

## BIOGRAPHICAL SKETCH

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#### **1. Education:**

- 1991-1992 Post-doc in Animal Science, University of Hawaii, USA
- 1985-1990 PhD in Animal Physiology & Biochemistry, Nanjing Agricultural University, Nanjing, China
- 1979-1983 BS in Biochemistry, Nanjing University, Nanjing, China

#### **2. Professional Appointments:**

- 2014- Director of Graduate Program, Dept of Food Nutrition Dietetics & Health
- 2012- Professor, Dept of Food Nutrition Dietetics & Health, Kansas State Univ
- 2006-2012 Associate Professor, Dept of Human Nutrition, Kansas State Univ
- 2002-2006 Assistant Professor, Department of Human Nutrition, Kansas State University
- 1998-2002 Associate Scientist, Dept of Food Sciences & Human Nutrition, Iowa State Univ
- 1997-1998 Assistant Scientist, Dept of Food Sciences & Human Nutrition, Iowa State Univ
- 1992-1997 Junior Researcher, Cancer Research Center of Hawaii, Univ of Hawaii
- 1990-1991 Lecturer, Department of Biology, Nanjing Univ, Nanjing, China
- 1983-1985 Research Associate, Institute of Biological Products, Shanghai, China

#### **3. Honors & Awards:**

- 2016-2017 Panel Manager of USDA-NIFA Function & Efficacy of Nutrients
- 2016- Chair-Elect, American Society for Nutrition's Diet and Cancer Section
- 2015- US Working Group on the Codex General Principles of Food Hygiene, FDA Office of Food Safety
- 2015 Keynote Speaker at the International Conference of Quality and Safety of Agricultural Products, Shanghai, China
- 2013-2014 Faculty Senator, Kansas State University
- 2009 Dawley-Scholar Award for Faculty Excellence in Student Development, College of Human Ecology, Kansas State University.
- 2006-2009 Faculty Senator, Kansas State University
- 2005 Faculty Research Excellence Award, College of Human Ecology, Kansas State Univ.
- 1996 Symposium Principal Speaker at the 2<sup>nd</sup> International Symposium on the Role of Soy in Preventing and Treating Chronic Disease. Brussels, Belgium.
- 1995 Symposium Principal Speaker at the 3<sup>rd</sup> International Conference on Phytoestrogens, Little Rock, Arkansas
- 1994 Mead Johnson Award for Outstanding Achievement in the Field of Biomedical Research, John A. Burns School of Medicine, University of Hawaii
- 1994 Traineeship in Histopathobiology of Neoplasia, American Association for Cancer Research

#### **4. Selected Peer-reviewed Publications (\*senior & corresponding author):**

- Wu L, Guo X, Lyu Y, Clarke S, Lucas E, Smith B, Hildebrand D, **Wang W**, Medeiros D, Shen X, Lin D. Untargeted Metabolomics Reveals Abnormal Hepatic Energy Metabolism by Depletion of  $\beta$ -Carotene Oxygenase 2 in Mice. *Scientific Reports* 2017; 7:14624.
- Su X, Rhodes D, Xu J, Chen X, Davis H, Wang D, Herald TJ, **Wang W\***. Phenotypic Diversity of Anthocyanins in Sorghum Accessions with Various Pericarp Pigments. *Journal of Nutrition & Food Sciences* 2017; 7(4):1000610.
- Shen Y, Su X, Rhodes D, Herald T, Xu J, Chen X, Smith JS, **Wang W\***. The pigments of sorghum pericarp are associated with the contents of carotenoids and pro-vitamin A. *International Journal of Food & Nutritional Sciences* 2017; 6(3):2320-7876.
- Guo X, Wu L, Lyu Y, Chowanadisai W, Clarke SL, Lucas EA, Smith BJ, He H, **Wang W**, Medeiros DM, Lin D. Ablation of  $\beta$ , $\beta$ -carotene -9', 10'-oxygenase 2 remodels the hypothalamic metabolome to stimulate feeding behavior in mice. *Journal of Nutritional Biochemistry* 2017; 46:74-82.
- Chen X, Du X, Shen J, Lu L, **Wang W\***. Effect of Various Dietary Fats on Fatty Acid Profile in Duck Liver: Efficient Conversion of Short-chain to Long-chain Omega-3 Fatty Acids. *Experimental Biology & Medicine* 2017; 242(1):80-87.
- Wu L, Guo X, Hartson S, Davis A, He H, Medeiros DM, **Wang W**, Clarke SL, Lucas EA, Smith BJ, von Lintig J, Lin D. Lack of  $\beta$ , $\beta$ -carotene -9', 10'-oxygenase leads to hepatic mitochondrial dysfunction and cellular oxidative stress in mice. *Molecular Nutrition and Food Research* 2017; 61(50):1600576.
- Du X, Liu Y, Lu L, **Wang W**, Zeng T, Tian Y, Xu X, Shen J, Niu D, Lu Y. Effects of Dietary Fats on Egg Quality and Lipid Parameters in Serum and Yolks of Shan Partridge Duck. *Poultry Science* 2017; 96:1184-1190.
- Yu M, King BS, Ewert E, Su X, Mardiyati N, Zhao Z, **Wang W\***. Exercise activates p53 and negatively regulates IGF-1 pathway in epidermis within a skin cancer model. *PloS One* 2016; 11(8):e0160939.
- He J, **Wang W**, Lu L, Tian Y, Niu D, Ren J, Dong L, Sun S, Zhao Y, Chen L, Shen J, Li X. Analysis of miRNAs and their target genes associated with lipid metabolism in duck liver. *Scientific Reports* 2016; 6:27418.
- Wu L, Guo X, **Wang W**, Medeiros DM, Clarke SL, Lucas EA, Smith BJ, Lin D. Molecular aspects of  $\beta$ ,  $\beta$ -carotene-9', 10'-oxygenase 2 in carotenoid metabolism and diseases. *Experimental Biology & Medicine* 2016; 241(11):1879-1887.
- Guo X, Wu L, **Wang W**, Medeiros DM, Clarke S, Lucas E, Smith B, Chowanadisai W, Lin D. Hypothalamic mitochondria in energy homeostasis and obesity. *Integrative Molecular Medicine*. 2016; 3(2):590-599.
- Su X, Xu J, Rhodes D, Shen Y, Song W, Katz B, Tomich J, **Wang W\***. Identification and quantification of anthocyanins in transgenic purple tomato. *Food Chemistry* 2016; 202:184-188.
- Xue Y, Harris ED, **Wang W**, Baybutt R. Vitamin A depletion induced by cigarette

smoke is associated with an increase in lung cancer-related markers in rats. *Journal of Biomedical Science* 2015; 22:84.

- Chen L, Vadlani P, Madl R, **Wang W**, Shi YC, William R. The investigation of virginiamycin-added fungal fermentation on the size and immunoreactivity of heat-sensitive soy protein. *International Journal of Polymer Science* 2015; 682596.
- Xu J, Su X, Lim S, Griffin J, Carey E, Katz B, Tomich J, Smith JS, **Wang W\***. Characterization and stability of anthocyanins in purple-fleshed sweet potato P40. *Food Chemistry* 2015; 186(11):90-96.
- King BS, Lu L, Yu M, Jiang Y, Standard J, Su X, Zhao Z, **Wang W\***. Lipidomics profiling of di- and tri-acylglycerol species in weight-controlled mice. *PloS One* 2015; 10(2):e0116398.
- Standard J, Jiang Y, Yu M, Su X, Zhao Z, Xu J, Chen J, King B, Lu L, Tomich J, Baybutt B, **Wang W\***. Reduced signaling of PI3K-Akt and RAS-MAPK pathways are the key targets for weight loss-induced cancer prevention by dietary restriction and/or physical activity. *Journal of Nutritional Biochemistry* 2014; 25(12):1317-1323.
- King B, Jiang Y, Su X, Xu J, Xie L, Standard J, **Wang W\***. Weight control, endocrine hormones and cancer prevention. *Experimental Biology and Medicine* 2013; 238(5):502-508.
- Lim S, Xu J, Kim, J, Chen TY, Su X, Standard J, Carey E, Griffin J, Herndon B, Katz B, Tomich J, **Wang W\***. Role of anthocyanin-enriched purple-fleshed Sweetpotato P40 in colorectal cancer prevention. *Molecular Nutrition and Food Research* 2013; 57(11):1908-1917.
- Xie L, **Wang W\***. Weight control and cancer prevention: role of IGF1-mediated signaling pathways. *Experimental Biology and Medicine* 2013; 238(2):127-132.
- Jiang Y, Ma H, Su X, Chen J, Xu J, Standard J, Lin D, **Wang W\***. IGF-1 mediates exercise-induced phospholipid alteration in the murine skin tissues. *Journal of Nutrition and Food Science* 2012; S2-003.
- Xue Y, Edward P. Meadors EP, **Wang W**, Baybutt BC. Customized Microarray Analysis Identifies Cancer-Related Genes Suppressed by Dietary Retinoic Acid in the Lungs of Cigarette Smoke-Treated Rats. *Journal of Nutrition and Food Science* 2012; S2-005.
- Jiang Y, Zhang Y, Wark L, Ortiz E, Lim S, He H, **Wang W**, Medeiros D, Lin D. Wolfberry water soluble phytochemicals down-regulate ER stress biomarkers and modulate multiple signaling pathways leading to inhibition of proliferation and induction of apoptosis in Jurkat cells. *Journal of Nutrition and Food Science* 2011; S2-001.
- Ayella A, Lim S, Jiang Y, Iwamoto T, Lin D, Tomich J, **Wang W\***. Cytostatic inhibition of cancer cell growth by lignan secoisolariciresinol diglucoside. *Nutrition Research* 2010; 30(11):762-9.
- Ouyang P, Yu J, Doan HM, Xie L, Vasquez D, Welti R, Su X, Lu N, Herndon B, Yang SS, Jeannotte R, **Wang W\***. Effects of exercise on phospholipid profile in the skin of mice. *Cancer Prevention Research* 2010; 3(4):466-77.
- Przybyszewski J, **Wang W**, Au A, Perry C, Guetzko M, Koehler K, Birt DF. Dietary

energy restriction, in part through glucocorticoid hormones, mediates the impact of 12-O-tetradecanoylphorbol-13-acetate on jun D and fra-1 in senescent mouse epidermis. *Molecular Carcinogenesis* 2010; 49(6):592-602.

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- Zhao X, Nechols JR, Williams KA, **Wang W**, Carey EE. Comparison of phenolics in organically and conventionally grown Pac Choi (*Brassica rapa* L. Chinensis group). *Journal of the Science of Food and Agriculture* 2009; 89(6):940-6.
- Jiang Y, **Wang W\***. Potential mechanisms of cancer prevention by weight control. *Biophysical Reviews and Letters* 2008; 3(3):421-37.
- Xie L, Jiang Y, Ouyang P, Chen J, Doan H, Herndon B, Sylvester JE, Zhang K, Molteni A, Reichle M, Zhang R, Haub MD, Baybutt RC, **Wang W\***. Effects of dietary calorie restriction or exercise on the PI3K and Ras signaling pathways in the skin of mice. *Journal of Biological Chemistry* 2007; 282(38):28025-35.
- Ayella AK, Trick HN, **Wang W\***. Enhanced lignan biosynthesis by over-expressing pinoresinol lariciresinol reductase in transgenic wheat. *Molecular Nutrition and Food Research* 2007; 51(12):1518-26.
- Lu J, Xie L, Sylvester JE, Wang J, Bai J, Baybutt RC, **Wang W\***. Different gene expression of skin tissues between mice with weight controlled by either calorie restriction or physical exercise. *Experimental Biology and Medicine* 2007; 232(4):473-80.
- Zhao X, Young JE, **Wang W**, Iwamoto T, Carey EE. Influences of organic fertilization, high tunnel environment, and postharvest storage on phenolic compounds in lettuce. *HortScience* 2007; 42(1):71-6.
- Au A, Li B, **Wang W**, Roy H, Koehler K, Birt D. The effect of dietary apigenin on colonic ornithine decarboxylase activity, aberrant crypt foci formation and tumorigenesis in different experimental models. *Nutrition and Cancer* 2006; 54:243-51.
- Zhao X, Carey EE, **Wang W**, Rajashekar CB. Does organic production enhance phytochemical content of vegetables and fruits? current knowledge and prospects for research. *HortTechnology* 2006; 16:449-56.
- Wang J, **Wang W\***. New 2-D graphical representation of DNA sequences. *Biophysical Reviews and Letters* 2006; 1:133-40.
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- Stewart JW, Koehler K, Jackson W, Hawley J, **Wang W**, Au A, Myers R, Birt DF. Prevention of mouse skin tumor promotion by dietary energy restriction requires an intact

adrenal gland and glucocorticoid supplementation restores inhibition. *Carcinogenesis* 2005; 26:1077-84.

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- Birt DF, Hendrich S, **Wang W**. Dietary agents in cancer prevention: flavonoids and isoflavonoids. *Pharmacology & Therapeutics* 2001; 90:157-77.
- Przybyszewski J, Yaktine AL, Duysen E, Blackwood D, **Wang W**, Au A, Birt DF. Inhibition of phorbol ester-induced AP-1:DNA binding, c-jun protein and c-jun mRNA by dietary energy restriction is reversed by adrenalectomy in SENCAR mouse epidermis. *Carcinogenesis* 2001; 22:1421-7.
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- Liu Y, Duysen E, Yaktine AL, Au A, **Wang W**, Birt DF. Dietary energy restriction inhibits ERK but not JNK or p38 activity in the epidermis of SENCAR mice. *Carcinogenesis* 2001; 22:607-12.
- **Wang W**, Heideman L, Chung C, Pelling JC, Koehler KJ, Lepley D, Birt DF. Cell cycle arrest at G2/M and growth inhibition by apigenin in human colon carcinoma cell lines. *Molecular Carcinogenesis* 2000; 28:102-10.
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- **Wang W\***, Liu LQ, Higuchi CM, Chen H. Induction of NADPH:quinone reductase by dietary phytoestrogens in human colonic Colo205 cells. *Biochemical Pharmacology* 1998; 56:189-95.
- Franke AA, Custer LJ, **Wang W**, Chen YS. HPLC analysis of isoflavonoids and other phenolic agents from foods and from human fluids. *Proceedings of the Society for Experimental Biology and Medicine*. 1998; 217:263-73.

- **Wang W\***. Radioimmunoassay determination of formononetin in murine plasma and mammary glandular tissue. *Proceedings of the Society for Experimental Biology and Medicine* 1998; 217:281-7.
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- **Wang W\***, Tanaka Y, Han Z, Higuchi CM. Proliferative response of mammary glandular tissue to formononetin. *Nutrition and Cancer* 1995; 23:131-40.
- **Wang W\***, Higuchi CM. Induction of NAD(P)H:quinone reductase by vitamins A, E and C in Colo205 colon cancer cells. *Cancer Letters* 1995; 98:63-9.
- Higuchi CM, **Wang W**. Comodulation of cellular polyamines and proliferation: biomarker application to colorectal mucosa. *Journal of Cellular Biochemistry* 1995; 57:256-61.
- **Wang W\***, Tanaka Y, Han Z, Cheng J. Radioimmunoassay for quantitative analysis of formononetin in blood plasma and rumen fluid of wethers fed red clover. *Journal of Agricultural and Food Chemistry* 1994; 42:1584-7.

## **5. Synergistic Activities:**

Teaching:               HN820-Functional Foods for Chronic Disease Prevention  
                               HN812-Advanced Micronutrient Metabolism  
                               HN620-Nutrient Metabolism

Grant Support:       Total 23 research grants have been funded, including NIH-NCI R01, NIH-NCI R15, NIH-COBRE, NIH-INBRE, USDA Cooperative Projects, and American Heart Association Award, etc.

Grant-proposal Reviewer: NIH, USDA, Canadian Agricultural Research Funding Institute, United Kingdom's National Cancer Research Institute, etc.

Editorial Board Service:	10
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Direction of Graduate Students as Major Professor:	10 Ph.D. and 20 MS
Direction of Graduate Students as Committee Chair:	24 Ph.D.
Direction of Graduate Students as Committee Member:	16 Ph.D. and 18 MS
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