Curriculum Vitae

Rami S. Najjar

Postdoctoral Fellow
PhD in Chemistry with a Concentration in Nutritional Sciences
Georgia State University

GENERAL INFORMATION

University Address: Petit Science Center
161 Jesse Hill Jr Dr SE
Atlanta, GA 30303
T: 1-832-495-5485

Email address: rnajjar1@gsu.edu

PubMed ORCID LinkedIn ResearchGate

RESEARCH INTERESTS

- Molecular Biology, Nutritional Biochemistry, Plant-Based Diets, Inflammatory Signaling, Redox Pathways, Heart Failure, Hypertension, Atherosclerosis, Polyphenols

EDUCATION

August 2017- May 2023 ***Ph.D.***
Chemistry with a Concentration in Nutritional Sciences
Georgia State University, Atlanta, GA
Major Professor: Rafaela G. Feresin, PhD

Dissertation Title: *Raspberry Polyphenols Target Molecular Pathways of Heart Failure*

August 2015 - May 2017 ***M.S.***
Nutrition and Food Science
Texas Woman's University, Houston, TX
Major Professor: Carolyn E. Moore, PhD

Thesis Title: *Effects of a four-week raw, plant-based diet on anthropometric and cardiovascular risk factors.*

August 2010 - May 2015 ***B.S.***
Nutrition and Food Science
University of Houston
Houston, TX

PROFESSIONAL EXPERIENCE

2023-Present	**Freelance Academic English Language Editor** Organization: E-corrector
2023-2024	**Guest Editor for JoVE** Methods Collection: "Methods for Isolation of Cells of the Cardiovascular System"
2023-2024	**Guest Editor for *Nutrients*** Special Issue: "Plant-Based Diets in CVD Prevention: Molecular Mechanisms and Biochemical Insights"
2023-2025	**USDA-NIFA Postdoctoral Fellow**
2021-2023	**USDA-NIFA Predoctoral Fellow** Georgia State University, Atlanta, GA
2017-2022	**Lewis College Student Ambassador** Georgia State University, Atlanta, GA
2017-2021	**Graduate Research Assistant** Georgia State University, Atlanta, GA
2015-2017	**Clinical Nutritionist** Montgomery Heart & Wellness, Houston, TX

HONORS & AWARDS

2023	**Abstract of Distinction Award,** American Physiology Summit, Long Beach, CA
2023	**Al Baumstark Award in Chemistry,** Georgia State University, Atlanta, GA
2023	**First Place Poster Presentation**, Lewis College Graduate Research Conference, Georgia State University, Atlanta, GA
2022	**Outstanding Presentation Award,** Chemistry Graduate Student Association Research Symposium, Georgia State University, Atlanta, GA
2022	**Second Place Poster Presentation Award**, Lewis College Graduate Research Conference, Georgia State University, Atlanta, GA
2021	**Outstanding Graduate Student Award,** Department of Nutrition, Lewis College, Georgia State University, Atlanta, GA
2021	**Graduate Student Research Award Competition Finalist**, American Society for Nutrition, Rockville, MD
2021	**Emerging Leaders in Nutrition Science Abstract Recognition Award**, American Society for Nutrition, Rockville, MD
2020	**Research Conference Travel Award**, Department of Nutrition, Georgia State University, Atlanta, GA
2019	**First Place Poster Presentation**, Lewis College Graduate Research Conference, Georgia State University, Atlanta, GA

2018	**Second Place Poster Presentation**, Lewis College Graduate Research Conference, Georgia State University, Atlanta, GA
2018-	Lewis College Ambassador
2016	**Carolyn and Matt Khourie Endowment**, Texas Woman's University, Houston, TX
2015	Golden Key International Honor Society
2014	Dean's List, University of Houston, Houston, TX
2013	Dean's List, University of Houston, Houston, TX
2011	Dean's List, University of Houston, Houston, TX

EXTERNAL FUNDING

2023-2025

Postdoctoral Fellowship
Title: Plant-based diets in hypertension-induced ischemia and no obstructive coronary artery disease (INOCA): protective role of the gut microbiome.
Agency: National Institute of Food and Agriculture-USDA
Funding: $225,000
Grant Number: 2023-67012-39756

2021-2023

Predoctoral Fellowship
Title: Raspberry consumption as a potential therapeutic strategy in the treatment of congestive heart failure: physiological effects and mechanisms
Agency: National Institute of Food and Agriculture-USDA
Funding: $120,000
Grant Number: 2021-67034-35131

PROFFESIONAL MEMBERSHIPS

2023-present	American Physiological Society
2019-present	American Heart Association
2018-present	American Society for Nutrition

AD-HOC MANUSCRIPT REVIEWER

American Journal of Lifestyle Medicine, BIOCELL, Biology, Biomedicines, British Journal of Nutrition, Cardiovascular Diagnosis and Therapy, Cell Cycle, Current Issues in Molecular Biology, Evidence-Based Complementary and Alternative, Heliyon, International Journal of Molecular Sciences, Mediators of Inflammation, FEBS Letters, Frontiers in Cardiovascular Medicine, Frontiers in Pharmacology, Genes, Journal of Inflammation Research, Journal of Clinical Medicine, Journal of Ethnopharmacology, Medicina, Nutrients, Nutrition and Food Science, Nutrition and Metabolism, Nutrition Research, OBM Integrative and Complementary Medicine, The Lancet.

INVITED PRESENTATIONS

2023

Title: Plant-based diets: A Path to Ending CVD as We Know It?
Health Sciences Seminar, Georgia State University, Atlanta, GA.

2023	Title: Raspberry polyphenols target molecular pathways of heart failure. **Center for Diagnostics and Therapeutics Seminar Series**, Georgia State University, Atlanta, GA.
2022	Title: Raspberries rescue cardiac function and improve morphology in ischemic heart failure. **Lewis College Seminar Series**, Georgia State University, Atlanta, GA.
2022	Title: Raspberry and blackberry act in a synergistic manner to improve cardiac redox proteins and reduce NF-κB and SAPK/JNK in mice fed a high-fat, high-sucrose diet. **Center for Diagnostics and Therapeutics Seminar Series**, Georgia State University, Atlanta, GA.
2021	Title: Berry polyphenols mediate key regulatory pathways of oxidative stress and inflammation in the heart. **Lewis College Seminar Series**, Georgia State University, Atlanta, GA.

PUBLICATIONS

Google Scholar Metrics: Total # of Citations: 347
h-Index: 9
i10 Index: 8
NIH iCite Metrics: Relative Citation Ratio (RCR): 1.94 (mean), 3.75 (max)
Weighted RCR: 23.24

Refereed Journal Articles
Note: *denotes myself as corresponding author

1. **Najjar RS**, Roy RK, Stern JE, Feresin RG. Raspberry Polyphenols Target Molecular Pathways of Heart Failure. *The Journal of Nutritional Biochemistry*. 2023 Nov 19;124:109535. doi: 10.1016/j.jnutbio.2023.109535. Epub ahead of print. PMID: 37984734. *Impact Factor: 5.6*

2. **Najjar RS***. Comment on Dyńka et al. The Ketogenic Diet and Cardiovascular Diseases. Nutrients 2023, 15, 3368. *Nutrients*. 2023 Oct; 15(20):4311. doi: 10.3390/nu15204311. *Impact Factor: 5.9*

3. **Najjar RS***, Gewirtz AT. Plant-Based Diets: A Path to Ending CVD as We Know It? *Nutrients*. 2023 Aug 17;15(16):3608. doi: 10.3390/nu15163608. PMID: 37630797; PMCID: PMC10458614. *Impact Factor: 5.9*

4. **Najjar RS***. The Impacts of Animal-Based Diets in Cardiovascular Disease Development: A Cellular and Physiological Overview. *The Journal of Cardiovascular Development and Disease*. 2023 Jun 30;10(7):282. doi: 10.3390/jcdd10070282. PMID: 37504538; PMCID: PMC10380617. *Impact Factor: 2.4*

5. **Najjar RS**, Wong BJ, Feresin RG. Tissue Derivation and Biological Sex Uniquely Mediate Endothelial Cell Protein Expression, Redox Status, and Nitric Oxide Synthesis. *Cells*. 2022 Dec 26;12(1):93. doi: 10.3390/cells12010093. PMID: 36611888; PMCID: PMC9818567. *Impact Factor: 6.0*

6. Meister ML, **Najjar RS**, Danh JP, Knapp D, Wanders D, Feresin RG. Berry consumption mitigates the hypertensive effects of a high-fat, high-sucrose diet via attenuation of renal and aortic AT1R expression resulting in improved endothelium-derived NO bioavailability. *The Journal of Nutritional Biochemistry*. 2022 Nov 23;112:109225. doi: 10.1016/j.jnutbio.2022.109225. Epub ahead of print. PMID: 36435288. *Impact Factor: 5.6*

7. Althammer F, Roy RK, Lefevre A, **Najjar RS**, Schoenig K, Bartsch D, Eliava M, Feresin RG, Hammock EAD, Murphy AZ, Charlet A, Grinevich V, Stern JE. Altered PVN-to-CA2 hippocampal oxytocin pathway and reduced number of oxytocin-receptor expressing astrocytes in heart failure rats. *Journal of Neuroendocrinology*. 2022 Jul;34(7):e13166. doi: 10.1111/jne.13166. Epub 2022 Jun 3. PMID: 35657290; PMCID: PMC9495289. *Impact Factor: 3.2*

8. **Najjar RS**. Knapp D, Wanders D, Feresin RG. Raspberry and blackberry act in a synergistic manner to improve cardiac redox proteins and reduce NF-κB and SAPK/JNK in mice fed a high-fat, high-sucrose diet. *Nutrition, Metabolism and Cardiovascular Diseases*. 2022 Mar 29. DOI: 10.1016/j.numecd.2022.03.015. *Impact Factor: 3.9*

9. **Najjar RS**, Mu S, Feresin RG. Blueberry polyphenols increase nitric oxide and attenuate angiotensin II-induced oxidative stress and inflammatory signaling in human aortic endothelial cells. *Antioxidants*. 2022 Mar 23;11(4):616. *Impact Factor: 7.0*

10. **Najjar RS**, Schwartz AM, Wong BJ, Mehta PK, Feresin RG. Berries and Their Polyphenols as a Potential Therapy for Coronary Microvascular Dysfunction: A Mini-Review. *International Journal of Molecular Sciences.* 2021 Mar 25;22(7):3373. Review. PubMed PMID: 33806050. *Impact Factor:* 5.6

11. **Najjar RS**, Feresin RG. Protective Role of Polyphenols in Heart Failure: Molecular Targets and Cellular Mechanisms Underlying Their Therapeutic Potential. *International Journal of Molecular Sciences.* 2021 Feb 7;22(4). Review. PubMed PMID: 33562294. *Impact Factor:* 5.6

12. **Najjar RS**, Akhavan NS, Pourafshar S, Arjmandi BH, Feresin RG. Cornus officinalis var. *koreana* Kitam polyphenol extract decreases pro-inflammatory markers in lipopolysaccharide (LPS)-induced RAW 264.7 macrophages by reducing Akt phosphorylation. *Journal of Ethnopharmacology.* 2021 Apr 24;270:113734. PubMed PMID: 33359857. *Impact Factor: 5.4*

13. **Najjar RS,** Turner CG, Wong JB, Feresin RG**.** Berry-Derived Polyphenols in Cardiovascular Pathologies: Mechanisms of Disease and the Role of Diet and Sex. *Nutrients*. 2021 Jan 27;13(2). Review. PubMed PMID: 33513742. *Impact Factor: 5.9*

14. **Najjar RS**, Feresin RG. Plant-based diets in the reduction of body fat: physiological effects and biochemical insights. *Nutrients.* 2019; Review. PMID 31717463*. Impact Factor: 5.9*

15. **Najjar RS**, Montgomery BD. A defined, plant-based diet as a potential therapeutic approach in the treatment of heart failure: A clinical case series. *Complimentary Therapies in Medicine*. 2019 June; 45:211-214. *Impact Factor:* 3.6.

16. **Najjar RS***, Moore CE, Montgomery BD. Consumption of a defined, plant-based diet reduces lipoprotein(a), inflammation, and other atherogenic lipoproteins and particles within 4 weeks. *Clinical Cardiology*. 2018 Aug;41(8):1062-1068. *Impact Factor: 2.7*

17. **Najjar RS***, Moore CE, Montgomery BD. A defined, plant-based diet utilized in an outpatient cardiovascular clinic effectively treats hypercholesterolemia and hypertension and reduces medications. *Clinical Cardiology*. 2018 Mar;41(3):307-313. *Impact Factor: 2.7*

Book Chapters

1. Feresin RG, Meister ML, Danh JK, **Najjar RS**. (2023). The protective role of phytochemicals in cardiovascular disease. In: Onuh JO, Pathak YV. (eds) Plant food phytochemicals and bioactive compounds in nutrition and health. CRC Press. Accepted.

2. Feresin RG, **Najjar RS**, Meister ML, Danh JK. (2022). Tree Berries. In: Miller, J.P., Van Buiten, C. (eds) Superfoods. Food and Health. Springer, Cham.

Refereed Abstracts – Conferences Proceedings

1. **Najjar RS**, Roy RK, Stern JE, Feresin RG. Raspberry polyphenols attenuate heart failure by modulating underlying molecular drivers of disease. American Physiology Summit, Long Beach, CA. 2023.

2. Danh J, Zheng X, Meister ML, **Najjar RS**, Wanders D, Feresin RG. Raspberry Supplementation Attenuates Blood Pressure and Improves Mesenteric Artery Relaxation in a Nitric Oxide-Independent Mechanism in Angiotensin II-Treated Rats. *Current Developments in Nutrition*. 20222;6(Suppl 1):276.

3. Meister ML, **Najjar RS**, Danh J, Knapp D, Wanders D, Feresin RG. Raspberry Consumption Reduces ACE1 and NADPH Oxidase Expression in the Kidneys of Mice, Mitigating the Hypertensive Effects of a High-Fat, High-Sucrose Diet. *Current Developments in Nutrition*. 20222;6(Suppl 1):314.

4. **Najjar RS**, Meister ML, Knapp D, Wanders D, Feresin RG. Raspberry Protects Against High-Fat, High-Sucrose Diet-Induced Vascular Oxidative Stress via NRF2. *Current Developments in Nutrition*. 20222;6(Suppl 1):321.

5. **Najjar RS**, Wong BJ, Feresin RG. Sex differences in basal protein expression of eNOS and NRF2/HO-1/NQO1 in HAECs and HUVECs. APS, New Trends in Sex and Gender Medicine, 2021.

6. **Najjar RS**, Wong BJ, Feresin RG. Sex differences on protein expression of NOX5 and endogenous antioxidant enzymes in human aortic endothelial cells under basal and inflammatory conditions. APS, New Trends in Sex and Gender Medicine, 2021.

7. Setka A, **Najjar RS**, Meister ML, Feresin RG. Evaluation of phytochemical content as well as antioxidant and free radical scavenging activity of oven- and freeze-dried hydroponic- and soil-grown kale-derived extracts. Current Developments in Nutrition. 2021;5(Suppl 2):369.

8. **Najjar RS**, Meister ML, Danh JP, Lear LMT, Kim J, Wanders D, Feresin RG. Raspberry consumption increases cardiac NRF2 transcriptional products in angiotensin II-infused rats. *Current Developments in Nutrition.* 2021;5(Suppl 2):351.

9. Meister ML, **Najjar RS**, Danh JP, Lear MTL, Kim J, Wanders D, Feresin RG. Raspberry consumption decreases NOX4 expression and increases antioxidant enzymes in lungs of angiotensin II-infused rats. *Current Developments in Nutrition.* 2021;5(Suppl 2):347.

10. Lear MTL, **Najjar RS**, Meister ML, Danh JP, Wanders D, Feresin RG. Raspberry increases expression of antioxidant enzymes in the kidney of angiotensin II-treated rats. *Current Developments in Nutrition.* 2021;5(Suppl 2):341.

11. Kim J, Meister ML, **Najjar RS**, Danh JP, Lear MTL, Wanders D, Feresin RG. Raspberry consumption decreases the expression of interleukin-6 in the liver of angiotensin II-Infused rats. *Current Developments in Nutrition.* 2021;5(Suppl 2):334.

12. Ivy D, **Najjar RS**, Meister ML, Naves MM, Feresin RG. Evaluation of phenolic and flavonoid content, antioxidant and radical scavenging capacity of baru (*Dipteryx alata Vog.*) almond. *Current Developments in Nutrition.* 2021;5(Suppl 2):326.

13. Danh JP, Canup B, **Najjar RS**, Meister ML, Laroui H, Feresin RG. Characterization and uptake of strawberry-derived exosome-like nanovesicles by human aortic endothelial cells. *Current Developments in Nutrition.* 2021;5(Suppl 2):310.

14. Blacks J, Althammer F, **Najjar RS**, Meister ML, Danh JP, Lear MTL, Lail H, Wanders D, Stern J, Feresin RG. Raspberry Consumption Attenuates Angiotensin II-Induced Oxidative Stress in the Subfornical Organ in Male Sprague-Dawley Rats. Curr Dev Nutr. 2021;5:S2 Page 298.

15. Perez P, Wanders D, Land H, Chiang K, **Najjar RS**, Patel R, Knapp D, Pearson K, Chassaing B, Feresin RG. Effects of berries on high-fat diet-induced inflammation. *Current Developments in Nutrition.* 2020;4(Suppl 2):449.

16. Lena L, **Najjar RS**, Danh JP, Feresin RG. Raspberry polyphenol extract decreases NF-kB and IL-6 Expression in lipopolysaccharide (LPS)-induced RAW 264.7 macrophages. *Current Developments in Nutrition.* 2020;4(Suppl 2):422.

17. Blacks J, **Najjar RS**, Simecka C, Mu S, Feresin RG. Effects of raspberry on angiotensin II-induced oxidative stress, inflammation, and fibrosis in the heart of mice. *Current Developments in Nutrition.* 2020;4(Suppl 2):370.

18. Feresin RG, **Najjar RS**, Simecka C, Mu S. Blackberry and raspberry attenuate the increase in blood pressure elicited by angiotensin II in mice. *Current Developments in Nutrition.* 2019;3(Suppl 1):nzz031. P06-054-19.

19. Beebe M, **Najjar R**, Chan D, Madhani C, Elfakhani M, Yount S, Ji X, Feresin R, Mo H. Synergistic impact of xanthorrhizol and *d*-δ-tocotrienol on the proliferation of murine B16 melanoma cells and human DU145 prostate carcinoma cells. *Current Developments in Nutrition.* 2019;3(Suppl 1):nzz031. P06-042-19.

20. **Najjar RS**, Akhavan N, Pourafshar S, Hsieh YH, Arjmandi B, Feresin RG. Cornus officinalis polyphenol extract decrease pro-inflammatory markers in lipopolysaccharide (LPS)-induced RAW 264.7 macrophages. *Current Developments in Nutrition.* 2019;3(Suppl 1):nzz031. P06-087-19

21. Feresin RG, **Najjar RS**, Huff H, Mu S, Phelps J. Blueberry polyphenols decrease oxidative stress and increase levels of nitric oxide metabolites in angiotensin II-stimulated human aortic endothelial cells. *Current Developments in Nutrition.* November 2018, 2(11):P08-023.

22. **Najjar RS**, Laws FA, Moore CE, Montgomery BD. Abstract 15119: Consumption of a Defined Plant Based Diet Reduces Lp(a) and Other Atherogenic Lipoproteins and Particles in Four Weeks. American Heart Association Scientific Sessions; 2017 November; Circulation; c2018.

MENTORSHIP

2022-2023	Wesley Grace (undergraduate, Nutrition)
2021-2022	Roya Nabavi (undergraduate, Biology) Joshua Jones (undergraduate, Biology) Rafaela Todd (undergraduate, Biology) Kendahl Heckstall (undergraduate, Nutrition) Rita Zorh (undergraduate, Biology) Albert Adhya (undergraduate, Chemistry) Mohammad Barry (undergraduate, Biology)
2019-2023	Jessica Danh (PhD student, Nutrition)
2019-2021	Alivia Setka (undergraduate, Nutrition) Justina Kim (undergraduate, Chemistry) Lena Lear (undergraduate, Nutrition) Jasmynne Blacks (MS student, Nutrition)
2018-2019	Lloyd Harrison (undergraduate, Chemistry) Sameer Samnani (undergraduate, Chemistry) Ravi Patel (undergraduate, Economics) Micheala Davis (undergraduate, Biology)

TEACHING EXPERIENCE

Spring 2019	Graduate Teaching Assistant Nutrition and Physical Fitness (NUTR 4960)
Fall 2018	Graduate Teaching Assistant Research Methods (CNHP 3500) Nutrition and Physical Fitness (NUTR 4960)
Spring 2018	Graduate Teaching Assistant Nutrition and Health (NUTR 3100)

MEDIA PARTICIPATION

October 2023	Panelist on the Montgomery Heart & Wellness YouTube channel, titled "The Adverse Effects of the Ketogenic Diet on Cardiovascular Health"
February 2021	Interviewed on Fresh, Natural and Live YouTube channel, titled "The Science of Plant-Based Nutrition"
November 2020	Gym Climber in-print magazine article "The Performance Diet: Use Science to Improve Your Climbing"
March 2020	Gym Climber online magazine article "Eat Carbs and Climb Harder"
November 2019	Interviewed on The Plant-Based Podcast "Episode 35; Losing Weight On A Plant Based Diet IS Easier; A Scientific Review w/ Rami Najjar"
October 2019	Interviewed for Consumer Reports article "The Ideal Diet for Lower Blood Pressure"