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### EDUCATION

- 01/2011–02/2016 Ph.D., Food Science, University of Massachusetts Amherst, Amherst, MA  
09/2006–07/2010 B.S., Biotechnology, China Pharmaceutical University, Nanjing, China

### PROFESSIONAL EXPERIENCE

- 07/2024–Present Associate Professor, Department of Kinesiology, Nutrition, and Health, Miami University, Oxford, OH  
08/2019–06/2024 Assistant Professor, Department of Kinesiology, Nutrition, and Health, Miami University, Oxford, OH  
01/2016–07/2019 Postdoctoral Associate, USDA Human Nutrition Research Center on Aging at Tufts University, Boston, MA  
01/2016–06/2016 Visiting Scientist, Koch Institute for Integrative Cancer Research at MIT, Cambridge, MA  
01/2011–12/2015 Graduate Research Assistant, Department of Food Science, University of Massachusetts Amherst, Amherst, MA

### PATENT

- Mason JB, **Wu X**, Crott JW. Compositions and methods for preventing inflammatory conditions. US Patent App. Pub. No.: US 17 / 611,730, Pub. Date: Jul. 7, 2022.

### PEER-REVIEWED PUBLICATIONS

1. Kou F, Wang W, You S, Wei X, **Wu X**. Preparation and characterization of metal-polyphenol networks encapsulated in sodium alginate microbead hydrogels for catechin and vitamin C delivery. *International Journal of Biological Macromolecules*, 276(2024) 133870.
2. Kou F, Mei Y, Wang W, Wei X, Xiao H, **Wu X**. *Phellinus linteus* polysaccharides: A review on their preparation, structure-activity relationships, and drug delivery systems. *International Journal of Biological Macromolecules*, 258 (2024) 128702.
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4. Liu W, Gao B, Yu F, **Wu X**, Li L. Edible Mushrooms and the Gut Microbiota. *Frontiers in Nutrition*, 10:1349429.
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6. Huang M, Wang J, Tan C, Ying R, **Wu X**, Otto JL. Modulating the stability and rheological properties of Pickering emulsion by different charges polysaccharides to improve the functional properties. *Food Bioscience*, 55 (2023) 103063.
7. Xie C, Huang M, Ying R, **Wu X**, Hayat K, Shaughnessy LK, Tan C. Olive pectin-chitosan nanocomplexes for improving stability and bioavailability of blueberry anthocyanins. *Food Chemistry*, 417 (2023) 135798.
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11. Shi X, Deng Y, Kurtz NC, Sun Y, Xue M, **Wu X**. Concise and efficient total synthesis of oxyphyllacinol, yakuchione-A and yakuchione-B. *Synthetic Communications*, 2022, 52, 4, 513–520.
12. Zou D, Zhao Z, Li L, Min Y, Zhang D, Ji A, Jiang C, Wei X, **Wu X**. A comprehensive review of spermidine: safety, health effects, absorption and metabolism, food materials evaluation, physical and chemical processing, and bioprocessing. *Comprehensive Reviews in Food Science and Food Safety*, 2022; 21: 2820–2842.
13. Wele P, **Wu X**, Shi H. Sex-Dependent Differences in Colorectal Cancer: With a Focus on Obesity. *Cells*, 2022, 11, 3688.
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15. Guo S, **Wu X**, Zheng J, Song M, Dong P, Xiao H. Anti-inflammatory property of 5-demethylnobiletin (5-hydroxy-6, 7, 8, 3', 4'-pentamethoxyflavone) and its metabolites in lipopolysaccharide (LPS)-induced RAW 264.7 cells. *Biology*, 2022, 11, 1820.
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22. Chen X, **Wu X**, Liu G, Wang Q, Itenberg SA, Ouyang W, Song M, Dixon WR, Cao Y, Xiao H. Structure analysis of ethyl ferulate from *Rubus Corchorifolius* L.f. leaves and its inhibitory effects on HepG2 liver cancer cells. *Food Bioscience*, 45 (2022) 101340.
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43. Rakariyatham K, Du Z, Yuan B, Gao Z, Song M, Pan C, **Wu X**, Tang Z, Zhang G, Xiao H. Inhibitory effects of 7,7'-bromo-curcumin on 12-O-tetradecanoylphorbol-13-acetate-induced skin inflammation. *European Journal of Pharmacology*, 2019, 858, 172479.
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47. Guo S, **Wu X (Co-first author)**, Zheng J, Charoensinphon N, Dong P, Qiu P, Song M, Tang Z, Xiao H. Anti-inflammatory effect of xanthomicrol, a major colonic metabolite of 5-demethyltangeretin. *Food & Function*, 2018, 9, 3104-3113. **[Paper featured on the cover]**
48. Rakariyatham K, **Wu X**, Han Y, Wang Q, Tang Z, Xiao H. Synergism between luteolin and sulforaphane in anti-inflammation. *Food & Function*, 2018, 9, 5115-5123. **[Paper featured on the cover]**
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55. Chen X, **Wu X**, Ouyang W, Gu M, Gao Z, Song M, Chen Y, Cao Y, Xiao H. A novel ent-kaurane diterpenoid from *Rubus corchorifolius* L.f inhibits human colon cancer cell growth via inducing cell cycle arrest and apoptosis. *Journal of Agricultural and Food Chemistry*, 2017, 65, 1566–1573.
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59. Song M, Charoensinphon N, **Wu X**, Zheng J, Gao Z, Xu F, Wang M, Xiao H. Inhibitory effects of 5-demethylnobiletin and its metabolites on human non-small cell lung cancer cells. *Journal of Agricultural and Food Chemistry*, 2016, 64, 4943-4949.
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### **REFEREED ABSTRACTS AND PRESENTATIONS**

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2. Tijani A, Shi H, Thongkhao-on S, Shi X, Sun Y, **Wu X**. “Effects of Zingiberaceae Bioactive Components Against 12-O-Tetradecanoylphorbol-13-Acetate (TPA)-Induced Skin Inflammation and the Underlying Mechanisms of Action” Nutrition 2024. Chicago, IL. 2024 (accepted).
3. Wele P, Shi H, **Wu X**. “Deciphering colorectal cancer: A model to study sex-based differences and role of estrogen amidst obesity” American Association for Cancer Research (AACR) Annual Meeting 2024 (accepted)
4. **Wu X**, Xu M, Crist MC, Sallese A, Zhu Q, Zhu J, Shi H. “Estrogenic protection against colorectal cancer development in obesity” Nutrition 2023. Boston, MA. 2023 (Poster).
5. **Wu X**, Shi H, Reidy P. “Processed meat- and alternative protein-based diets on physical inactivity: an animal study” Nutrition 2023. Boston, MA. 2023 (Poster).
6. Chen X, Li Z, Smith SA (Presenting Author), Chen M, Liu H, **X Wu**. “Optimization of supercritical CO2 extraction of *Moringa oleifera* seed oil using response surface methodological approach and its antioxidant activity.” Nutrition 2022 (ePoster).
7. Chen X, Du C, Li Z, Zhang J, **Wu X**. “The protective effect of carnosic acid on dextran sulfate sodium-induced colitis based on metabolomics and gut microbiota analysis.” American Chemical Society (ACS) National Meeting & Exposition. Chicago, IL. 2022 (Oral, invited & refereed).
8. Chen X, **Wu X (Presenting Author)**, Liu G, Wang Q, Ouyang W, Song M, Cao Y, Xiao H. “Identification of ethyl ferulate from *Rubus Corchorifolius* L.f. leaves and its inhibitory effects on HepG2 liver cancer cells.” Nutrition 2021 (ePoster).
9. **Wu X**, Ueland PM, Koh GY, Crott JW, Mason JB. “Combined supplementation with vitamin B6 and curcumin is superior to either agent alone in suppressing obesity-associated colorectal tumorigenesis in mice.” The Folic Acid, Vitamin B12 and One-Carbon Metabolism Conference 2020 (ePoster, Invited & Refereed).
10. **Wu X**, Xue L, Tata A, Song M, Neto CC, Xiao H. “Chemopreventive Effects of Cranberry Extracts on Colitis-Associated Colon Cancer.” Nutrition 2020 (ePoster).
11. **Wu X**, Li Z, Sun Y, Li F, Zheng J, Xiao H. “Identification of Xanthomicrol as a Major Metabolite of 5-demethyltangeretin in Mouse Gastrointestinal Tract and Its Inhibitory Effects on Colon Cancer Cells.” Nutrition 2020 (ePoster).
12. **Wu X**, Koh GY, Crott JW, Mason JB. “Vitamin B6 and curcumin co-treatment is superior to either agent alone in suppressing obesity-associated colorectal tumorigenesis in mice.” American Chemical Society (ACS) Spring 2020 National Meeting & Expo. (ePoster).
13. **Wu X**, Koh GY, Crott JW, Mason JB. “Vitamin B6 and curcumin supplementation is superior to either agent alone in suppressing pro-carcinogenic signaling and colorectal tumorigenesis in obese mice.” Nutrition 2019. Baltimore, MD. 2019 (Oral & Poster).
14. **Wu X**, Koh GY, Crott JW, Mason JB. “The combination of curcumin and salsalate suppresses high fat diet-induced pro-carcinogenic signaling and colorectal tumorigenesis in azoxymethane-treated mice.” Converging on Cancer, 2019 Tufts Cancer Symposium. Boston, MA. 2019 (Poster).
15. Han Y, **Wu X**, Xiao H. “Inhibition of colonic inflammation and colon tumorigenesis by strawberry and cranberry.” 258th American Chemical Society (ACS) National Meeting & Exposition. San Diego, CA. 2019.
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- (ACS) National Meeting & Exposition. Boston, MA. 2018 (Oral, Invited & Refereed).
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38. **Wu X**, Song M, Gao Z, Zheng J, Xiao H. "Chemopreventive effects of nobiletin on azoxymethane-induced colon carcinogenesis in rats is associated with inhibition of heat shock proteins." Experimental Biology Annual Meeting. Boston, MA. 2015 (Poster).
39. Song M, **Wu X**, Wang M, Xiao H. "Inhibition of colon carcinogenesis by 5-demethylnobiletin in azoxymethane-treated rats." Experimental Biology Annual Meeting. Boston, MA. 2015.
40. Song M, **Wu X**, Wang M, Xiao H. "Inhibitory Effect of 5-Demethylnobiletin on NNK-Induced Tumorigenesis of A/J Mice and Growth of Lung Cancer Cells." IFT Annual Meeting and Food Expo. Chicago, IL. 2015.
41. Wang M, Song M, **Wu X**, Gao Z, Xu F, Cao Y, Xiao H "Gastrointestinal biotransformation enhances biological effects of polymethoxyflavones." 250th American Chemical Society (ACS) National Meeting & Exposition. Boston, MA. 2015.
42. Frade S, Liberty A, Tata A, **Wu X**, Song M, Cai X, Xiao H, Neto CC. "Inhibition of colon cancer growth and inflammation in cellular and mouse models by cranberry extracts (*Vaccinium macrocarpon*)." 250th American Chemical Society (ACS) National Meeting & Exposition. Boston, MA. 2015.
43. **Wu X**, Song M, Zheng J, Xiao H. "Nobiletin inhibits colitis-associated colon carcinogenesis in mice." Experimental Biology Annual Meeting. San Diego, CA. 2014 (Oral & Poster).
44. Song M, **Wu X**, Zheng J, Xiao H. "5-Demethylnobiletin inhibits colon carcinogenesis in azoxymethane/dextran sulfate sodium-treated mice." Experimental Biology Annual Meeting. San Diego, CA. 2014.
45. Wang M, Zheng J, Song M, Gao Z, Xu F, Cai X, **Wu X**, Xiao H. "Tissue distribution and metabolism of 5-demethylnobiletin after its long-term dietary administration in mice." Experimental Biology Annual Meeting. San Diego, CA. 2014.
46. **Wu X**, Song M, Zheng J, Guo S, Xiao H. "*In vitro* and *in vivo* anti-inflammatory effect of 4'-hydroxyl nobiletin, a major colonic metabolite of nobiletin." Experimental Biology Annual Meeting. Boston, MA. 2013 (Poster).
47. Funaro A, **Wu X (Presenting Author)**, Zheng J, Rodriguez-Estrada MT, Xiao H. "Synergistic Anti-Inflammatory Effects of Luteolin and Tangeretin on Lipopolysaccharide-Stimulated Raw 264.7 Cells." Experimental Biology Annual Meeting. Boston, MA. 2013 (Poster).
48. Wang M, Zheng J, Zhong Z, Song M, **Wu X**. "Tissue distribution of nobiletin and its metabolites in mice after oral administration of nobiletin." Experimental Biology Annual Meeting. Boston, MA. 2013.
49. **Wu X**, Guo S, Xu G, Zheng J, Xiao H. "Anti-inflammatory effects of 4'-hydroxy nobiletin, the major metabolite of nobiletin." Experimental Biology Annual Meeting. San Diego, CA. 2012 (Poster).
50. Xiao H, Guo S, Zheng J, **Wu X**. "The Major Metabolites of 5-Hydroxy Nobiletin Inhibit Lipopolysaccharide-induced Inflammation in Macrophages." Experimental Biology Annual Meeting. San Diego, CA. 2012.

### **INVITED TALKS**

1. **Wu X**. "Diet, Obesity, and Women's Health". Department of Food Science, University of Massachusetts Amherst, 2023.
2. **Wu X**. "Phytochemicals in Colon Cancer Prevention". Miami University Center for the Study of Integrative Metabolism Seminar Series, 2021.
3. **Wu X**. "Phytochemicals against colorectal cancer". 3rd South Lake Innovation Forum for International Young Talents (Huazhong Agricultural University). Wuhan, China. 2018.
4. **Wu X**. "Combination regimen to prevent colorectal cancer" Antioxidants Research Laboratory, Jean Mayer USDA Human Nutrition Research Center on Aging, 2017.

### **SELECTED HONORS AND AWARDS**

- Outstanding Professor Award, Miami University's Associated Student Government. Apr. 2023
- The Creativity & Innovation Award, Miami University. Nov. 2022
- *Journal of Agricultural and Food Chemistry* Reviewer of Excellence, Reviewer Award 2022
- The Provost Faculty Enhancement Fund Award, Miami University. Sep. 2021
- *Food & Function* Outstanding Reviewer 2018-2020 (for three consecutive years)
- American Society for Nutrition (ASN) Nutrition Translation Award (finalist), Nutrition 2019, Baltimore, MD.

Jun. 2019

- ASN Postdoctoral Research Award (finalist), Experimental Biology 2017 Annual Meeting, Chicago, IL. Apr. 2017.
- 2<sup>nd</sup> place winner of ASN's Emerging Leaders in Nutrition Science Poster Competition, Experimental Biology 2017 Annual Meeting, Chicago, IL. Apr. 2017.
- North America Chinese Society for Nutrition (NACSN) and ASN Travel Award, Experimental Biology 2017 Annual Meeting, Chicago, IL. Apr. 2017.
- Association for Women in Science-Massachusetts Chapter (MASS AWIS) Scholarship, Aug. 2016.
- PepsiCo and NYAS Travel Award for Journey through Science Day, Dec. 2015.
- 1<sup>st</sup> place winner of Diet and Cancer RIS Poster Competition Award, Experimental Biology 2014 Annual Meeting, San Diego, CA. Apr. 2014.

## **SELECTED SERVICE**

### **Editorships**

- Associate Editor: Future Postharvest and Food (2023–Present)
- Editorial Board Member: *Journal of Future Foods* (2021–Present), *Biology* (2023–Present)
- Special Issue Guest Editor: *Frontiers in Nutrition* (2019–2023); *Frontiers in Bioengineering and Biotechnology* (2020–2021); *Biology* (2021–2023); *Journal of Future Foods* (2022), *Nutrients* (2023–Present)

### **Peer Review**

- *Journal of Agricultural and Food Chemistry, Food & Function, Trends in Food Science & Technology, Critical Reviews in Food Science and Nutrition, Journal of Functional Foods, Journal of Food Science, LWT - Food Science and Technology, Research, Food Science and Human Wellness, Food Control, Food Research International, European Journal of Pharmacology, Nutrients, ACS Omega, Nutrition Research, Natural Product Communications, Scientific Reports, Journal of Applied Microbiology, Journal of Food Biochemistry, Journal of Food Quality, Frontiers in Pharmacology, Infectious Microbes & Diseases, Medical Cannabis and Cannabinoids, etc.*

### **Professional Organizations**

- American Chemical Society (ACS) – Agricultural and Food Chemistry Division
  - Chair of Functional Foods & Natural Products Subdivision (01/2022–01/2023)
  - Session Chair of “Functional Ingredients in Food Processing” Symposium at ACS Spring 2023 National Meeting & Expo.
  - Judge for the Undergraduate Student Poster Competition at ACS Spring 2023 National Meeting & Expo.
  - Session Chair of “Food Bioactives in Infectious and Autoimmune Diseases” Symposium at ACS Fall 2022 National Meeting & Expo.
  - Chair-Elect of Functional Foods & Natural Products Subdivision (01/2021–01/2022)
  - Vice-Chair of Functional Foods & Natural Products Subdivision (01/2020–01/2021)
  - Secretary of Functional Foods & Natural Products Subdivision (01/2019–01/2020)
- American Society for Nutrition (ASN)
  - Session Chair of “Antioxidant and Anti-Inflammatory Effects of Dietary Bioactives” Minisymposium at Nutrition 2019.
  - Judge for the Postdoctoral Research Award Competition and Emerging Leaders in Nutrition Science Poster Competition at Nutrition 2018.
  - Abstract Reviewer for ASN's Scientific Sessions and Annual Meeting (2016–Present)