes
University of Texas at Arlington, Arlington, TX
- 2022 Role of Oxidative Stress in Attenuating Microvascular Endothelial Function after Gestational Diabetes
Georgia State University, Atlanta, GA
- 2021 Oxidative Stress Contributes to Microvascular Dysfunction in Women who have had Gestational Diabetes
UI Fraternal Order of Eagles Diabetes Research Center Seminar Series
- 2021 Persistent Microvascular Dysfunction Following Preeclampsia: Role of Angiotensin II
Florida State University, Tallahassee, FL
- 2021 Interventional Targets for Improved Cardiovascular Health Span After Preeclampsia
Texas ACSM Annual Meeting
- 2020 Mechanisms of Microvascular Dysfunction Following Preeclampsia: Role of Inflammation

- ZOOMing in on Preeclampsia Research; University of Mississippi Medical Center, Online*
- 2020 Mechanisms of Microvascular Dysfunction Following Preeclampsia
Internal Medicine Research Day, UIHC
- 2020 Mechanisms of Microvascular Dysfunction Following Preeclampsia
Microcirculatory Society Summer Series: Microvascular Exchange, Online
- 2020 Role of LOX-1 in Vascular Dysfunction in Women with Endometriosis
*Experimental Biology 2020, San Diego, CA *cancelled due to COVID19*
- 2020 Microvascular endothelium-dependent vasodilation is impaired in women with endometriosis and improved with acute atorvastatin treatment.
*Society for Reproductive Investigation Annual Meeting, Vancouver, BC *cancelled due to COVID19*
- 2019 Acute Systemic Inhibition of Inflammation Augments Endothelium-dependent Dilation in Women with a History of Preeclamptic Pregnancy
Iowa Physiological Society Annual Meeting, Iowa City, IA
- 2018 The Impact of Acute Ultraviolet Radiation Exposure on Human Cutaneous Microvascular Function
Exercise Science and Skin Cancer Prevention Research Meeting, NIH National Cancer Institute, Bethesda, MD
- 2018 Mechanisms Contributing to Residual Microvascular Dysfunction in Women with a History of Preeclampsia
John B. Pierce Laboratory, Yale University School of Medicine, New Haven, CT
- 2018 Considering Neural Control of the Cutaneous Circulation during Reflex Thermoregulatory Stress
American College of Sports Medicine Annual Meeting, Minneapolis, MN
- 2018 Mechanisms of Microvascular Dysfunction in Women Who Have Had Preeclampsia
Georgia Prevention Institute, Augusta University, Augusta, GA
- 2018 Local Angiotensin 1-7 Administration Augments Microvascular Endothelial Function in Women Who Have Had Preeclampsia
Experimental Biology, San Diego, CA
- 2017 Attenuated Endothelin Type B Receptor-Mediated Dilation Contributes to Endothelial Dysfunction in the Microvasculature of Women Who Have Had Preeclampsia
Endothelin-15, Prague, Czech Republic
- 2017 Role of Endothelin Type B Receptors in Microvascular Dysfunction Post-partum in Women Who Have Had Preeclampsia.
Experimental Biology, Chicago, IL
- 2017 Dairy Protein and Sodium-Induced Vascular Dysfunction
Experimental Biology, Chicago, IL
- 2017 Effect of Female Reproductive Hormones on Thermoregulatory Responses
Experimental Biology, Chicago, IL
- 2016 Microvascular Dysfunction in Preclinical Populations: Mechanisms and Intervention Strategies
University of Delaware, Newark, DE
- 2016 Microvascular Dysfunction Persists Postpartum in Women Who Have Had Preeclampsia
OBGYN/MFM Grand Rounds, Penn State College of Medicine, Hershey, PA
- 2016 Blunted Increases in Skin Sympathetic Nerve Activity Contribute to Attenuated Reflex Vasodilation in Aged Human Skin

- Experimental Biology, San Diego, CA*
- 2015 Intervention Strategies for Improved Reflex Cutaneous Vasodilation in Aged Adults
MARC ACSM, Harrisburg, PA
- 2014 Cutaneous Microvascular Function: Mechanisms, Implications, and Assessment of Intervention Strategies
University of Rhode Island, Kingston, RI
- 2013 Acute Oral Sapropterin Augments NO-dependent Reflex Vasodilation in Aged Human Skin
Experimental Biology, Boston, MA
- 2012 Acute Oral Supplementation with Sapropterin Augments NO-dependent Reflex Vasodilation in Aged Human Skin.
MARC ACSM, Harrisburg, PA
- 2011 Reflex Cutaneous Vasodilation is Preserved in Human Skin Through Middle Age
American College of Sports Medicine Annual Meeting, San Francisco, CA

TEACHING EXPERIENCE

- 2020 - HHP 4460/6460: Cardiovascular Physiology
- 2020 - HHP 6400: Integrative Physiology Seminar
- 2019 - HHP 4500: Undergraduate Independent Study
- 2019 - HHP 4410/6410: Integrative Physiology of Exercise
- 2016 KINES 588: Scientific Writing in Kinesiology
Guest lectures - Individual Development Plans, Writing Fellowship Grants
- 2015 APS Professional Skills Training Course: Abstract Writing (online)
- 2015 OSHA Lifelong Learning Institute: Evidence Based Healthy Aging
- 2011 – 2012 BIOL 473: Mammalian Physiology laboratory
- 2010 – 2011 BIOL 421: Comparative Vertebrate Anatomy laboratory

STUDENT MENTORING

Undergraduate

Elizabeth Wetzel (Anticipated graduation Spring '24 – B.S. Human Physiology)

Department of Health and Human Physiology, University of Iowa

* Iowa Center for Research by Undergraduates Summer Fellowship Award 2022

* 2023 Iowa Physiological Society Undergraduate Outstanding Oral Presentation Award

* 2024 APS Horwitz/Horowitz Outstanding Undergraduate Abstract Award

Rowan Schlarmann, B.S. (2022)

Department of Health and Human Physiology, University of Iowa

* 2021 Iowa Physiological Society Undergraduate Outstanding Oral Presentation Award

Michael Pyevich, B.S. (2021)

Honors Thesis Mentor, Department of Health and Human Physiology, University of Iowa

* 2021 APS Horwitz/Horowitz Outstanding Undergraduate Abstract Award

Graduate

Grace Maurer, M.S.

Doctoral Dissertation Mentor, Department of Health and Human Physiology, University of Iowa

*2023 Iowa Physiological Society Graduate Outstanding Oral Presentation Award

*2024 APS EEP Section Women in Physiology Predoctoral Research Award

Kelsey Schwartz

Doctoral Dissertation Mentor, Department of Health and Human Physiology, University of Iowa

*University of Iowa Graduate College Post-Comprehensive Research Fellowship Award

*2024 APS EEP Section Nike Loren G. Myhre Predoctoral Research Award

Ruda Lee, M.S.

Doctoral Dissertation Mentor, Department of Health and Human Physiology, University of Iowa

Kristen Halstead, M.S. (2023)

M.S. Thesis Mentor, Department of Health and Human Physiology, University of Iowa

Paola Hernandez, M.S. (2023)

M.S. Thesis Mentor, Department of Health and Human Physiology, University of Iowa

Casey G. Turner, Ph.D (2022)

Member of Doctoral Dissertation Committee, Department of Kinesiology and Health, Georgia State University

PROFESSIONAL AND SERVICE ACTIVITIES

Journal and Resource Reviewing

Journal of Applied Physiology (member of editorial board)

Journal of Physiology

American Journal of Physiology, Reg. Integrative and Comparative Physiology

American Journal of Physiology – Heart and Circulatory Physiology

Medicine and Science in Sports and Exercise

Experimental Physiology

European Journal of Applied Physiology

Microvascular Research

Microcirculation

Hypertension

Clinical Science

Bioscience Reports

Applied Physiology, Nutrition, and Metabolism

Cell Metabolism

American Physiological Society: Life Science Teaching Resource Community

Grant Review

2023 NIH BBHV Study Section (ad hoc)

2022, 2023 AHA Transformational Project Award Review Committee

2022 NIH IVPP Study Section (ad hoc, ECR)

2022 AHA Pre and Post-doctoral Fellowship Award Review Committee

2021 University of Delaware INBRE

2018 - 2019 American College of Sports Medicine (ad hoc)

2016 - 2018 Penn State Kinesiology Student Grant Review

Society Memberships

2009 – Present American Physiological Society

2009 – Present American College of Sports Medicine
2013 – Present American Heart Association

Professional Society Committee Service

2023 Member, APS Sex & Gender Research Interest Group Steering Committee
2020 – 2023 Councilor, APS Exercise and Environmental Physiology Section Steering Committee (also served as regular member representative to trainee advisory subcommittee)
2020 - 2024 Member, APS Science Policy Committee
2022 APS Outstanding Undergraduate Poster Award Judge
2014 – 2017 Member, APS Education Committee
2015, 2016 Intel International Science and Engineering Fair
American Physiological Society Special Awards Judge

University and Local Academic Service

2024 - Strategic Planning Committee, UI Department of Health and Human Physiology
2020 – Scholarship Committee, UI Department of Health and Human Physiology
2023 Chair, Experiential Learning Poster Session Planning Committee, UI Department of Health and Human Physiology
2020 Invited Panel Speaker for UI Pre-Med Club “Medicus Research Panel”
2020 Abstract Presentation Judge, Internal Medicine Research Day, UIHC
2019 Session Chair, Iowa Physiological Society Annual Meeting
2015 Pennsylvania Junior Academy of Science (Region 6) Judge
Altoona, PA
2013 – 2016 Graduate Exhibition Judge
Graduate School, Pennsylvania State University
2013 – 2014 HHD Graduate Student Council Representative
Department of Kinesiology, Pennsylvania State University
2010 – 2011 Graduate Student Representative
Graduate Degree Program in Physiology, Pennsylvania State University
2011 – 2015 American Physiological Society - PhUn Week
State College Area High School, State College, PA
Park Forest Middle School, State College, PA