

Curriculum Vitae

Maria Azrad PhD, RD

The University of Alabama
College of Human Environmental Sciences
Department of Human Nutrition, Hospitality and Sport Management
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EDUCATION:

- 2010 Ph.D. Nutrition Sciences,
University of Alabama at Birmingham
Dissertation: The effects of weight reduction on obesity-related cancer biomarkers
and *in vitro* cancer cell growth.
Mentors: Tim Nagy, PhD and Douglas Heimburger MD, MPH
- 2003 M.S. Human Nutrition,
University of Alabama (Tuscaloosa)
Thesis: Analysis of complications and length of stay in patients fed parenterally
after bowel resection.
Mentor: Yasmine Neggers, PhD
- 2001 B.S. Food and Nutrition/Coordinated Program in Dietetics,
University of Alabama (Tuscaloosa)

Licensure:

1997-Present Registered Dietitian – Commission on Dietetic Registration

PROFESSIONAL EXPERIENCE:

- 2017-current Assistant Professor, Dept. of Human Nutrition, Hospitality and Sport Management,
University of Alabama, Tuscaloosa, Alabama
- 2014-2017 Adjunct Professor, Dept. of Human Nutrition and Hospitality Management,
University of Alabama, Tuscaloosa, Alabama
- 2010-2015 Postdoctoral Fellow, Dept. of Nutrition Sciences, University of Alabama at
Birmingham
Mentor: Wendy Demark-Wahnefried, PhD RD
- 2005-2010 Predoctoral Fellow, National Cancer Institute Cancer Prevention and Control
Training Program (R25), University of Alabama at Birmingham

- 2003-2005 Project Coordinator, Dept. Nutrition Sciences, University of Alabama at Birmingham
- 2001-2003 Graduate Teaching Assistant, Dept. of Human Nutrition and Hospitality Management, University of Alabama
- 2001-2003 Clinical Dietitian, DCH Hospital, Tuscaloosa, AL

HONORS & AWARDS:

- 2013-2015 Recipient of Loan Repayment Program
Merit-based award through National Cancer Institute for repayment of federal loans
- 2012 Scholar-in-Training Award
\$1200.00 travel award to present research at the Eleventh Annual International Conference, Frontiers in Cancer Prevention Research meeting, American Association for Cancer Research
- 2009 Susan G. Komen Scholar-in-Training Award
\$1200.00 travel award to present research at the 100th Annual International meeting, American Association for Cancer Research
- 2009 Scholar-in-Training Award
\$1200.00 travel award to present research at the Eighth Annual International Conference, Frontiers in Cancer Prevention Research meeting, American Association for Cancer Research
- 2001 Kathleen Stitt Scholarship
Awarded to students demonstrating academic excellence and majoring in Food and Nutrition, University of Alabama (Tuscaloosa)
- 2001 Jerold Kennedy Scholarship
Awarded to students demonstrating academic excellence and pursuing distance-based education, University of Alabama (Tuscaloosa)

TEACHING EXPERIENCE:

A. PRIMARY INSTRUCTOR

University of Alabama, (Tuscaloosa)

2017–Present

- NHM 295 (Introduction to Research in Food and Nutrition)
- NHM 362 (Nutrition at the Cellular Level)
- NHM 572 (Metabolism of Energy Nutrients)
- NHM 573 (Advanced Vitamins and Minerals Metabolism)
- NHM 558 (Nutrition in the Prevention and Treatment of Chronic Diseases)
- NHM 597 (Master's Capstone)
- NHM 625 (Nutritional Epidemiology)
- NHM 635 (Advanced Practicum in Post Secondary Dietetic Education)

University of Alabama at Birmingham, (Birmingham)

2012-2013

- Guest Lecturer, NTR 779 (Obesity in the 21st Century)
- Guest Lecturer, NTR 601 (Advanced Medical Nutrition)

B. COURSES DEVELOPED FOR ONLINE DELIVERY

NHM 295 (Redevelopment 2019 and 2024)

NHM 362: Nutrition at the Cellular Level (Redevelopment 2020)

NHM 572: Metabolism of Energy Nutrients (Co-development 2019 and Redevelopment 2024)

NHM 573: Advanced Vitamins and Minerals (Co-development 2020 and Redevelopment 2025)

NHM 625: Nutritional Epidemiology (Redevelopment 2020 and Co-development 2025)

Graduate Student Hub Refresher for Biochemistry: Module–Overview of Nutritional Biochemistry (Developed 2022)

Graduate Student Hub Refresher for Biochemistry: Module-Enzymes (Developed 2022)

PUBLICATIONS:

A. PEER-REVIEWED JOURNAL ARTICLES

1. Senkus KE, **Azrad M**, Bolland A, Park HA, Tice JR, Zhang M, Liu T, Blood AB, Van Der Pol W, Morrow C, Crowe-White KM. Functional mouth rinse containing inorganic nitrate and antioxidants bolsters the enterosalivary pathway and lowers blood pressure in Wistar rats. *Sci Rep*. 2025 Jul 23;15(1):26827. doi: 10.1038/s41598-025-12060-0. PMID: 40702063; PMCID: PMC12287446.
2. Zhou J, **Azrad M**, Kong L. Effect of Limonene on Cancer Development in Rodent Models: A Systematic Review. *Front Sustain Food Syst*. 2021; 5:725077. doi:10.3389/fsufs.2021.725077.
3. Lai L, Liu S, **Azrad M**, Hall S, Hao C, Novak J, Julian BA, Novak L. IgA Vasculitis with Nephritis in Adults: Histological and Clinical Assessment. *J Clin Med*. 2021; 10:4851. <https://doi.org/10.3390/jcm10214851>.
4. Demark-Wahnefried W, Rogers LQ, Gibson JT, Harada S, Frugé AD, Oster RA, Grizzle WE, Norian LA, Yang ES, Della Manna D, Jones LW, **Azrad M**, Krontiras H. Randomized trial of weight loss in primary breast cancer: Impact on body composition, circulating biomarkers and tumor characteristics. *Int J Cancer*. 2020 May 15;146(10):2784-2796. doi: 10.1002/ijc.32637. Epub 2019 Sep 5. PMID: 31442303; PMCID: PMC7155016.
5. **Azrad M**, Blair CK, Rock CL, Sedjo RL, Wolin KY, Demark-Wahnefried W. Adult weight gain accelerates the onset of breast cancer. *Breast Cancer Res Treat*. 2019; 176:649-656.
6. **Azrad M**, Demark-Wahnefried W. Too early to worry about blueberries. *J Natl Cancer Inst*. 2019;111(2):103–104. doi:10.1093/jnci/djy101.
7. Demark-Wahnefried W, Rais-Bahrami S, Desmond RA, Gordetsky JB, Hunter GR, Yang ES, **Azrad M**, Frugé AD, Tsuruta Y, Norian LA, Segal R, Grizzle WE. Reply to "Phase II prospective randomized trial of weight loss prior to radical prostatectomy". *Prostate Cancer Prostatic Dis*. 2018. doi:10.1038/s41391-018-0038-9.
8. Demark-Wahnefried W, Rais-Bahrami S, Desmond RA, Gordetsky JB, Hunter GR, Yang ES, **Azrad M**, Frugé AD, Tsuruta Y, Norian LA, Segal R, Grizzle WE. Presurgical weight loss affects tumor traits and circulating biomarkers in men with prostate cancer. *Br J Cancer*. 2017. doi:10.1038/bjc.2017.303.

9. Frugé AD, Ptacek T, Tsuruta Y, Morrow CD, **Azrad M**, Desmond RA, Hunter GR, Rais-Bahrami S, Demark-Wahnefried W. Dietary changes impact the gut microbe composition in overweight and obese men with prostate cancer undergoing radical prostatectomy. *J Acad Nutr Diet*. 2016. doi: 10.1016/j.jand.2016.10.017.
10. Tsuruta Y, Rogers LQ, Krontiras H, Grizzle WE, Frugé AD, Oster RA, Umphrey HR, Jones LW, **Azrad M**, Demark-Wahnefried W. Exploring effects of presurgical weight loss among women with stage 0-II breast cancer: protocol for a randomized controlled feasibility trial. *BMJ Open*. 2016;6: e012320. doi:10.1136/bmjopen-2016-012320.
11. Demark-Wahnefried W, Nix JW, Hunter GR, Sudarshan S, Rais-Bahrami S, Desmond RA, Chacko B, Morrow CD, **Azrad M**, Tsuruta Y, Frugé AD, Ptacek T, Tully SA, Segal R, Grizzle WE. Feasibility, outcomes and methods of a presurgical randomized controlled trial that explored the impact of caloric restriction and increased physical activity on tumor characteristics and circulating biomarkers in men electing prostatectomy for prostate cancer. *BMC Cancer*. 2016; 16:61. doi:10.1186/s12885-016-2075-x.
12. Zhang D, **Azrad M**, Demark-Wahnefried W, Frederickson C, Lippard S, Radford RA. Peptide-based, Two-fluorophore, Ratiometric Probe for Quantifying Mobile Zinc in Biological Material. *ACS Chem Biol*. 2015; 10:385-389.
13. Demark-Wahnefried W, Colditz GA, Rock CL, Sedjo RL, Liu J, Wolin KY, Krontiras H, Byers T, Pakiz B, Parker BA, Naughton M, Elias A, Ganz PA; **ENERGY Trial Group**. Quality of life outcomes from the Exercise and Nutrition to Enhance Recovery and Good Health for You (ENERGY)-randomized weight loss trial among breast cancer survivors. *Breast Cancer Res Treat*. 2015;154(2):329-337. doi:10.1007/s10549-015-3627-5.
14. **Azrad M**, Demark-Wahnefried W. The association between adiposity and breast cancer recurrence and survival: A review of the recent literature. *Curr Nutr Rep*. 2014; 3:9-15.
15. Sedjo RL, Ganz PA, Colditz GA, Demark-Wahnefried W, Rock CL, **Azrad M**, Byers T. Predictors of Weight Gain Prior to Entry Into a Weight-Loss Study among Breast Cancer Survivors. *J Cancer Surviv*. 2014;8:410-418.
16. Libby Falk E*, **Azrad M***, Novak L, Vazquez AI, Wilson TR, Demark-Wahnefried W. Obesity is associated with higher 4E-BP1 expression in endometrial cancer. *Curr Biomark Find*. 2014;2014:1-7. *Both authors contributed equally*.
17. **Azrad M**, Vollmer RT, Madden J, Polascik TJ, Snyder DC, Ruffin MT, Moul JW, Brenner DE, Demark-Wahnefried W. Discordant results between proliferation rates of surgically-excised prostate tumors and an in vitro bioassay using sera from a positive randomized controlled trial. *Biotech Histochem*. 2014;1:1-6.
18. Rock CL, Byers TE, Colditz GA, Demark-Wahnefried W, Ganz PA, Wolin KY, Elias A, Krontiras H, Liu J, Naughton M, Pakiz B, Parker BA, Sedjo RL, Wyatt H; **Exercise and Nutrition to Enhance Recovery and Good Health for You (ENERGY) Trial Group**. Reducing breast cancer recurrence with weight loss, a vanguard trial: the Exercise and Nutrition to Enhance Recovery and Good Health for You (ENERGY) Trial. *Contemp Clin Trials*. 2013;34:282-295.

19. **Azrad M**, Vollmer RT, Madden J, Dewhirst M, Polascik TJ, Snyder DC, Ruffin MT, Moul JW, Brenner DE, Demark-Wahnefried W. Flaxseed-derived enterolactone is inversely associated with tumor cell proliferation in men with localized prostate cancer. *J Med Food*. 2013;16:357-360.
20. **Azrad M**, Turgeon CE, Demark-Wahnefried W. Current evidence linking polyunsaturated fatty acids (PUFAs) with cancer risk and progression. *Front Oncol*. 2013;3:224.
21. **Azrad M**, Zhang K, Vollmer RT, Madden J, Polascik TJ, Snyder DC, Ruffin MT, Moul JW, Brenner DE, He X, Hardy R, Demark-Wahnefried W. Prostatic alpha-linolenic acid (ALA) is positively associated with aggressive prostate cancer: A relationship which may be modified by genetic variation in ALA metabolism. *PLoS One*. 2012;7(12):e53104. doi:10.1371/journal.pone.0053104.
22. Hursting SD, DiGiovanni J, Dannenberg AJ, **Azrad M**, LeRoith D, Demark-Wahnefried W, Madhuri K, Brodie A, Berger NA. Obesity, energy balance and cancer: New opportunities for prevention. *Cancer Prev Res*. 2012;5:1260-1272.
23. **Azrad M**, Gower BA, Hunter GR, Nagy TR. Racial differences in adiponectin and leptin in premenopausal women. *Endocrine*. 2012. doi:10.1007/s12020-012-9797-6.
24. **Azrad M**, Gower BA, Hunter GR, Nagy TR. Intra-abdominal adipose tissue is independently associated with sex-hormone binding globulin in premenopausal women. *Obesity*. 2012;20:1012-1015.
25. **Azrad M**, Demark-Wahnefried W. Dietary omega-6 and omega-3 fatty acids and prostate cancer - letter. *Cancer Prev Res*. 2012;5:798-799.
26. **Azrad M**, Gower BA, Hunter GR, Nagy TR. Reduced Mitogenicity of Sera Following Weight Loss in Premenopausal Women. *Nutr Cancer*. 2011;63:916-923.
27. Piyathilake CJ, Celedonio-Colquococha JE, Bell WC, **Azrad M**, Grizzle WE. Mandatory fortification with folic acid in the United States is associated with increased expression of DNA methyltransferase 1 in the cervix. *Nutrition*. 2008;24:94-99.
28. Piyathilake CJ, **Azrad M**, Macaluso M, Henao OL, Johanning GL, Cornwell PE, Partridge EE, Heimbarger DC. The protective association of MTHFR polymorphism on cervical intraepithelial neoplasia is modified by riboflavin status. *Nutrition*. 2007;23:229-235.
29. Piyathilake CJ, **Azrad M**, Jhala D, Macaluso M, Kabagambe EK, Brill I, Niveleau A, Jhala N, Grizzle W. Mandatory fortification with folic acid in the United States is not associated with changes in the degree or the pattern of global DNA methylation in cells involved in cervical carcinogenesis. *Cancer Biomark*. 2006;2:259-266.

B. BOOK CHAPTER

Piyathilake CJ, **Azrad M**, Matthews R. New Research on Oncogenic DNA Viruses. Nova Science Publishers, Inc; 2006.

INVITED ORAL PRESENTATIONS:

- 2015 Differences in Response to Weight Loss in African American and White Breast Cancer Survivors. American, Society of Preventive Oncology, 38th Annual Conference, Birmingham, Alabama
- 2015 Metabolic Changes in Breast Cancer Survivors Enrolled in a Weight Loss Trial. Alabama Food Service and Nutrition, 37th Annual Exposition, Montgomery, Alabama
- 2010 Reduced Mitogenicity of Sera Following Weight Loss in Premenopausal Women. M American Society of Preventive Oncology, 34th Annual Conference, Bethesda, Maryland

PREVIOUS RESEARCH SUPPORT:

- 2014-2015 Postdoctoral Fellowship. American Society of Preventive Oncology/Breast Cancer Research Foundation. Longitudinal analyses of racial differences in adiposity, hormones and glucose metabolism in African American and White breast cancer survivors enrolled in a weight loss trial
Role: PI
- 2014-2016 R21 CA178359. PI Wendy Demark-Wahnefried, Exploring the Effects of Weight Loss on Ductal Carcinoma in Situ
Role: Postdoctoral Fellow/Project Coordinator
- 2013–2015 Pilot Grant in Prostate Cancer Research, Alabama Department of Public Health/ UAB Comprehensive Cancer Center. Nutrigenomic link between alpha-linolenic acid and aggressive prostate cancer
Role: PI
- 2012-2015 R21 CA161263. PI Wendy Demark-Wahnefried, Exploring the Impact of Negative Energy Balance in Men with Prostate Cancer.
Role: Postdoctoral Fellow/Project Coordinator
- 2010-2014 R01 CA148791, PI Cheryl Rock, Reducing Breast Cancer Recurrence with Weight Loss: Vanguard RCT.
Role: Postdoctoral Fellow/Project Coordinator

STUDENT COMMITTEES:

- 2022-2024 **Dissertation Committee Member**
Janie DiNatale
Dietary Nitrate as an Adjuvant Therapy for Hypertensive Pregnancies and a Nutritional Modifier of Cardiometabolic Programming in Offspring
- 2020-2023 **Dissertation Committee Member**
Katelyn Senkus
Mouth Rinse Infused with Nitrates and Antioxidants to Support the Enterosalivary Pathway for Oral and Vascular Health: The Rinse Study

SERVICE

A. UNIVERSITY

2025 Summer Graduate Partnerships Initiative, Judge
2023-Present Undergraduate Council, Member
2023-Present Premier Awards Committee, Member
2023-Present Undergraduate Research and Creativity Activities, Judge
2017-Present Legacy Scholars First Gen at UA, Mentor
2022-2023 Transfer Students subcommittee of the General Education Core Curriculum Implementation Committee, Member
2020-2022 Faculty Senate, Alternate
2018 3 Minute Thesis, Graduate School, Judge

B. COLLEGE

2022-Present Graduate Students Subcommittee, Chair
2021-2022 Graduate Students Subcommittee, Member

C. DEPARTMENT

2017-Present Academic Advisor
2022 Search Committee for RCF Position, Chair
2019-2020 Primary Research Mentor for Master's Student Molly Rusch, University of Alabama (project was terminated due to COVID-19)
2018-2020 Leaders Exploring Academic Progress (LEAP), (Workshop for rising high school students interested in healthcare careers), Organizer and Speaker

D. PROFESSION

2019-Present Academy of Nutrition and Dietetics, E. Neige Todhunter Memorial Doctoral Fellowship, Grant Reviewer
2020 Academy of Nutrition and Dietetics, Dietary Guidelines, Think Tank Member
2019 Academy of Nutrition and Dietetics, Research Dietetics Practice Group, First Author Award, Reviewer
2019 Mead Johnson Student Abstract Award, Reviewer
2019 Sugar Association, Grant Reviewer
2018-2019 Obesity Task Force for the State of Alabama, Sector Leader & Member
2018-2019 Haley Parker, Doctoral Student, University of Rhode Island, Career Mentor through Research Dietetic Practice Group
2017-2019 Rachel Stokes, High School Honors student, Academic Magnet High School, Charleston, South Carolina, Mentorship for Honors Research

E. Other

Journal Reviewer-American Journal of Physiology, BMC Cancer, Breast Cancer Research and Treatment, Cancers, Cancer Prevention Research, Clinical Endocrinology, European Journal of Medical Research, Food and Chemical Toxicology, Frontiers in Endocrinology, Frontiers in Immunology, Frontiers in Oncology PLoS One, Obesity, Journal of Physical Activity and Health, Journal of Medicinal Foods, North American Journal of Medical Sciences, Journal of Clinical Oncology, Journal of Surgical Oncology, Scientific Reports,

F. Previous Service

UAB Cancer Research Experiences for Students (CaRES, R25), Mentor

2014	Shaonin Ji, graduate student, UAB School of Public Health
2014	Amaad Rana, first year medical student, UAB School of Medicine
2013	Chelsea Turgeon, first year medical student, UAB School of Medicine
2013	Bin Vu, first year medical student, UAB School of Medicine
2012	Lahnor Powel, graduate student, UAB School of Public Health
2011	Ayushe Sharma, first your medical student, UAB School of Medicine

UAB, Alabama Louis Stokes Alliance for Minority Participation and Summer Bridge Program

2006	Nicole Jones, undergraduate student, Tuskegee University
2007	Jasmine Johnson, undergraduate student, Tuskegee University