



Dr. Shu Wang is an associate professor in the Department of Nutritional Sciences at Texas Tech University. Dr. Wang conducts cutting edge research in nutrition and nanomedicine. Her research focuses on using biocompatible and biodegradable nanocarriers to enhance bioactivities of phytochemicals for the prevention and treatment of chronic diseases, especially cardiovascular disease and obesity. She has been funded by a variety of federal, industry and foundation agencies, especially two competitive NIH awards. Since 2009, she has published more than thirty peer-reviewed articles and four book chapters. Dr. Shu Wang has received several research honors to recognize the quality of her research. This includes American Heart Association Young Investigator Award Finalist, the Outstanding Research Award from the Texas Tech University College of Human Sciences, and 2014 Chancellor's Council Distinguished Research Award in the Texas Tech University system. Dr. Wang is a member of the *Journal of Nutritional Biochemistry* editorial board. She serves in a grant review panel of American Heart Association. Dr. Shu Wang received her medical degree from Jilin University in China, her master's in biochemistry and molecular biology from Capital Medical University in China, and her Ph.D. in nutritional biochemistry and metabolism from Tufts University in Massachusetts.

Curriculum Vitae

SHU WANG MD, PhD
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EDUCATION

2002-2008 Ph.D. in Nutritional Biochemistry and Metabolism
Tufts University, Medford, MA

1997-1999 M.S. in Biochemistry and Molecular Biology
Capital Medical University, Beijing, China

1988-1993 Bachelor of Medicine
Norman Bethune University of Medical Sciences,
Changchun, China

EXPERIENCE

2014-present Associate Professor,
Department of Nutritional Sciences, Texas Tech University, Lubbock, TX

2008-2014 Assistant Professor,
Department of Nutritional Sciences, Texas Tech University, Lubbock, TX

2008 Post Doctoral Research Associate,
Texas Tech University Health Sciences Center, Lubbock, TX

2002-2008 Graduate Research Assistant
Tufts University, Medford, MA

2000-2002 Graduate Research Assistant
Kansas State University, Manhattan, KS

1999-2000 Visiting Scholar
Chinese University of Hong Kong, Hong Kong, China

1993-1999 Instructor / Lecturer
Capital Medical University, Beijing, China

EDITORIAL BOARD

2013-Present Editorial Advisory Board, The Journal of Nutritional Biochemistry

PROFESSIONAL SOCIETIES

- American Heart Association
- American Society for Nutrition
- American Society for Nanomedicine

HONORS

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|------|--|
| 1997 | Second place in Academic Research Competition, Capital Medical University, Beijing, China. |
| 2006 | NIH Training Grant Trainee (T32 HL69772-01A1 – Nutrition and Cardiovascular Disease). |
| 2007 | Finalist, Procter & Gamble Graduate Student Research Award, American Society for Nutrition. |
| 2012 | Finalist, Nutrition, Physical Activity & Metabolism (NPAM) Young Investigator Award, American Heart Association. |
| 2012 | Nominee, The Barnie E. Rushing Jr. Faculty Distinguished Research Award, Texas Tech University |
| 2013 | Outstanding Research Award, Texas Tech University College of Human Sciences |
| 2014 | Chancellor's Council Distinguished Research Award, Texas Tech University |

RESEARCH AREAS

I am a tenured associate professor of Nutritional Sciences at Texas Tech University. I have more than 20 years of research experience in the area of chronic diseases and nutrition.

Following medical training, my PhD study in Human Nutrition and Metabolism from Tufts University provided specific training in the impact of dietary fatty acids on inflammation and atherosclerosis development. After joining Texas Tech University in 2008, we applied nanotechnology into nutrition and chronic diseases. My group focuses on targeted delivery of natural bioactive compounds to disease tissues or cells using biodegradable and biocompatible nanoparticles as carriers, which can increase their solubility, stability, payload, and cellular bioavailability, lower their toxicity, prolong their circulation time, and target them to specific cells or tissues for the prevention and treatment of chronic diseases. Currently, I am the principal investigator on a couple of funded projects related to phytochemicals, nanotechnology and chronic diseases. Three graduate students, two visiting doctoral students and one undergraduate student are working with me in the research areas of phytochemicals and chronic diseases, primarily obesity and atherosclerosis.

PATENT APPLICATIONS

1. **Title:** NANOPARTICLE-BASED DELIVERY SYSTEM WITH OXIDIZED PHOSPHOLIPIDS AS TARGETING LIGANDS FOR THE PREVENTION, DIAGNOSIS AND TREATMENT OF ATHEROSCLEROSIS
Inventors: Shu WANG, Guigen LI, Zhaoyang FAN
Publication number: US20140287024 A1
Filed date: March 5, 2014
Publication date: September 25, 2014

JOURNAL PUBLICATIONS

1. Zhang J, Zu YJ, Dhanasekara Chathurika, Li J, Wu DY, Fan ZY, Wang S (Corresponding Author). Detection and Treatment of Atherosclerosis Using Nanoparticles. **WIREs Nanomedicine & Nanobiotechnology** (Under review)
2. Zhang J, Nie S, Martinez-Zaguilan R, Sennoune S, Wang S (Corresponding Author). Formulation, Characteristics and Anti-atherogenic Bioactivities of CD36-Targeted Epigallocatechin Gallate (EGCG)-Loaded Nanoparticles. **J Nutr Biochem.** 2016 30:14–23. NIHMS 740685.
3. Tami SH, Reed DB, Trejos E, Boylan M, Wang S. Pilot Study: Survey Tools for Assessing Parenting Styles and Family Contributors to the Development of Obesity in Arab Children Ages 6 to 12 Years. **Ethn Dis.** 2015 Nov 5;25(4):463-8. doi: 10.18865/ed.25.4.463.
4. Shen CL, Han J, Wang S, Chung E, Chyu MC, Cao JJ. Green tea supplementation benefits body composition and improves bone properties in obese female rats fed with high-fat diet and caloric restricted diet. **Nutr Res.** 2015 Dec;35(12):1095-1105.
5. Nie S, Zhang J, Martinez-Zaguilan R, Sennoune S, Hossen MN, Lichtenstein AH, Cao J, Meyerrose GE, Paone R, Soontrapa S, Fan Z, Wang S (Corresponding Author). Detection of atherosclerotic lesions and intimal macrophages using CD36-targeted nanovesicles. **J Control Release.** 2015;220:61-70. NIHMS732821.
6. Li C, Zhang J, Zu YJ, Nie SF, Cao J, Wang Q, Nie SP, Deng ZY, Xie MY, Wang S (Corresponding Author). Biocompatible and biodegradable nanoparticles for enhancement of anti-cancer activities of phytochemicals. **Chin J Nat Med.** 2015 Sep;13(9):641-52. doi: 10.1016/S1875-5364(15)30061-3.
7. Voruganti S, Qin JJ, Sarkar S, Nag S, Walbi IA, Wang S, Zhao Y, Wang W, Zhang R. Oral nano-delivery of anticancer ginsenoside 25-OCH₃-PPD, a natural inhibitor of the MDM2 oncogene: Nanoparticle preparation, characterization, in vitro and in vivo anti-prostate cancer activity, and mechanisms of action. **Oncotarget.** 2015;6(25): 21379-21394.
8. **Wang S (corresponding author)**, Matthan NR, Wu D, Reed DB, Bapat P, Yin X, Grammas P, Shen CL, Lichtenstein AH. Lipid Content in Hepatic and Gonadal Adipose Tissue Parallel Aortic Cholesterol Accumulation in Mice Fed Diets with

- Different Omega-6 PUFA to EPA Plus DHA Ratios. *Clinical Nutrition*. 2014;33:260-266.
9. Sun M, Nie S, Pan X, Zhang R, Fan Z, **Wang S (corresponding author)**. Quercetin-nanostructured lipid carriers: Characteristics and anti-breast cancer activities in vitro. *Colloids and Surfaces B: Biointerfaces* 2014; 113:15-24.
 10. **Wang S**, Moustaid-Moussa N, Chen L, Mo H, Shastri A, Su R, Bapat P, Kwun IS, Shen CL. Novel Insights of Dietary Polyphenols and Obesity. *J Nutr Biochem*. 2014;25(1):1-18.
 11. **Wang S (corresponding author)**, Su R, Nie S, Sun M, Zhang J, Wu D, Moustaid-Moussa N. Application of Nanotechnology in Improving Bioavailability and Bioactivity of Diet-Derived Phytochemicals. *J Nutr Biochem*. 2014; 25(4):363-376. NIHMS 536692.
 12. Shen CL, Chen L, **Wang S**, Chyu MC. Effects of Dietary Fat Levels and Feeding Duration on musculoskeletal health in Female Rats. *Food and Function*. 2014; 5(3):598-604.
 13. Goktas Z, Owens S, Boylan M, Syn D, Shen CL, Reed DB, SanFrancisco S, **Wang S (corresponding author)**. Associations between Tissue Visfatin, Retinol Binding Protein-4 and Vaspin Concentrations and Insulin Resistance in Morbidly Obese Subjects. *Mediators of Inflammation* 2013;2013:861496. doi: 10.1155/2013/861496.
 14. **Wang S (corresponding author)**, Miller B, Matthan NR, Goktas Z, Wu D, Reed DB, Yin X, Grammas P, Moustaid-Moussa N, Shen CL, Lichtenstein AH. Aortic cholesterol accumulation correlates with systemic inflammation but not hepatic and gonadal adipose tissue inflammation in low-density lipoprotein receptor null mice. *Nutrition Research* 2013; 33(12), 1072-1082.
 15. Shen CL, Kwun IS, **Wang S**, Mo H, Chen L, Jenkins M, Brackee G, Chen CH, Chyu MC. Functions and Mechanisms of Green Tea Catechins in Regulating Bone Remodeling. *Current Drug Targets*. 2013;14(13):1619-1630.
 16. Zhang J, Nie S, **Wang S (corresponding author)**. Nanoencapsulation enhances epigallocatechin-3-gallate stability and its antiatherogenic bioactivities in macrophages. *J Agric Food Chem*. 2013; 61(38): 9200-9209. NIHMS523585.
 17. Lemieux M, Al-Jawadi A, **Wang S**, Moustaid-Moussa N. Metabolic Profiling in Nutritional and Metabolic Disorders. *Advances in Nutrition* 2013; 4(5):548-550.
 18. Goktas Z, Moustaid-Moussa N, Shen CL, Boylan M, Mo H, **Wang S (corresponding author)**. Effects of Bariatric Surgery on Adipokine-Induced Inflammation and Insulin Resistance. 2013. *Frontiers in Diabetes*. 2013; 4:69.
 19. Shen CL, Zhu W, Gao W, **Wang S**, Chen L, Chyu MC. Energy Restricted Diet Benefits Body Composition but Degrades Bone Integrity in Middle-Aged Obese Female Rats. *Nutrition Research*. 2013;33(8):668-676.
 20. de Pace RC, Liu X, Sun M, Nie S, Zhang J, Cai Q, Gao W, Pan X, Fan Z, **Wang S (corresponding author)**. Anticancer Activities of (-)-Epigallocatechin-3-Gallate

- Encapsulated Nanoliposomes in MCF7 Breast Cancer Cells. *J Liposome Res.* 2013;23(3):187-96.
21. Pan X, Zhao Y, Liu S, Korzeniewski C, **Wang S**, Fan ZY. Comparing Graphene-TiO₂ Nanowire and Graphene-TiO₂ Nanoparticle Composite Photocatalysts. *ACS Applied Materials & Interfaces.* 2012; 4 (8): 3944–3950.
 22. **Wang S**, Qaisar U, Yin X, Grammas P. Gene Expression Profiling in Alzheimer's Disease Brain Microvessels. *Journal of Alzheimer's Disease.* 2012;31(1):193-205.
 23. Chen YC, Reed DB, Velikova N, **Wang S**. University Student Sample Is Unable to Accurately Assess Their Calorie Needs: Implications for Weight Management and Menu Labeling. *Food and Nutrition Sciences.* 2012; 3, 505-510.
 24. Qhattal HS, **Wang S**, Salihima T, Srivastava SK, Liu X. Nanoemulsions of Cancer Chemopreventive Agent Benzyl Isothiocyanate Display Enhanced Solubility, Dissolution, and Permeability. *J Agric Food Chem.* 2011;59(23):12396-12404.
 25. **Wang S (corresponding author)**, Reed D, Goli S, Goswami D. Blood Leptin and C-Reactive Protein Provide More Sensitive Assessment Than Blood Lipids and Other Inflammatory Biomarkers in Overweight University Students. *Nutrition Research* 2011;31(8):586-593.
 26. **Wang S**, Wu D, Matthan NR, Lamon-Fava S, Lecker JL, Lichtenstein AH. Enhanced Aortic Macrophage Lipid Accumulation and Inflammatory Response in LDL Receptor Null Mice Fed an Atherogenic Diet. *Lipids* 2010; 45(8):701-711. NIHMSID: NIHMS231280.
 27. **Wang S**, Wu D, Lamon-Fava S, Matthan NR, Honda KL, Lichtenstein AH. *In Vitro* Fatty Acid Enrichment of Macrophages Alters Inflammatory Response and Net Cholesterol Accumulation. *Br J Nutr* 2009;102(4):497-501. NIHMSID: NIHMS177991.
 28. **Wang S**, Wu D, Matthan NR, Lamon-Fava S, Lecker JL, Lichtenstein AH. Reduction in Dietary Omega-6 Polyunsaturated Fatty Acids: Eicosapentaenoic Acid Plus Docosahexaenoic Acid Ratio Minimizes Atherosclerotic Lesion Formation and Inflammatory Response in the LDL Receptor Null Mouse. *Atherosclerosis* 2009; 201(1):147-155. NIHMSID: NIHMS177443.
 29. **Wang S**, Noh SK, Koo SI. Epigallocatechin Gallate and Caffeine Differentially Inhibit the Intestinal Absorption of Cholesterol and Fat in Ovariectomized Rats. *J Nutr.* 2006; 136(11): 2791-2796.
 30. **Wang S**, Noh SK, Koo SI. Green Tea Catechins Inhibit Pancreatic Phospholipase A(2) and Intestinal Absorption of Lipids in Ovariectomized Rats. *J Nutr Biochem.* 2006; 17(7):492-498.
 31. Dorfman S, **Wang S**, Vega-López S, Jauhiainen M, Lichtenstein A. Dietary Fatty Acids and Cholesterol Differentially Modulate HDL Cholesterol Metabolism in Golden-Syrian Hamsters. *J Nutr.* 2005; 135(3):492-498.

32. Chen ZY, **Wang S**, Lee KMS, Huang Y, Ho WKK. Preparation of Flavanol-Rich Green Tea Extract by Precipitation with $AlCl_3$. *J Sci Food Agric*. 2001; 81(10):1034-1038.
33. **Wang S**, Higgins ML, Penner KP. Review: Food Technology: Irradiation-VideoActive. *J of Nutr Educ*. 2001; 33(5):309-310.

BOOK CHAPTERS

1. Chapter Title: "Regulation and Metabolic Functions of White Adipose Tissue Stearoyl-CoA Desaturase"
Authors: Nishan Sudheera Kalupahana, Thilak Jayalath, **Shu Wang**, and Naima Moustaid-Moussa
Pages of the mentioned chapter: 49-60 (both included)
Book title: "Stearoyl-CoA Desaturase Genes in Lipid Metabolism"
Editor: James M. Ntambi
Publisher: Springer Science+Business Media New York
ISBN (13): 978-1-4614-7968-0
Publication date: 2013
2. Chapter Title: "Function and Regulation of Macrophage Stearoyl-CoA Desaturase in Metabolic Disorders"
Authors: Nishan Sudheera Kalupahana, **Shu Wang**, Shaikh M Rahman, and Naima Moustaid-Moussa
Pages of the mentioned chapter: 61-71 (both included)
Book title: "Stearoyl-CoA Desaturase Genes in Lipid Metabolism"
Editor: James M. Ntambi
Publisher: Springer Science+Business Media New York
ISBN (13): 978-1-4614-7968-0
Publication date: 2013
3. Chapter title: "TiO₂/graphene nanocomposite for photocatalytic application"
Authors: Xuan Pan, Yong Zhao, **Shu Wang**, and Zhaoyang Fan
Pages of the mentioned chapter: 913-920 (both included)
Book title: "Materials and processes for energy: communicating current research and technological developments"
Editor: A. Méndez-Vilas
Publisher: Formatex Research Center
ISBN (13): 978-84-939843-7-3
Publication date: August 2013
4. Book title: Handbook of Clinical Nanomedicine: From Bench to Bedside
Chapter 39 Title: Potential Applications of Nanotechnology in the Nutraceutical Sector
Chapter 39 Authors: **Shu Wang**, Jia Zhang
Editor: Raj Bawa, Gerald F. Audette, Israel Rubinstein
Publisher: Pan Stanford Publishing Pte. Ltd.
ISBN (13): 978-981-4316-17-0

Publication date: 2015

PUBLISHED ABSTRACTS

1. Zhang J, Nie S, Hossen MN, Sun M, Martinez-Zaguilan R, Sennoune S, and **Wang S (corresponding author)**. Anti-Atherogenic Effects of Lesion-Targeted Epigallocatechin Gallate (EGCG) - Loaded Nanoparticles. *FASEB J* April 2015 29:271.3.
2. Zu Y, Zhang J, Nie S, **Wang S (corresponding author)**. The effect of EGCG and EGCG nanoparticles on body weight and body composition in LDL receptor null mice. *FASEB J* April 2015 29:402.5.
3. Dhanasekara C, Zhang J, Nie S, **Wang S (corresponding author)**. Detection of Intimal Macrophages in Atherosclerotic Lesions Using a CD36-Targeted Ligand Containing Nanoparticle. *FASEB J* April 2015 29:606.12.
4. Cao J, Zhang J, Li C, **Wang S (corresponding author)**. Effects of Epigallocatechin Gallate Nanocarriers on Liver Cholesterol Content in LDL Receptor Null Mice. *FASEB J* April 2015 29:LB369.
5. Li C, Zhang J, Nie S, Cao J, **Wang S (corresponding author)**. Comparing Effects of Native and Nanoencapsulated Epigallocatechin Gallate on Liver Fat Content in LDL Receptor Null Mice. *FASEB J* April 2015 29:LB373.
6. Zahid MK, Doyel A, Janssen RC, **Wang S**, Friedman JE, Rahman SM. C/EBP-beta regulates lipid homeostasis and autophagy activation in liver and macrophages. *FASEB J* April 2015 29:743.16
7. Zhang J, Nie S, **Wang S (corresponding author)**. The Antiatherogenic Effects of Targeted Epigallocatechin Gallate - Loaded Nanoparticles. *FASEB J* April 2014 28:1045.41.
8. Zhang J, Nie S, **Wang S (corresponding author)**. Targeted (-)-Epigallocatechin Gallate Loaded Lipid Nanoparticles Inhibit Foam Cell Formation. *J Neuroimmune Pharmacol.* 2014 DOI 10.1007/s11481-014-9526-4.
9. Sun M, Wang S, Nie S, **Zhang J**. Enhanced oral bioavailability of quercetin by nanostructured lipid carriers. *FASEB J* April 2014 28:1044.24.
10. **Zhang J**, Nie S, Wang S. Characteristics and Anti-Atherosclerotic Properties of (-)-Epigallocatechin Gallate Loaded Lipid Nanoparticles *in vitro*. *CIRCULATION* 2013 November, Vol. 128, No. 22.
11. Sun M, Nie S, Pan X, Fan Z, **Wang S (corresponding author)**. Quercetin encapsulated nanocarriers: effects on breast cancer cell growth, apoptosis, and uptake *in vitro* and bioavailability *in vivo*. *FASEB J* April 9, 2013 27:224.3.

12. Bapat P, Sun M, **Wang S (corresponding author)**. Promising applications of nano-encapsulated (-) epigallocatechin gallate during adipogenesis in 3T3-L1 cells. *FASEB J April 9, 2013 27:112.4.*
13. Zhang J, Nie S, **Wang S (corresponding author)**. Epigallocatechin gallate (EGCG) - loaded nanoparticles decrease cholesterol content in THP-1 derived macrophages. *FASEB J April 9, 2013 27:224.5.*
14. Goktas Z, **Wang S (corresponding author)**. Visfatin and vaspin protein concentrations in different tissues and insulin resistance. *FASEB J April 9, 2013 27:865.13*
15. **Wang S (corresponding author)**, Miller B, Matthan NR, Wu D, Lichtenstein AH. Effect of atherogenic diets with different ratios of omega-6 polyunsaturated fatty acids to eicosapentaenoic acid plus docosahexaenoic acid on lipid content and inflammatory response in hepatic and visceral adipose tissue in LDL receptor null mice. *Circulation*. 2012;126:A14933.
16. **Wang S (corresponding author)**, Zhang J, Sun M, Fan ZY. Nanoencapsulation increases (-)-epigallocatechin gallate stability and its cellular bioavailability in macrophages. *FASEB J*. 2012; 26:646.5.
17. **Wang S (corresponding author)**, Wu D, Matthan NR, Lichtenstein AH. Lower dietary n-6 polyunsaturated fatty acids: eicosapentaenoic acid plus docosahexaenoic acid ratio decreases the expression of inflammatory factors in livers and visceral adipose tissue in LDL receptor null mice. *FASEB J*. 2012; 26:1026.17.
18. Bapat P and **Wang S**. Effect of nano-encapsulated (-) epigallocatechin gallate on triglyceride accumulation in 3T3-L1 adipocytes. *BMC Proceedings 2012*, 6(Suppl 3):P55.
19. Goktas Z and **Wang S**. Visfatin and RBP4 gene expression levels in different adipose tissues and insulin resistance. *BMC Proceedings 2012*, 6(Suppl 3):P17.
20. **Wang S (corresponding author)**, Reed D, Goli S, Goswami D. Associations between blood lipid and inflammatory biomarkers and obesity in university students. *FASEB J*. 2011; 25:LB289.
21. **Wang S (corresponding author)**, Wu YC, Wu D, Matthan NR, Lamon-Fava S, Srinivasan I, Reed D, Lichtenstein AH. Atherogenic diet promotes liver inflammation, fatty liver formation & atherogenesis in LDL receptor null mice. *FASEB J*. 2010; 24:724.8.
22. **Wang S (corresponding author)**, Wu D, Matthan NR, Lamon-Fava S, Lecker JL, Wu YC, Lichtenstein AH. Atherogenic diet promotes atherosclerotic lesion formation by enhancing inflammatory response in the LDL receptor null mouse. *FASEB J*. 2009; 23:LB510.
23. **Wang S**, Wu D, Matthan NR, Lichtenstein AH. The Impact of different ratios of omega-6 polyunsaturated fatty acids to eicosapentaenoic acid (EPA) plus docosahexaenoic acid (DHA) on atherosclerotic lesion formation and

inflammatory factors in the LDL receptor knockout (LDLr^{-/-}) mouse. *FASEB J.* 2007;21:231.1.

24. **Wang S**, Wu D, Matthan NR, Lichtenstein AH. Impact of omega-6 polyunsaturated fatty acids: eicosapentaenoic acid plus docosahexaenoic acid ratios in LDL receptor knockout (LDLr^{-/-}) mice on atherosclerotic lesion formation and elicited peritoneal macrophage inflammatory response. *Arterioscler Thromb Vasc Biol.* 2007;27:e56.
25. **Wang S**, Noh SK, Koo SI. Green tea epigallocatechin gallate (EGCG) inhibits the luminal hydrolysis and lymphatic output of phosphatidylcholine (PC) and lowers the lymphatic absorption of fat and alpha-tocopherol in ovariectomized rats. *FASEB J.* 2002;16:A644.
26. Koo SI, **Wang S**, Noh SK. (+)-Catechin is a potent inhibitor than resveratrol of the intestinal absorption of cholesterol in ovariectomized rats. *FASEB J.* 2002;16:A645.
27. **Wang S**, Noh SK, Koo SI. Green tea catechins inhibit pancreatic phospholipase A₂ activity in vitro. *FASEB J.* 2001;15:LB305.

PRESENTATIONS

1. Experimental Biology Meeting, Boston, MA. March 2015. (Oral presentation). Zhang J, Nie S, Hossen M, Sun M, Martinez-Zaguilan R, Sennoune S, **Wang S (corresponding author)**. Anti-Atherogenic Effects of Lesion-Targeted Epigallocatechin Gallate (EGCG) - Loaded Nanoparticles.
2. Experimental Biology Meeting, Boston, MA. March 2015. (Oral presentation). Zu Y, Zhang J, Nie S, **Wang S (corresponding author)**. The Effect of EGCG and EGCG Nanoparticles on Body Weight and Body Composition in LDL Receptor Null Mice.
3. Experimental Biology Meeting, Boston, MA. March 2015. (Poster). Cao J, Zhang J, Li C, **Wang S (corresponding author)**. Effects of Epigallocatechin Gallate Nanocarriers on Liver Cholesterol Content in LDL Receptor Null Mice.
4. Experimental Biology Meeting, Boston, MA. March 2015. (Poster). Li C, Zhang J, Nie S, Cao J, **Wang S (corresponding author)**. Comparing Effects of Native and Nanoencapsulated Epigallocatechin Gallate on Liver Fat Content in LDL Receptor Null Mice.
5. Experimental Biology Meeting, Boston, MA. March 2015. (Poster). Dhanasekara S, Zhang J, Nie S, **Wang S (corresponding author)**. Detection of Intimal Macrophages in Atherosclerotic Lesions Using CD36-targeted Ligand Containing Nanoparticles.
6. Experimental Biology Meeting, San Diego, CA. April 2014. (Poster). Zhang J, Nie S, **Wang S (corresponding author)**. The Anti-Atherogenic Effects of Targeted Epigallocatechin Gallate (EGCG) - Loaded Nanoparticles.
7. Fourth Annual Conference of the American Society for Nanomedicine. Universities at Shady Grove, Rockville, MD. March 2014. (Poster)

- Zhang J, Nie S, **Wang S (corresponding author)**. Targeted (-)-Epigallocatechin Gallate Loaded Lipid Nanoparticles inhibit Foam Cell Formation.
8. The 31st Annual Scientific Meeting of the Obesity Society, Atlanta, GA. November 2013. (Poster)
Goktas Z, **Wang S (corresponding author)**, Owens S, Boylan M, Syn D, Shen C, Reed D, SanFrancisco. S. Associations between tissue retinol binding protein-4 levels and insulin resistance in morbidly obese subjects.
 9. American Heart Association's Scientific Sessions 2013, Dallas, TX. November 2013. (Poster)
Jia Zhang, Shufang Nie, **Wang S (corresponding author)**. Characteristics and anti-atherosclerotic properties of (-)-epigallocatechin gallate loaded lipid nanoparticles *in vitro*.
 10. Annual Meeting of Chinese Society for Nutrition. Hangzhou, China. May 17, 2013. **(Invited oral presentation)**.
Wang S. Dietary fat and cardiovascular disease. A Special Session for the North America Chinese Society for Nutrition (NACSN).
 11. West Lake Frontiers in Nutrition Research Training Program (WFNRTP), Hangzhou, China. May 18, 2013. **(Invited oral presentation)**.
Wang S. Dietary fat, inflammation and cardiovascular disease.
 12. Experimental Biology Meeting, Boston, MA. April 2013. (Oral presentation).
Sun M, Nie S, Pan X, Fan Z, **Wang S (corresponding author)**. Quercetin encapsulated nanocarriers: effects on breast cancer cell growth, apoptosis, and uptake *in vitro* and bioavailability *in vivo*.
 13. Experimental Biology Meeting, Boston, MA. April 2013. (Oral presentation).
Bapat P, Sun M, **Wang S (corresponding author)**. Promising applications of nano-encapsulated (-) epigallocatechin gallate during adipogenesis in 3T3-L1 cells.
 14. Experimental Biology Meeting, Boston, MA. April 2013. (Oral presentation).
Zhang J, Nie S, **Wang S (corresponding author)**. Epigallocatechin gallate (EGCG) - loaded nanoparticles decrease cholesterol content in THP-1 derived macrophages.
 15. Experimental Biology Meeting, Boston, MA. April 2013. (Poster).
Goktas Z, **Wang S (corresponding author)**. Visfatin and vaspin protein concentrations in different tissues and insulin resistance.
 16. American Heart Association's Scientific Sessions 2012, Los Angeles, CA. November 2012. (Oral presentation)
Wang S (corresponding author), Miller B, Matthan NR, Wu D, Lichtenstein AH. Effect of atherogenic diets with different ratios of omega-6 polyunsaturated fatty acids to eicosapentaenoic acid plus docosahexaenoic acid on lipid content and inflammatory response in hepatic and visceral adipose tissue in LDL receptor null mice.

17. International Conference and Exhibition on Nutritional Science & Therapy Aug.27 to 29, 2012. Philadelphia, PA. **(Invited oral presentation).**
Wang S (corresponding author). Inflammation and Chronic Diseases: the Role of Dietary Fat.
18. Metabolism, Diet and Disease Conference, Washington DC, May 29-31, 2012. (Poster).
Bapat P and **Wang S.** Effect of nano-encapsulated (-) epigallocatechin gallate on triglyceride accumulation in 3T3-L1 adipocytes.
19. Metabolism, Diet and Disease Conference, Washington DC, May 29-31, 2012. (Poster)
Goktas Z and **Wang S.** Visfatin and RBP4 gene expression levels in different adipose tissues and insulin resistance.
20. Experimental Biology Meeting, San Diego, CA. April 2012. (Poster).
Wang S (corresponding author), Zhang J, Sun M, Fan ZY. Nanoencapsulation increases (-)-epigallocatechin gallate stability and its cellular bioavailability in macrophages.
21. Experimental Biology Meeting, San Diego, CA. April 2012. (Poster).
Wang S (corresponding author), Wu D, Matthan NR, Lichtenstein AH. Lower dietary n-6 polyunsaturated fatty acids: eicosapentaenoic acid plus docosahexaenoic acid ratio decreases the expression of inflammatory factors in livers and visceral adipose tissue in LDL receptor null mice.
22. Experimental Biology Meeting, Washington, DC. April 2011. (Poster).
Wang S (corresponding author), Reed D, Goli S, Goswami D. Associations between blood lipid and inflammatory biomarkers and obesity in university students.
23. Texas Tech University Health Sciences Center 2011 Annual Cancer Symposium, Amarillo, TX. April 2011. (Poster).
Castillo-Cohen de Pace R, **Wang S (corresponding author).** Apoptotic and antiproliferative effect of nanoencapsulated (-)-epigallocatechin-3-gallate in MCF7 cells.
24. American Society For Nanomedicine, Third Annual Conference, Rockville, MD 2011. (Poster).
Castillo-Cohen de Pace R, **Wang S (corresponding author).** Green tea nanoliposomes: a promising approach for the prevention and treatment of breast cancer.
25. Experimental Biology Meeting, Amheim, CA. April 2010. (Poster).
Wang S (corresponding author), Wu YC, Wu D, Matthan NR, Lamon-Fava S, Srinivasan I, Reed D, Lichtenstein AH. Atherogenic diet promotes liver inflammation, fatty liver formation & atherogenesis in LDL receptor null mice.
26. TTU graduate student research poster competition. March 2010. (Poster).
Wang S (corresponding author), Wu YC, Srinivasan I, Wu D, Lichtenstein AH. Western-type diet promotes liver inflammation, fatty liver formation & atherogenesis in LDL receptor null mice.

27. Experimental Biology Meeting, New Orleans, LA. April 2009. (Poster).
Wang S, Wu D, Matthan NR, Lamon-Fava S, Lecker JL, Wu YC, Lichtenstein AH. Atherogenic diet promotes atherosclerotic lesion formation by enhancing inflammatory response in the LDL receptor null mouse.
28. NIH meeting. December 2009. (Oral presentation).
Wang S. Effects of EGCG incorporated nanoemulsions containing oxidized phosphatidylcholine on atherosclerosis.
29. SACNAS (Advancing Hispanic/Chicanos and Native Americans in Science) National Conference. October 2010. (Poster).
Shedd S, Reed D, **Wang S**, Srinirasan I. Pilot Study to evaluate the correlation of plasma tumor necrosis factor biomarker and BMI in university students.
30. Alpha Chi Omega student group at TTU, Fall 2008. (Oral presentation).
Wang S. Healthy Eating and Exercise During the Holiday Season.
31. Texas Tech University Health Sciences Center. February 2008. (Oral presentation).
Wang S. Impact of fatty acids in atherosclerotic lesion formation and inflammation.
32. Experimental Biology Meeting, Washington, DC. April 2007. (Oral presentation).
Wang S, Wu D, Matthan NR, Lichtenstein AH. The Impact of different ratios of omega-6 polyunsaturated fatty acids to eicosapentaenoic acid (EPA) plus docosahexaenoic acid (DHA) on atherosclerotic lesion formation and inflammatory factors in the LDL receptor knockout (LDLr^{-/-}) mouse.
33. American Heart Association, Arteriosclerosis, Thrombosis, and Vascular Biology Annual Conference, Chicago, IL. April 2007. (Poster).
Wang S, Wu D, Matthan NR, Lichtenstein AH. Impact of omega-6 polyunsaturated fatty acids: eicosapentaenoic acid + docosahexaenoic acid ratios in LDL receptor knockout (LDLr^{-/-}) mice in atherosclerotic lesion formation and elicited peritoneal macrophage inflammatory response.
34. Experimental Biology Meeting, New Orleans, LA. April 2002. (Poster).
Wang S, Noh SK, Koo SI. Green tea epigallocatechin gallate (EGCG) inhibits the luminal hydrolysis and lymphatic output of phosphatidylcholine (PC) and lowers the lymphatic absorption of fat and alpha-tocopherol in ovariectomized rats.
35. Experimental Biology Meeting, New Orleans, LA. April 2002. (Poster).
Koo SI, **Wang S**, Noh SK. (+)-Catechin is a potent inhibitor than resveratrol of the intestinal absorption of cholesterol in ovariectomized rats.
36. Experimental Biology Meeting, Orlando, FL. April 2001. (Poster).
Wang S, Noh SK, Koo SI. Green tea catechins inhibit pancreatic phospholipase A₂ activity *in vitro*.

RESEARCH SUPPORT

Ongoing Research Support

1. NIH R15 AT008733-01 Wang (PI) 04/01/2015-03/31/2018
NCCAM/NIH “Anti-Obesity Effects of Adipose-Targeting Resveratrol Nanocarriers”.
The goal this project is to study the effect of nanoencapsulated resveratrol on obesity prevention and treatment.
Role: PI
2. USDA AFRI Wang (Co-PI) 04/01/2015-03/31/2016
“Establishing *C Elegans* as a Model for Nutritional Studies”
The goal this project is to study the effect of omega-3 fatty acids on metabolic disorders using *C Elegans*.
Role: Co-PI

Completed Research Support

1. NIH R15 AT007013-01 Wang (PI) 09/30/2011-09/29/2014
NCCAM/NIH “Green Tea Nanocarriers: A Promising Approach for the Prevention and Treatment of Atherosclerosis”.
The goal this project is to study the effect of nanoencapsulated (-)-epigallocatechin gallate (EGCG) on the development of atherosclerosis.
Role: PI
2. The Burleson’s Family Wang (PI) 02/01/2012-01/31/2015
Supporting a postdoctoral research associate for conducting research in early detection of atherosclerotic lesions using biocompatible nanoparticles and helping in the above NIH funded project for three years.
Role: PI
3. Omega Proteins Company Ballou M (PI) 08/01-2013 – 07/30/2014
“How Do Various Omega-3 Fatty acids Alone or In Combination Influence the Risk for Osteoporosis, Obesity, and Neutral Degenerative Diseases”.
The objective of this project is to investigate the role omega-3 fatty acids in regulating inflammatory response and the progression of neutral degenerative diseases in adipose tissue, brain and bone in mice.
Role: Co-Investigator
4. Omega Proteins Company Ballou M and Wang S (PI) 02/01-2012 – 01/31/2013
“Understanding the Role Docosapentaenoic Acid n-3 (DPAn3) Plays in Controlling Inflammation, Lipid Metabolism, and the Development of Atherosclerosis”.
The objective of this project is to study the effect of docosapentaenoic acid n-3 (DPAn3) on the development of atherosclerosis *in vitro* and *in vivo*.
5. The Burleson’s Family Wang (PI) 04/01/2011– 03/31/2013
“Using Green Tea Nanoparticles to Prevent and Cure Cardiovascular Disease”.
The objective of this project is to synthesize green tea nanoparticles to prevent or reverse atherosclerosis.
6. Research Grant from Reliable GeolInfo LLC. Wang (PI) 01/01-2011 – 08/31/2013

“Chitosan-Coated Nanoliposomes as Carriers of EGCG Inhibit Atherosclerotic Macrophage Functions”.

The objective of this project is to synthesize (-)-epigallocatechin gallate (EGCG) encapsulated nanoparticles to increase its stability, bioavailability and target specificity to macrophages, and to measure its anti-atherogenic effects on macrophages.

TEACHING

NS1301 Introduction to Nutrition (spring 2009)

NS4320 Nutritional Biochemistry (2009-2011)

NS5118 Seminar (spring 2012)

NS5327 Lipids in Nutrition (2009-2014)

NS6340 Nutrition and Chronic Diseases (2011-present)

NS5350 Nutritional Pathophysiology (2008-present)

NS5380 Carbohydrates and Proteins in Nutrition (2008-2014)

NS5370 Carbohydrates, Lipids and Proteins in Nutrition (2015-present)

STUDENT RESEARCH SUPERVISION

Undergraduate Students

Iswarya Srinivasan (2009)

Shemika Shedd (2009) -- TTU Plains Bridges to the Baccalaureate (PBB) Program

Shavia Curry (2012 to 2013) -- TTU Plains Bridges to the Baccalaureate (PBB) Program

Joyce Chumo (2014) – TTU National Wind Resource Center summer student program

Taylor Brooks (2014 to 2015)

Leslee Castro (summer 2015)

Graduate Students (Serve as a committee chair)

PHD students

Zeynep Goktas (Graduated in May 2013)

Jia Zhang (Graduated in December 2015)

Yujiao Zu (Current PhD student)

Md Shahjalal Khan (Current PhD student)

Jie Liu (Current PhD student)

MS students

Rita Castillo-Cohen (Graduated in May 2011)

Priyanka Bapat (Graduated in May 2011)

Dhruvi Patel (Graduated in August 2011)

Ming Sun (Graduated in December 2012)

Caraline Trotter (Graduated in May 2013)

Chathurika Samudani Dhanasekara (Current MS student)

Postdoctoral Research Associate

Dr. Shufang Nie (2012 to 2014)

Dr. Md Nazir Hossen (February 2014 to 2015)

Dr. Chunzi Liang (October 2015 to April 2016)

DOCTORAL DISSERTATION COMMITTEE MEMBER

Natalie Hensarling (Graduated in 2011)	Nutritional Sciences
Yi Fang Chen (Graduated in 2013)	Nutritional Sciences
Elizabeth Dombly (Graduated in 2013)	Animal and Food Sciences
Afnan Saaty (Graduated in 2014)	Nutritional Sciences
Suzy Tami (in progress)	Nutritional Sciences
Shannon Owens-Malett (Graduated in 2014)	Nutritional Sciences
Hui Chang (Graduated in 2014)	Nutritional Sciences
Navya Gurajada (Graduated in 2014)	Nutritional Sciences
Hadil Subih (Graduated in 2014)	Nutritional Sciences
Monique Lemieux (Graduated in 2015)	Nutritional Sciences
Mandy Pepper-Yowell (Graduated in 2014)	Animal and Food Sciences
Kembra Albert (Current)	Nutritional Sciences
Pahlavani Mandana (Current)	Nutritional Sciences
Arwa Aljawadi (Current)	Nutritional Sciences
Caroline Schuster (Current)	Biology
James G. Simpson (Current)	Biology

MASTER THESIS COMMITTEE MEMBER

Yi Fang Chen (Graduated in 2011)	Nutritional Sciences
Jenny Chen (Graduated in 2011)	Nutritional Sciences
Cassie Alvarado (Graduated in 2011)	Nutritional Sciences
Amanda Kozimor (Graduated in 2011)	Nutritional Sciences
Indrika Ranaweera (Graduated in 2012)	Nutritional Sciences
Wenbin Zhu (Graduated in 2013)	Environmental & Human Health
Arwa Aljawadi (Graduated in 2013)	Nutritional Sciences
Chathuriks Samudani Dhanasekara (in progress)	Nutritional Sciences

SERVICE

University Committees and Service

- Safety in Creative Activity Research and Scholarship Committee (2011 to 2013).
- A Member of the Animal Care and Use Committee (2013-2015 academic year)
- The Convocations Committee (2013-2015 academic year)
- The Junior Faculty Expert Panel at TTU Young Investigator Forum Hosted by TTU Office of the Vice President for Research (February 24, 2012 and March 8, 2013).

- A Judge for Poster Presentations: TTU Undergraduate Research Conference (April 2012 and April 2013)

College Committee

- The Commencement Activities Committee
- Promotion and Tenure Committee (2015-2017)

Department Committees and Service

- Department Hygiene Officer (2010-2014)
- New Faculty Search Committees (2009 and 2013)
- Graduate Curriculum Committee at Nutritional Sciences Department
- Co-Advisor for TTU Graduate Nutrition Organization
- Web-site Development Committee at Nutritional Sciences Department (2015)

Professional Service

National and international scientific conference service

- Co-Chair for Track 1: Nutritional Assessment and Basic Requirements; Track 3: Nutritional Disorders and Therapy; and Track 6: Stage-Specific Nutrition Requirements at International Conference and Exhibition on Nutritional Science & Therapy. Philadelphia, USA. (August 2012)
- Co-Chair in the Minisymposium of Nutrient-Gene Interactions: Lipids at Experimental Biology Meeting in Boston, MA. (April 2013)
- Co-Chair in the Minisymposium of Effects of Dietary Bioactive Components in Animal Models of Obesity and Cardiometabolic Risk at Experimental Biology Meeting in Boston, MA. (April 2015)
- Co-Chair in the Minisymposium of Diet and Cancer: Animal and Molecular Studies at Experimental Biology Meeting in San Diego, CA. (April 2016)

Grant reviewer

- An External Reviewer for Texas Department of Agriculture's Food and Fibers Research Grant Program.
- A Peer Reviewer in the Review Panel of American Heart Association LIPIDS & LIPOPROTEIN METABOLISM Basic Science from April 2013 to Present.

Abstract reviewer

- Review 96 Abstracts for Scientific Sessions 2013, the Annual Conference of American Heart Association (2013).

Manuscript reviewer for the following journals

- Nanomedicine: Nanotechnology, Biology, and Medicine (Impact Factor: 6.930)
- Nutrition Research (Impact Factor: 2.142)
- Journal of Medicinal Food (Impact Factor: 1.642)

- The Journal of Nutritional Biochemistry (Impact Factor: 4.552)
- PLOS ONE (Impact Factor: 3.730)
- Advances in Nutrition (Impact Factor: 3.200)
- Journal of Diabetes & Metabolism (Impact Factor: 3.784)
- Marine Drugs (Impact Factor: 3.978)
- Journal of Liposome Research (Impact Factor: 1.909)
- International Journal of Obesity (Impact Factor: 5.386)
- Journal of Agricultural and Food Chemistry (Impact Factor: 3.107)
- International Journal of Obesity (Impact Factor: 5.386 review in January 2015)
- Journal of Agricultural and Food Chemistry (review in April 2015)
- International Journal of Nanomedicine (review in July 2015)
- Nutrition Reviews (review in September 2015)
- International Journal of Nanomedicine (review in November 2015)
- Drug Design, Development and Therapy (review in 2015)
- International Journal of Pharmaceutics (Manuscript Number IJP-D-15-02295 reviewed in December 2015)

Book reviewer

TTU President's Book Award Reviewer (2011)

Other service

- Graduate Dean's Representative for the Following PhD Candidates: Lixia Chen, Yi-Hua Yuan, Shery L. Mahon and Jianbin Wu at TTU.
- A Graduate and Postdoctoral Mentor at Experimental Biology Meeting on April 23, 2012 in San Diego Convention Center, San Diego, CA. I have mentored one graduate from University of Connecticut and one postdoctoral research associate from North Carolina A&T State University.
- Award committee member of the North America Chinese Society for Nutrition (NACSN) (2015)
- Co-chair of award committee of the North America Chinese Society for Nutrition (NACSN) (2016)