Han-A Park, Ph.D.

Assistant Professor
Department of Human Nutrition and Hospitality Management
The University of Alabama
Box 870311, Tuscaloosa, AL 35487
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EDUCATION

2010	Ph.D., Human Nutrition Ohio State University, Columbus, OH Advisor: Chandan K. Sen, Ph.D.
2003	M.S., Food and Nutrition Sookmyung Women's University, Seoul, Republic of Korea Advisor: Hyun-sook Kim, Ph.D.
2001	B.S., Food and Nutrition Sookmyung Women's University, Seoul, Republic of Korea

NONDEGREE EDUCATION AND TRAINING

2011-2017	Postdoctoral Fellow, Neuroscience Yale University, New Haven, CT Advisor: Elizabeth A. Jonas, M.D.

PROFESSIONAL EXPERIENCE

2017 – Present	**Assistant Professor**, Department of Human Nutrition and Hospitality Management The University of Alabama, Tuscaloosa, AL
2017 – 2017	**Associate Research Scientist**, Department of Internal Medicine Yale University, New Haven, CT
2011 – 2017	**Postdoctoral Associate**, Department of Internal Medicine Yale University, New Haven, CT
2006 – 2010	**Graduate Research Assistant**, Department of Surgery Ohio State University, Columbus, OH

CERTIFICATION

2001 – Present	Dietitian, Ministry of Health and Welfare Republic of Korea

PUBLICATIONS

- **Peer-Reviewed Research Papers** (* denotes UA students)

1. J. Brucker Nourse, Jr.*, Shannon N. Russell, Nathan A. Moniz, Madison Scott, **Han-A Park**, Kim A. Caldwell, and Guy A. Caldwell. Integrated Regulation of Dopaminergic and Epigenetic Effectors of Neuroprotection in Parkinson's Disease Models. ***PNAS*** (Accepted, 2023)
2. **Han-A Park,** Spenser R. Brown*, Joseph Jansen*, Tracie Dunn*, Madison Scott*, Nelli Mnatsakanyan, Elizabeth A. Jonas, and Yonghyun Kim. Fluid Shear Stress Enhances Breast Cancer Cell Survival via Downregulation of the c-subunit of the F1Fo ATP Synthase. ***Biochemical and Biophysical Research Communications*** 2022 Sep 29;632:173-180. doi: 10.1016/j.bbrc.2022.09.084. PMID: 36209586

3. **Han-A Park,** Kristi M. Crowe-White, Lukasz Ciesla, Madison Scott*, Sydni Bannerman*, Abigail U. Davis*, Bishnu Adhikari*, Garret Burnett*, Katheryn Broman*, Khondoker Adeba Ferdous*, Kimberly H. Lackey, Pawel Licznerski, and Elizabeth A. Jonas. Alpha-Tocotrienol Enhances Arborization of Primary Hippocampal Neurons via Upregulation of Bcl-xL***. Nutrition Research*** 2022 Mar 7;101:31-42. doi: 10.1016/j.nutres.2022.02.007. PMID: 35366596. PMCID: MC9081260
4. Inhyeok Chung, **Han-A Park**, Jun Kang, Heyyoung Kim, Su Min Hah, Juhee Lee, Hyeon Soo Kim, Won-Seok Choi, Ji Hyung Chung, and Min-Jeong Shin. Neuroprotective effects of ATPase inhibitory factor 1 preventing mitochondrial dysfunction in Parkinson's disease. ***Scientific Reports*** 2022 Mar 9;12(1):3874. doi: 10.1038/s41598-022-07851-8. PMID: 35264673. PMCID: PMC8907304.
5. Nelli Mnatsakanyan, **Han-A Park**, Jing Wu, Xiang He, Marc Llaguno, Maria Latta, Paige Miranda, Besnik Murtishi, Morven Graham, Richard J Levy, Evgeny V Pavlov, and Elizabeth A. Jonas. Mitochondrial ATP synthase c-subunit leak channel triggers cell death upon loss of its F1 subcomplex. ***Cell Death & Differentiation***. 2022. Mar 23. doi: 10.1038/s41418-022-00972-7. PMID: 35322203.
6. Joseph Jansen*, Madison Scott*, Emma Amjad*, Allison Stumpf*, Kimberly H. Lackey, Kim A. Caldwell, and **Han-A Park**. Bcl-xL Is Required by Primary Hippocampal Neurons During Development to Support Local Energy Metabolism at Neurites. ***Biology***. 2021 Aug; 10(8): 772
7. **Han-A Park**, Allison Stumpf*, Katheryn Broman*, Joseph Jansen*, Tracie Dunn*, Madison Scott*, and Kristi M. Crowe-White. Role of Lycopene in Mitochondrial Protection during Differential Levels of Oxidative Stress in Primary Cortical Neurons***. Brain Disorders***. 2021 Sep; 3:100016. doi: 10.1016/j.dscb.2021.10001
8. **Han-A Park,** Katheryn Broman*, and Elizabeth A. Jonas. Oxidative Stress Battles Neuronal Bcl-xL in a Fight to the Death. ***Neuronal Regeneration Research***. 2021 Jan;16(1):12-15. doi: 10.4103/1673-5374.286946.
9. Pawel Licznerski, **Han-A Park**, Harshvardhan Rolyan, Rongmin Chen, Nelli Mnatsakanyan, Paige Miranda, Morven Graham, Jing Wu, Nicole Cruz-Reyes, Nikita Mehta, Sana Sohail, Jorge Salcedo, Erin Song, Charles Effman, Samuel Effman, Lucas Brandao, Nancy Xu, Amber Braker, Valentin K. Gribkoff, Richard J. Levy and Elizabeth Ann Jonas. ATP synthase c-subunit leak causes aberrant cellular metabolism in Fragile X syndrome. ***Cell***. 2020 Sep 3;182(5):1170-1185.e9. doi: 10.1016/j.cell.2020.07.008
10. **Han-A Park**, Mary Margaret Hayden*, Sydni Bannerman*, Joseph Jansen*, and Kristi M. Crowe-White, Anti-Apoptotic Effects of Carotenoids in Neurodegeneration. ***Molecules***. 2020 Jul 29;25(15):3453. doi: 10.3390/molecules25153453
11. **Han-A Park,** Spenser R. Brown*, and Yonghyun Kim. Cellular Mechanisms of Circulating Tumor Cells during Breast Cancer Metastasis. ***International Journal of Molecular Sciences***. 2020 Jul 17;21(14):5040. doi: 10.3390/ijms21145040
12. **Han-A Park** and Amy C. Ellis, Dietary Antioxidants and Parkinson's Disease. ***Antioxidants***. 2020 Jul 1;9(7):570. doi: 10.3390/antiox9070570.
13. **Han-A Park**, Nelli Mnatsakanyan, Katheryn Broman*, Abigail U. Davis*, Jordan May*, Pawel Licznerski, Kristi Crowe-White, Kimberly H. Lackey, and Elizabeth A. Jonas. Alpha-Tocotrienol prevents ΔN-Bcl-xL-associated mitochondrial dysfunction in primary hippocampal neurons. *International Journal of Molecular Sciences.* 2019 Dec 28;21(1). doi: 10.3390/ijms21010220.
14. Rongmin Chen, **Han-A Park**, Nelli Mnatsakanyan, Yulong Niu, Pawel Licznerski, Jing Wu, Paige Miranda, Morven Graham, Jack Tang, Anita Boon, Giovanni Cossu, Wim Mandemakers, Peter Smith, Kambiz Alavian, Vincenzo Bonifati, and Elizabeth A. Jonas. Parkinson's Disease protein DJ-1 regulates ATP synthase protein components to increase neuronal process outgrowth. *Cell Death & Disease.* 2019 Jun 13;10(6):469. doi: 10.1038/s41419-019-1679-x.
15. **Han-A Park,** Katheryn Broman*, Allison Stumpf*, Sara Kazyak*, and Elizabeth A. Jonas. Nutritional regulators of Bcl-xL in the brain. *Molecules.* 2018 Nov 19;23(11). pii: E3019. doi: 10.3390/molecules23113019.
16. **Han-A Park** and Elizabeth Jonas. ΔN-Bcl-xL, a therapeutic target for neuroprotection. *Neural Regeneration Research*. 2017 Nov;12(11):1791-1794. doi: 10.4103/1673-5374.219033.

17. **Han-A Park**, Pawel Licznerski, Nelli Mnatsakanyan, Yulong Niu, Silvio Sacchetti, Jing Wu, Brian M. Polster, Kambiz N. Alavian, and Elizabeth A. Jonas. Inhibition of Bcl-xL prevents pro-death actions of ΔN-Bcl-xL at the mitochondrial inner membrane during glutamate excitotoxicity. *Cell Death & Differentiation.* 2017 Nov;24(11):1963-1974. doi: 10.1038/cdd.2017.123.
18. **Han-A Park**, Pawel Licznerski, Kambiz N. Alavian, Marya Shanabrough, and Elizabeth A. Jonas. Bcl-xL is necessary for neurite outgrowth in hippocampal neurons. *Antioxidants & Redox Signaingling*. 2015 Jan 10;22(2):93-108. doi: 10.1089/ars.2013.5570.
19. Hongmei Li, **Han-A Park**, and Elizabeth A. Jonas. Measurement of synaptic activity using fluorescent synaptopHluorin in isolated hippocampal neurons. *Bio-protocol.* 2014 Dec 5;4(23). pii: e1304.
20. **Han-A Park** and Elizabeth A. Jonas. Mitochondrial membrane protein Bcl-xL, a regulator of adult neuronal growth and synaptic plasticity: multiple functions beyond apoptosis. *Neural Regeneration Research*. 2014 Oct 1;9(19):1706-7. doi: 10.4103/1673-5374.143413. *Review.*
21. Kambiz N. Alavian, Gisela Beutner, Emma Lazrove, Silvio Sacchetti, **Han-A Park**, Pawel Licznerski, Hongmei Li, Panah Nabili, Kathryn Hockensmith, Morven Graham, George A. Porter, and Elizabeth A. Jonas. An uncoupling channel within the c-subunit ring of the F1FO ATP synthase is the mitochondrial permeability transition pore. *PNAS.* 2014 Jul 22;111(29):10580-5. doi: 10.1073/pnas.1401591111.
22. Elizabeth A. Jonas, Silvio Sacchetti, **Han-A Park**, Emma Lazrove, Gisela Beutner, George A. Porter, and Kambiz A. Alavian. The c-subunit of the ATP synthase forms the pore of the PTP. *Biophysical Journal.* 2014 106, 3a-4a.
23. **Han-A Park**, Natalia Kubicki, Surya Gnyawali, Yuk Cheung Chen, Sashwati Roy, Savita Khanna, and Chandan K. Sen. Natural vitamin E α-tocotrienol protects against ischemic stroke by induction of multidrug resistance-associated protein 1. *Stroke.* 2011 Aug;42(8):2308-14. doi: 10.1161/STROKEAHA.110.608547.
24. Gayle Gordillo, Huiquing Fang, **Han-A Park**, and Sashwati Roy. Nox-4-dependent nuclear H_2O_2 drives DNA oxidation resulting in 8-OHdG as urinary biomarker and hemangioendothelioma formation. *Antioxidants & Redox Signaingling.* 2010 Apr 15;12(8):933-43. doi: 10.1089/ars.2009.2917.
25. **Han-A Park**, Savita Khanna, Cameron Rink, Surya Gnyawali, Sashwati Roy, and Chandan K. Sen. Glutathione disulfide induces neural cell death via a 12-lipoxygenase pathway. *Cell Death & Differentiation.* 2009 Aug;16(8):1167-79. doi: 10.1038/cdd.2009.37.
26. Savita Khanna, **Han-A Park**, Chandan K. Sen, Trimurtulu Golakoti, Krishanu Sengupta, Somepalli Venkateswarlu, and Sashwati Roy. Neuroprotective and antiinflammatory properties of a novel demethylated curcuminoid. *Antioxidants & Redox Signaingling.* 2009 Mar;11(3):449-68. doi: 10.1089/ARS.2008.2230.
27. Savita Khanna, Sashwati Roy, **Han-A Park**, and Chandan K. Sen. Regulation of c-Src activity in glutamate-induced neurodegeneration. *Journal of Biological Chemistry.* 2007 Aug 10;282(32):23482-90.

    NCBI my bibliography
    https://www.ncbi.nlm.nih.gov/sites/myncbi/1Jwv0NgvqfRQaz/bibliography/57844390/public/?sort=date&direction=ascending

● **Peer-Reviewed Book Chapters**

1. Katheryn Broman*, Abigail U. Davis*, Jordan May*, and **Han-A Park.** Lifestyle factors, Mitochondrial Dynamics, and Neuroprotection in *Neuroprotection - New Approaches and Prospects*. London, UK, Intech. (2019)
2. **Han-A Park,** and Elizabeth A. Jonas. Synaptic Plasticity, Chapter 3, Mitochondrial Regulators of Synaptic Plasticity in the Ischemic Brain. Intech. p39-67 (2017)
3. Elizabeth A. Jonas, George A. Porter, Gisela Beutner, Nelli Mnatsakanyan, **Han-A Park**, Nikita Mehta, Rongmin Chen, Kambiz A. Alavian. Molecular Basis for Mitochondrial Signaling. Chapter 3,

The mitochondrial permeability transition pore: molecular structure and function in health and disease. Springer. p69-105 (2017)

4. **Han-A Park**, Sashwati Roy, Savita Khanna, and Chandan K. Sen. Method in Redox Signaling, Chapter 10: Current Technologies in Single Cell Microinjection and Application to Study Signal Transduction. Mary Ann Liebert, Inc. p71-77 (2010)

PRESENTATIONS

1. Amy Ellis, **Han-A Park**, Deniz Azarmanesh, Christine Ferguson*, Sydni Bannerman*, Mary Margaret Hayden*, Marian Yurchishin*. Habitual Diet Quality Was Not Associated with Self-Reported Symptoms of Young Adults with Sars-CoV-2 Infection During the First Pandemic Wave, Virtual, Nutrition 2022
2. **Han-A Park**, Kristi M. Crowe-White, Lukasz Ciesla, Sydni Bannerman*, Madison Scott*, Abigail U. Davis*, Bishnu Adhikari*, Garrett Burnett*, Katheryn Broman*, Khondoker Adeba Ferdous*, Kimberly H. Lackey, Pawel Licznerski, and Elizabeth A. Jonas. The role of alpha-tocotrienol during development of primary hippocampal neurons. Virtual, Nutrition 2022
3. Khondoker Adeba Ferdous*, Garett Burnett*, Madison Scott*, Emma Amjad*, Sydni Bannerman*, and **Han-A Park**. Neuroprotective function of fucoxanthin in oxidative stress-mediated mitochondrial dysfunction. Virtual, Nutrition 2022
4. Joseph Jansen*, Madison Scott*, Emma Amjad*, Allison Stumpf*, Kimberly H. Lackey, Kim A. Caldwell, and **Han-A Park**. Bcl-xL is required by primary hippocampal neurons for mitochondrial motility and proper neurite development. Virtual, Nutrition 2022 (June 14, 2022)
5. Madison Scott*, Joseph Jansen*, Tricie Dunn*, Katheryn Broman*, and **Han-A Park**. Dietary antioxidant lycopene enhances neurite complexity protecting primary hippocampal neurons against excitotoxicity. Undergraduate Research & Creative Activity Conference (April 4, 2022) ***Awarded***
6. Joseph Jansen*, Madison Scott*, Emma Amjad*, Allison Stumpf*, Kimberly H. Lackey, Kim A. Caldwell, and **Han-A Park**. Bcl-xL is required for mitochondrial motility and proper neurite development. Undergraduate Research & Creative Activity Conference (April 4, 2022)
7. Mary Margaret Hayden*, Sydni Bannerman*, Christine Ferguson*, Marian Yurchishin*, **Han-A Park**, and Amy Ellis. Lifestyle Factors Influencing COVID-19 Severity. Undergraduate Research & Creative Activity Conference (April 4, 2022)
8. **Han-A Park**, Kristi M. Crowe-White, Abigail U. Davis*, Sydni Bannerman*, Garret Burnett*, Madison Scott*, Katheryn Broman*, Kimberly H. Lackey, Pawel Licznerski, and Elizabeth A. Jonas. Vitamin E Improves Neurite Complexity by Enhancing Mitochondrial Function. Virtual, Nutrition 2021
9. Madison Scott*, Joseph Jansen*, Tracie Dunn*, Katheryn Broman*, and **Han-A Park**. Roles of Lycopene During Neurite Development of Primary Hippocampal Neuron. Virtual, Nutrition 2021
10. Tracie Dunn*, Nelli Mnatsakanyan*, Spenser Brown*, Joseph Jansen*, Mary Margaret Hayden*, Elizabeth A. Jonas, Yonghyun Kim, and **Han-A Park**. Alteration of the F1Fo ATP Synthase Causes Metabolic Remodeling in Breast Cancer Cells. Virtual, Nutrition 2021
11. Joseph Jansen*, Emma Amjad*, Madison Scott*, Allison Stumpf*, Kimberly H. Lackey, and **Han-A Park**. Depletion of Bcl-xL Impairs Mitochondrial Motility in Primary Hippocampal Neurons. Virtual, Nutrition 2021
12. Madison Scott*, Joseph Jansen*, Tracie Dunn*, Katheryn Broman*, and **Han-A Park**. Primary Hippocampal Neuron Development Improved by Dietary Antioxidant Lycopene. Undergraduate Research & Creative Activity Conference (Mar 31, 2021)
13. Tracie Dunn*, Nelli Mnatsakanyan*, Spenser Brown*, Joseph Jansen*, Mary Margaret Hayden*, Elizabeth A. Jonas, Yonghyun Kim, and **Han-A Park**. Oxidative stress alters the F1Fo ATP Synthase in circulating breast cancer cell. Undergraduate Research & Creative Activity Conference (Mar 31, 2021)
14. Joseph Jansen*, Emma Amjad*, Madison Scott*, Allison Stumpf*, Kimberly H. Lackey, Kim A. Caldwell, and **Han-A Park**. Bcl-xL Supports Neurite Branching and Energy Retention in Primary Hippocampal Neurons. Undergraduate Research & Creative Activity Conference, Virtual (Mar 31, 2021)

15. Tracie Dunn*, Spenser Brown*, Nelli Mnatsakanyan, Elizabeth A. Jonas, Yonghyun Kim, and **Han-A Park**. Cellular Mechanisms of Metabolic Remodeling during Fluid Shear Stress-induced Metastasis. Nutrition 2020, Virtual (Jun 2020)
16. Tracie Dunn*, Spenser Brown*, Nelli Mnatsakanyan, Elizabeth A. Jonas, Yonghyun Kim, and **Han-A Park**. Is the c-subunit of F1Fo ATP Synthase an Important Target in Circulating Cancer Cells? Undergraduate Research & Creative Activity Conference, Virtual (April 2020)
17. Tracie Dunn*, Spenser Brown*, Nelli Mnatsakanyan, Elizabeth A. Jonas, Yonghyun Kim, and **Han-A Park.** Alteration of energy metabolism in circulating cancer cells. Alabama Dietetic Association, Montgomery, AL (Feb 28, 2020)
18. **Han-A Park**, Abigail U. Davis*, Allison Stumpf*, Jordan May*, Katheryn Broman*, and Kim Lackey. Vitamin E promotes neurite outgrowth via Bcl-xL upregulation. Neuroscience, Chicago, IL (Oct 20, 2019)
19. **Han-A Park,** Nelli Mnatsakanyan, Katheryn Broman*, and Elizabeth A. Jonas. Vitamin E Prevents ΔN-Bcl-xL-associate Mitochondrial Dysfunction in Primary Hippocampal Neurons. Nutrition, Baltimore (2019)
20. Allison Stumpf*, Katheryn Broman*, Katelyn E. Senkus*, Libo Tan, Kristi Crowe-White, and **Han-A Park**. Lycopene Protects Cortical Neurons via Oxidative Stress-mediated ΔN-Bcl-xL formation. Nutrition, Baltimore (2019)
21. **Han-A Park,** Nelli Mnatsakanyan, and Elizabeth A. Jonas. Neuroprotective properties of α-tocotrienol via regulation of oxidative stress-mediated ΔN-Bcl-xL formation. Nutrition 2018, Boston (2018)
22. **Han-A Park**, and Elizabeth A. Jonas. α-Tocotrienol protects primary hippocampal neurons against oxidative stress-mediated ΔN-Bcl-xL formation in the mitochondria. Experimental Biology, Chicago (2017)
23. **Han-A Park**, Pawel Licznerski, Yulong Niu, Nelli Mnatsakanyan, Paige Miranda, Jing Wu, Silvio Sacchetti, Brian M. Polster, Kambiz N. Alavian, Elizabeth A. Jonas. Metabolic Control of Cell Death: The Role of Bcl-xL. Experimental Biology, San Diego, CA (2016)
24. **Han-A Park**, Pawel Licznerski, Paige Miranda, Yulong Niu, Silvio Sacchetti, Kambiz N. Alavian, and Elizabeth A. Jonas. Regulation of neuronal death and survival by interaction of pro and anti-death versions of Bcl-xL with the mitochondrial permeability transition pore, Neuroscience, Chicago, IL (2015)
25. **Han-A Park**, Pawel Licznerski, Yulong Niu, Kambiz N. Alavian, and Elizabeth A. Jonas. ABT-737 Inhibits Full Length and Cleaved Pro-Apoptotic Bcl-xL, Resulting in Differential Effects on Death And Survival. Experimental Biology, Boston, MA (2015) **Young Scientist Travel Award**
26. **Han-A Park**, Pawel Licznerski, Kambiz N. Alavian, Marya Shanabrough, and Elizabeth A. Jonas. Inhibition of Bcl-xL arrests neurite outgrowth. Neuroscience, Washington, DC (2014)
27. **Han-A Park**, Kambiz N. Alavian, Silvio Sacchetti, and Elizabeth A. Jonas. Dual role of Bcl-xL inhibitor ABT-737 in neuronal death and survival. Neuroscience, San Diego, CA (2013)
28. **Han-A Park**, Natalia Kubicki, Surya Gnyawali, Yuk Cheung Chan, Sashwati Roy, Savita Khanna, and Chandan K. Sen. Natural vitamin E α-tocotrienol Protects against stroke by induction of multidrug resistance-associated protein 1. 4th annual Translational to Clinical (T2C) Wound Care Conference, Columbus, OH (2011) **Resident/Fellow Poster Award**
29. **Han-A Park**, Natalia Kubicki, Surya Gnyawali, Yuk Cheung Chan, Sashwati Roy, Savita Khanna, and Chandan K. Sen. Natural vitamin E α-tocotrienol Protects against stroke by induction of multidrug resistance-associated protein 1. Dorothy M. Davis Heart and Lung Research Institute Research Day, Columbus, OH (2010)
30. **Han-A Park**, Savita Khanna, Cameron Rink, Surya Gnyawali, Natalia Kubicki, Sashwati Roy, and Chandan K. Sen. Glutathione disulfide as a cell death signal. 9th annual OSU Medical Center Research Day, Columbus, OH (2010) **Travel award**

31. **Han-A Park**, Savita Khanna, Cameron Rink, Surya Gnyawali, Natalia Kubicki, Sashwati Roy, and Chandan K. Sen. Glutathione disulfide as a cell death signal. Oxygen Club of California, Santa Barbara, CA (2010)
32. **Han-A Park**, Savita Khanna, Cameron Rink, Surya Gnyawali, Sashwati Roy, and Chandan K. Sen. Intracellular glutathione disulfide as neural cell death signal: regulation by alpha-tocotrienol. Neuroscience, Chicago, IL (2009)
33. **Han-A Park**, Savita Khanna, Cameron Rink, Surya Gnyawali, Sashwati Roy, and Chandan K. Sen. Glutathione disulfide induces neural cell death via 12-lipoxygenase pathway. 14th Annual Department of Surgery Research Conference, Columbus, OH (2009)
34. **Han-A Park**, Savita Khanna, Sashwati Roy, and Chandan K. Sen. GSSG: A Novel Cell Death Signal. Russell Klein Memorial Nutrition Research Symposium, Columbus, OH (2008) **Basic research award**
35. **Han-A Park**, Savita Khanna, Sashwati Roy, and Chandan K. Sen. GSSG: A Novel Cell Death Signal. 13th Annual Department of Surgery Research Conference, Columbus, OH (2008) **Annual Surgery Research Conference Award**
36. **Han-A Park**, Savita Khanna, Sashwati Roy, and Chandan K. Sen. Does GSSG Signal for Cell Death? 6th annual OSU Medical Center Research Day, Columbus, OH (2007)

RESEARCH GRANTS

NS045876, National Institutes of Health, Co-I
Mitochondrial Ion Channel In Hypoxic Neurons, 12/15/2021 – 11/30/2025, $294,273 (UA award); $1,476,492 (Total award)

Research DPG Member Pilot Grant Award, Academy of Nutrition and Dietetics, Co-I
Epigenetic Influences of Prenatal Dietary Nitrate on Nutritional Programming of Brown Adipose Tissue Differentiation and Cardiometabolic Outcomes in Offspring of Obese Sprague-Dawley Rats, 11/01/2020-10/31/2022, $10,000

Sigma Xi Grants in Aid of Research, The Scientific Research Honor Society, Advisor
Effect of Marine Carotenoids, Fucoxanthin on Regulation of DJ-1 in the Rat Brain, 01/01/2022-12/31/2022, $500

Sigma Xi Grants in Aid of Research, The Scientific Research Honor Society, Advisor
Bcl-xL Regulation of Mitochondrial Trafficking and Energy Retention in Neurites of Hippocampal Neurons, 01/01/2021-12/31/2021, $1,000

14578, Joint Institute Pandemic Pilot Project Program, University of Alabama, mPI
Lifestyle Factors Influencing Covid-19 Severity in Young Adults, 05/15/2020-12/31/2021, $7,400

ALRI-14565, Alabama Life Research Institute, University of Alabama, Co-I
Fluid Shear Stress-induced Reactive Oxygen Species Response during Cancer, 01/01/2020-06/30/2021, $25,000

A-52248-217101-100, Mary A. Crenshaw Research Fund, University of Alabama, PI
Regulation of ΔN-Bcl-xL-mediated Mitochondrial Death Pore in Hippocampal Neurons, 01/01/2020-5/31/2021, $2,000

RG14811, Research Grants Committee, University of Alabama, PI
Molecular Mechanisms of Bcl-xL-mediated Neurite Formation, 05/15/2018-12/31/2020, $6,000

TEACHING EXPERIENCE

● Courses Taught – The University of Alabama

2017 – Present	NHM361 Nutritional Biochemistry
2018 – Present	NHM362 Nutrition at Cell Level
2022 – Present	NHM561 Vitamins and Minerals
2018 – 2022	NHM101 Introduction to Human Nutrition
2020	NHM611 Nutritional Neuroscience

● Courses Development – The University of Alabama

2022	NHM362 Nutrition at Cell Level (Online)
2020	NHM361 Nutritional Biochemistry (Online)
2020	NHM611 Nutritional Neuroscience

● Teaching Training

2016	Yale Scientific Teaching Fellows Program
2001	Teacher's certificate, Sookmyung Women's University

ADVISING AND MENTORING

● Graduate Committees

2023 – Present	Yeo Rang Lee, Biology
2023 – Present	Husnain Riaz, Biology
2022 – Present	Jane DiNatale, Human Nutrition
2022 – Present	Abby Fleming, Kinesiology
2022 – Present	Nahian Majlish, Biology
2021 – Present	Spenser Brown, Chemical Engineering
2021 – Present	Lindsey Starr, Biology
2021 – Present	MaryBeth Rowland, Biology
2020 – Present	Katelyn Senkus, Human Nutrition

● Mentored PhD Student Research

2021 – Present	Khondoker Adeba Ferdous

● Mentored MS Student Research

2021 – 2021	Marian Yurchishin
2018 – 2019	Allison Stumpf
2018 – 2019	Katheryn Broman
2018 – 2020	Sara Kazyak
2017 – 2018	Samantha Rogers

● Mentored Undergraduate Research

2023 – Present	Sarah Ann Ratliff
2022 – Present	Lanie Pray (Emerging Scholars Program)
2022 – Present	Alex Benoit (Emerging Scholars Program)
2021 – Present	Emma Amjad (Emerging Scholars Program)
2021 – 2021	Megan Scott (Emerging Scholars Program)
2021 – 2021	Architha Bommena (Randall Research Scholars Program)
2021 – 2021	Brandon King (Emerging Scholars Program)
2020 – Present	Joseph Jansen
2020 – 2022	Madison Scott
2020 – 2022	Mary Margaret Hayden
2020 – 2022	Sydni Bannerman
2020 – 2022	Garrett Burnett (Emerging Scholars Program)
2019 – 2021	Tracie Dunn

2019 – 2020	Zach Stratton
2019 – 2029	Jordan May
2018 – 2019	Abigail Davis

PROFESSIONAL SERVICE POSITIONS

● The University of Alabama

2021 – Present	CCBM Seminar Program Committee
2021 – Present	Instructional Effectiveness Subcommittee
2020 – Present	Alabama Research Institute on Aging, Member
2020 – 2022	Dare to Diagnose, Student Organization Advisor
2020 – 2021	CHES Teaching Evaluation Committee
2020	ALRI Pilot Project Proposal Review Panel
2017 – Present	Undergraduate and Graduate Curriculum Committee
2017 – Present	MS and PhD Program Admission Committee

● Professional

2021 – 2022	NIH, Loan Repayment Reviewer-NIA
2021 – Present	Brain Disorders (Elsevier), Board Member
2020 – Present	Frontiers in Aging, Review Editor
2020 – Present	Biology, Topic Board Member
2020 – 2021	Biology, Special Issue Editor
2020 – 2020	NIH, Early Career Reviewer (ECR)
2020 – 2020	Brain Disorders, Guest Editor *Oxidative stress, antioxidant defense, and neurodegeneration*

● Ad Hoc Manuscript Reviewer

Antioxidant Redox Signaling
FASEB Journal
Antioxidants
PharmaNutrition
Cells
Molecules
International Journal of Molecular Sciences
Cell Cycle
Analytical Cellular Pathology
Nutrients
Environmental Research and Public Health
Biomolecules
Neural Regeneration Research
Biomedicine and Pharmacotherapy

PROFESSIONAL MEMBERSHIPS

2019 - Present	National Strength and Conditioning Association
2017 – Present	American Heart Association
2016 – Present	American Society for Nutrition
2013 – Present	Society for Neuroscience