

**Mehrnaz Abbasi, Ph.D.**  
Assistant Professor of Nutrition  
Department of Nutritional Sciences | College of Human Sciences  
Auburn University

**GENERAL INFORMATION**

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**EDUCATION**

Jan 2021 – June 2023      Postdoctoral Fellowship, Nutrition & Nanomedicine, Metabolic Diseases  
College of Health Solutions, Arizona State University, Phoenix, AZ

Dec 2020                      Ph.D., Nutritional Sciences (Nutritional Biochemistry and Physiology)  
Texas Tech University, Lubbock, TX

June 2016                      MS, Nutritional Sciences  
Shahid Beheshti University of Medical Sciences, Tehran, Iran

March 2013                    BS, Nutritional Sciences  
Shahid Beheshti University of Medical Sciences, Tehran, Iran

**PROFESSIONAL EXPERIENCE**

Aug 2023 – Present        Assistant Professor of Nutrition, Department of Nutritional Sciences,  
College of Human Sciences, Auburn University, Auburn, AL

Jan 2021 – June 2023      Postdoctoral Scholar, Wexford Innovation Center  
College of Health Solutions, Arizona State University, Phoenix, AZ

Jan 2017 - Dec 2020       Graduate Research Assistant, Nutrition & Nanomedicine Lab  
Texas Tech University, Lubbock, TX

Aug 2018 - May 2020      Graduate Teaching Assistant, Department of Nutritional Sciences  
Texas Tech University, Lubbock, TX

Aug 2014 - June 2016      Graduate Research Assistant, Nutrition and Endocrine Research Center  
Research Institute of Endocrine Sciences  
Shahid Beheshti University of Medical Sciences, Tehran, Iran

Sep 2013 - June 2014      Graduate Research Assistant, Cancer Research Center  
Shahid Beheshti University of Medical Sciences, Tehran, Iran

Oct 2012 - May 2013 Undergraduate Research Assistant, National Nutrition and Food Technology  
Research Institute  
Shahid Beheshti University of Medical Sciences, Tehran, Iran

### **TEACHING EXPERIENCE**

- Nutrition & Health (NTRI-2000-D01), Auburn University, Fall 2023
- Undergraduate Research (BIO 495), Arizona State University  
Postdoctoral Scholar, Instructor Backup, 2021-2022
- Graduate Research (EXW 692), Arizona State University  
Postdoctoral Scholar, Instructor Backup, 2021-2022
- Education Outreach Programs: The Bioscience high school students' academies  
Arizona State University  
Postdoctoral Scholar, 2021-2022
- Science of Nutrition (NS 1410), Texas Tech University  
Graduate Teaching Assistant, Fall 2018, Spring 2019, Fall 2019, Spring 2020
- The Lauro Cavazos & Ophelia Powell-Malone Mentoring Program, Texas Tech University  
Mentor Tech, 2018

### **PROFESSIONAL MEMBERSHIPS**

- American Society of Nutrition (ASN), 2017 - Present
- Nutritionist, Iran's Scientific Association of Healthy Food & Nutrition, 2014 - Present
- Nutritionist, Medical Council, I.R. IRAN, 2013 - Present

### **AWARDS AND HONORS**

- TTU Doctoral Dissertation Completion Fellowship, 2020-2021
- TTU Margaret Chan Carter Scholarship, 2020-2021
- Study Abroad Competitive Scholarship, Fall 2019
- Awarded 1st place in the American Society of Nutrition's 5th Emerging Leaders in Nutrition Science  
Poster Competition, Nutrition 2019- ASN's Annual Meeting, Baltimore, Maryland, June 2019
- Graduate Student Research Support Award, Spring 2019
- TTU Parent Fam Relations Scholarship, 2018-2019
- Jack and Mildred Buchanan Nutritional Sciences Scholarship, 2018-2019
- Cash Family Endowed Graduate Fellowship, 2018-2019
- TTU Human Sciences Graduate Students of the Month, June 2018
- Officials for academic excellence in nutrition science, Shahid Beheshti University of Medical  
Sciences, 2016
- Special Talented M.Sc. Student, Shahid Beheshti University of Medical Sciences and Health  
Services, 2015
- Special Talented B.Sc. Student, Shahid Beheshti University of Medical Sciences, 2012
- Officials for academic excellence in nutrition science, Shahid Beheshti University of Medical  
Sciences, 2011
- Top-ranked university student in nutrition science, Shahid Beheshti University of Medical Sciences,  
2011

## RESEARCH & TEACHING INTERESTS

- **Research:** Nutrition and nanomedicine, Nutrients/ bioactive compounds/ supplements/ drugs delivery, Chronic metabolic diseases; Obesity, Cancer, Diabetes, Cardiovascular diseases prevention and treatment, Nutrigenetics.
- **Teaching:** Basics of nutrition, Nutrition-based approaches for identifying, treating, and preventing chronic diseases such as obesity, cardiovascular disease, diabetes, etc., Nutritional physiology & biochemistry, Aspects of nutrition research, and Research methods.

## PUBLICATIONS

<https://scholar.google.com/citations?user=xOL3CVoAAAAJ&hl=en>

### • Journal Articles

1. **Abbasi, M.**; Fan, Z.; Dawson, J.A.; Wang, S. Anti-obesity, and metabolic benefits of metformin: Comparison of different delivery routes (*Under Review Drug Delivery Sciences and Technology*).
2. Karimi, A.; Eghbali, M; Abdolmaleki, F.; **Abbasi, M.**; Mottaghi, A. Pre- and Post-Surgical Prevalence of Thiamin Deficiency in Patients Undergoing Bariatric Surgery: Systematic Review and Meta-Analysis (*Journal Obesity Surgery In press*).
3. **Abbasi, M.**; Fan, Z.; Dawson, J.A.; Wang, S. Transdermal Delivery of Metformin Using Dissolving Microneedles, and Iontophoresis Patches for Browning Subcutaneous Adipose Tissue. *Pharmaceutics* 2022, 14, 879. <https://doi.org/10.3390/pharmaceutics14040879>. (IF: 5.4)
4. Zu Y, Zhao L, Hao L, Mechref Y, Zabet-Moghaddam M, Keyel PA, **Abbasi M**, Wu D, Dawson JA, Zhang R, Nie S, Moustaid-Moussa N, Kolonin MG, Daquinag AC, Brandi L, Warraich I, San Francisco SK, Sun X, Fan Z, Wang S. Browning white adipose tissue using adipose stromal cell-targeted resveratrol-loaded nanoparticles for combating obesity. *J Control Release*. 2021 May 10; 333:339-351. doi: 10.1016/j.jconrel.2021.03.022. Epub 2021 Mar 23. PMID: 33766692. (IF: 10.8)
5. Sezavar, H., Yousefi, R., **Abbasi, M. et al.** Anthropometric and Biochemical Measures in Bariatric Surgery Candidates: What Is the Role of Inflammatory Potential of Diet? *OBES SURG* 31, 3097–3108 (2021). <https://doi.org/10.1007/s11695-021-05345-6>. (IF: 2.9)
6. Soheilipour F, Yousefi R, **Abbasi M**, Safari S, Mottaghi A. The association between dietary profile with practical biochemical parameters in bariatric surgery candidates. *ABS*. 2020; 9 (2) :9-17
7. Zeynep Goktas, Yujiao Zu, **Mehrnaz Abbasi**, Shannon Galyean, Dayong Wu, Zhaoyang Fan, Shu Wang. "Recent advances in nano-encapsulation of phytochemicals to combat obesity and its comorbidities." *Journal of Agricultural and Food Chemistry* 2020 July 7. (IF: 5.27)
8. Hosseinikia M, Oubari F, Hosseinikia R, Tabeshfar Z, Salehi MG, Mousavian Z, **Abbasi M**, Samadi M, Pasdar Y. Quercetin supplementation in non-alcoholic fatty liver disease. *Nutrition & Food Science*. 2020 Apr 10. (IF: 1.20)
9. Pasdar Y, Oubari F, Zarif MN, **Abbasi M**, Pourmahmoudi A, Hosseinikia M. Effects of Quercetin Supplementation on Hematological Parameters in Non-Alcoholic Fatty Liver Disease: A Randomized, Double-Blind, Placebo-Controlled Pilot Study. *Clin Nutr Res*. 2020 Jan;9(1):11-19. <https://doi.org/10.7762/cnr.2020.9.1.11>. (IF: 6.36)

10. **Abbasi, M.**, Daneshpour, M. S., Hedayati, M., Mottaghi, A., Pourvali, K., & Azizi, F. (2019). Dietary Total Antioxidant Capacity and the Risk of Chronic Kidney Disease in Patients with Type 2 Diabetes: A Nested Case-Control Study in the Tehran Lipid Glucose Study. *Journal of renal nutrition: the official journal of the Council on Renal Nutrition of the National Kidney Foundation*, 29(5), 394–398. <https://doi.org/10.1053/j.jrn.2018.11.008>. (IF: 3.2)
11. Zhang, J., Nie, S., Zu, Y., **Abbasi, M.**, Cao, J., Li, C., Wu, D., Labib, S., Brackee, G., Shen, C. L., & Wang, S. (2019). Anti-atherogenic effects of CD36-targeted epigallocatechin gallate-loaded nanoparticles. *Journal of controlled release: official journal of the Controlled Release Society*, 303, 263–273. <https://doi.org/10.1016/j.jconrel.2019.04.018>. (IF: 10.8)
12. Hao L, Scott S, **Abbasi M**, Zu Y, Khan MSH, Yang Y, Wu D, Zhao L, Wang S. Beneficial Metabolic Effects of Mirabegron In Vitro and in High-Fat Diet-Induced Obese Mice. *J Pharmacol Exp Ther.* 2019 Jun;369(3):419-427. doi: 10.1124/jpet.118.255778. Epub 2019 Apr 2. PMID: 30940691; PMCID: PMC6530071. (IF: 3.86)
13. Shen CL, Wang S, Yang S, Tomison MD, **Abbasi M**, Hao L, Scott S, Khan MS, Romero AW, Felton CK, Mo H. A 12-week evaluation of annatto tocotrienol supplementation for postmenopausal women: safety, quality of life, body composition, physical activity, and nutrient intake. *BMC Complement Altern Med.* 2018 Jun 28;18(1):198. doi: 10.1186/s12906-018-2263-0. PMID: 29954374; PMCID: PMC6022510. (IF: 2.83)
14. **Abbasi M**, Daneshpour MS, Hedayati M, Mottaghi A, Pourvali K, Azizi F. The relationship between MnSOD Val16Ala gene polymorphism and the level of serum total antioxidant capacity with the risk of chronic kidney disease in type 2 diabetic patients: a nested case-control study in the Tehran lipid glucose study. *Nutr Metab (Lond).* 2018 Apr 11; 15:25. doi: 10.1186/s12986-018-0264-0. PMID: 29681991; PMCID: PMC5896129. (IF: 4.5)
15. Pourvali K, **Abbasi M**, Mottaghi A. Role of Superoxide Dismutase 2 Gene Ala16Val Polymorphism and Total Antioxidant Capacity in Diabetes and its Complications. *Avicenna J Med Biotechnol.* 2016 Apr-Jun;8(2):48-56. PMID: 27141263; PMCID: PMC4842242. (IF: 1.44)
16. Shahbazi R, Akbari ME, Hashemian M, **Abbasi M**, Jalali S, Homayounfar R, Davoodi SH. High Body Mass Index and Young Age Are Not Associated with Post-Mastectomy Pain Syndrome in Breast Cancer Survivors: A Case-Control Study. *Iran J Cancer Prev.* 2015 Jan-Feb;8(1):29-35. PMID: 25821568; PMCID: PMC4360348.

- **Abstracts**

1. **Abbasi M**, Zhou F, Hu Q, Wang S., Anti-Obesity and Metabolic Effects of Forskolin in Obese C57BL/6J Mice, *Current Developments in Nutrition*, 2023;7:101567, July 2023, DOI: 10.1016/j.cdnut.2023.101567
2. **Abbasi M**, Hu Q, Zhou F, Wang S., Local Delivery of Adipose Stromal Stem Cells Targeting Peptide-Resveratrol Conjugate to Subcutaneous White Adipose Tissue for Combating Obesity, *Current Developments in Nutrition*, 2023;7:101568, July 2023, DOI: 10.1016/j.cdnut.2023.101568
3. Xu X, Chen J, Wu H, **Abbasi M**, Wang S, Zhao L., Browning of Adipose-derived Stromal Cells From db/db mice by Resveratrol, *Current Developments in Nutrition*, 2023;7:101636, July 2023, DOI: 10.1016/j.cdnut.2023.101636

4. **Mehrnaz Abbasi**, Shu Wang, Browning Subcutaneous White Adipose Tissue Using Transdermal Delivery of ASC-Targeting Peptide and Resveratrol Conjugate, *Current Developments in Nutrition*, Volume 6, Issue Supplement\_1, June 2022, Page 1042, <https://doi.org/10.1093/cdn/nzac070.001>
5. **Mehrnaz Abbasi**, Shu Wang, Novel Obesity Treatment Using Metformin Transdermal Patch, *Current Developments in Nutrition*, Volume 5, Issue Supplement\_2, June 2021, Page 1191, [https://doi.org/10.1093/cdn/nzab055\\_001](https://doi.org/10.1093/cdn/nzab055_001)
6. **Mehrnaz Abbasi**, Shu Wang, In Vivo Percutaneous Penetration of Dye into IgWAT and IBAT Using Dissolving Microneedle and Iontophoresis, *Current Developments in Nutrition*, Volume 4, Issue Supplement\_2, June 2020, Page 1154, [https://doi.org/10.1093/cdn/nzaa056\\_001](https://doi.org/10.1093/cdn/nzaa056_001)
7. **Mehrnaz Abbasi**, Shu Wang, Direct Delivery of Metformin to Subcutaneous White Adipose Tissue and Brown Adipose Tissue for Combating Obesity, *Current Developments in Nutrition*, Volume 4, Issue Supplement\_2, June 2020, Page 1603, [https://doi.org/10.1093/cdn/nzaa063\\_001](https://doi.org/10.1093/cdn/nzaa063_001)
8. **Mehrnaz Abbasi**, Shu Wang, Transdermal Delivery of Nanoparticles Using Microneedles, and Iontophoresis (P13-001-19), *Current Developments in Nutrition*, Volume 3, Issue Supplement\_1, June 2019, nzz036.P13-001-19, <https://doi.org/10.1093/cdn/nzz036.P13-001-19>

#### POSTER PRESENTATIONS

1. **Mehrnaz Abbasi**. (July 2023). Anti-Obesity and Metabolic Effects of Forskolin in Obese C57BL/6J Mice -Presenting Author. Poster presented at the American Society of Nutrition (ASN 2023), Boston, MA.
2. **Mehrnaz Abbasi**. (July 2023). Local Delivery of Adipose Stromal Stem Cells Targeting Peptide-Resveratrol Conjugate to Subcutaneous White Adipose Tissue for Combating Obesity -Presenting Author. Poster presented at the American Society of Nutrition (ASN 2023), Boston, MA.
3. **Mehrnaz Abbasi**. (July 2023). Browning of Adipose-derived Stromal Cells From db/db mice by Resveratrol -Co-Author. Poster presented at the American Society of Nutrition (ASN 2023), Boston, MA.
4. **Mehrnaz Abbasi**. (June 2022). Browning Subcutaneous White Adipose Tissue Using Transdermal Delivery of ASC-Targeting Peptide and Resveratrol Conjugate -Presenting Author. Poster presented at the American Society of Nutrition (ASN 2022), Online.
5. **Mehrnaz Abbasi**. (June 2020). In vivo, Percutaneous Penetration of Dye into IgWAT and IBAT Using Dissolving Microneedle and Iontophoresis -Presenting Author. Poster presented at the American Society of Nutrition (ASN 2020), Online.
6. **Mehrnaz Abbasi**. (June 2020). Direct Delivery of Metformin to Subcutaneous White Adipose Tissue and Brown Adipose Tissue for Combating Obesity -Presenting Author. Poster presented at the American Society of Nutrition (ASN 2020), Online.

7. **Mehrnaz Abbasi.** (June 2019). Transdermal Delivery of Nanoparticles Using Microneedles and Iontophoresis -Presenting Author. Poster presented at the meeting of the American Society of Nutrition (ASN 2019), Baltimore, MD, **Awarded 1<sup>st</sup> place 5th Emerging Leaders, ASN 2019.**
8. **Mehrnaz Abbasi.** (June 2018). Effect of EGCG-loaded nanoparticles on macrophage cholesterol accumulation and inflammation-Presenting Author. Poster presented at the American Society of Nutrition (ASN 2018), Boston, MA.
9. **Mehrnaz Abbasi.** (June 2018). Metabolic beneficial effects of mirabegron in vitro and high-fat diet-induced obese mice -Co-Author. Poster presented at the American Society of Nutrition (ASN 2018), Boston, MA.

#### **ORAL PRESENTATIONS**

- **Mehrnaz Abbasi.** (June 2021). Novel Obesity Treatment Using Metformin Transdermal Patch-Presenting Author. Presented at the American Society of Nutrition (ASN 2021) Online.

#### **INVITED LECTURES**

Invited by: The University of Texas, Health Science Center at Houston, McGovern Medical School, The Brown Foundation Institute of Molecular Medicine, Center for Metabolic & Degenerative Diseases, Center for Metabolic & Degenerative Diseases Seminar “Development & Application of Metformin Skin Patch for Combating Obesity and Improve Metabolic Health” February 1, 2023.

#### **STUDENTS MENTORED**

- Lauren McGinness, Undergraduate Student, Auburn University, Fall 2023 – Present
- Gracie Swensen, Undergraduate Student, Honor College, Arizona State University, 2021-2023
- Austin Taylor, Undergraduate Student, Arizona State University, 2021-2023
- Kim Ly, Undergraduate Student, Arizona State University, 2021-2023
- Jerryck Ordyna, Undergraduate Student, Arizona State University, 2021-2022
- Caitlin Tayag, Undergraduate student, Honor College, Texas Tech University, 2019-2020
- Sophia Beckett, Undergraduate student, Honor College, Texas Tech University, 2019-2020
- Ashley Selman, Undergraduate student, Honor College, Texas Tech University, 2019-2020