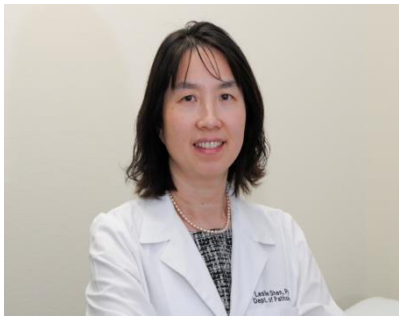
Dr. Chwan-Li (Leslie) Shen, PhD, CCRP, is a Professor of Pathology, School of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX.



Leslie is one of the NACSN founding members and past president of NACSN (2014-2015). She has made significant contribution in the establishment of the NACSN. During her NACSN's presidency, she initiated/implemented Faculty/Trainee Mentor-Mentee Program, Travel Award Program, NACSN newsletters, and organized/co-sponsored NACSN-CNS conferences.

Leslie's research includes a wide spectrum of interventions such as bioactive components/functional food and exercise, and various mechanisms – often shown in different musculoskeletal disease models. Her translational research program has been funded by NIH to study impacts of green tea on osteoporosis. Her research and presentations are well received by funding agencies (federal/industry), national scientific societies, and public media. Leslie has published 76+ journal papers, 3 book chapters, and made 84 national/international conference/invited talks. She served on study sections for national/federal/private/foreign funding agencies, an editorial board member of 12 journals, and a reviewer for 100+ journals.

Leslie is competent investigator and leader in the field of nutrition and health. She has engaged multiple colleagues to focus on contemporary nutrition issues that exemplify knowledge of biology and chronic disease. She is a team builder/leader to work with in academic and industry.

NAME	POSITION TITLE
Chwan-Li (Leslie) Shen	Professor of Pathology School of Medicine

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Providence University, Taiwan, R.O.C.	B.S.	1986-1989	Food & Nutrition
Texas Tech University, Lubbock, Texas	M.S.	1990-1991	Nutrition/bone
Purdue University, West Lafayette, Indiana	Ph.D.	1992-1995	Food Sci/Nutrition/bone
Texas Tech University Health Science Center, School of Medicine, Lubbock, Texas	Postdoc	1996-2000	Bone pathology /nutrition/carcinogenesis

Summary of Research:

During the past 14 years or so at School of Medicine, I developed independent research programs in a number of areas related to musculoskeletal pathology, addressing bone, joint, and muscle health issues related to osteoporosis, osteoarthritis, and sarcopenia, in addition to other chronic diseases including obesity, diabetes, renal disease, and frailty, using treatments/interventions such as nutrition (dietary nutrients, bioactive components, functional food, phytochemicals, herbal supplements) and exercise, and investigated mechanisms such as anti-inflammation, anti-oxidative DNA damage, bone metabolism and microstructure, and bone/joint/muscle strength.

As a researcher, I have several unique traits different from others. First, I am one of a few researchers who can conduct true **translational research**. To benefit human health, scientific discoveries must be translated from basic laboratory research into practical applications to humans. I have conducted translational research using animal models to investigate the effects and mechanisms associated with nutritional/dietary treatments, and eventually tested them on human subjects in clinical studies (I am a certified Clinical Research Professionals) and producing results that can benefit human health. Secondly, I am one of a few researchers who can and have conducted studies with both dietary and exercise interventions on human health. Knowledge has been established that it is particularly important to combine nutrition and physical activity in improving **musculoskeletal health (bone, joint, and skeletal muscle)** through their additive or even synergistic effects.

One of my strengths is in organizing and leading issue-oriented **multidisciplinary** research collaborations with faculty members inside and outside my department, school, and university. Based on research ideas initiated by myself to address various health issues mentioned above, I have succeeded in organizing a team of about 30 researchers with a wide spectrum of expertise including internal medicine, cardiology, endocrinology, rheumatology, nephrology, immunology, cell biology, molecular epidemiology, orthopedic surgery, dietetics, physical therapy, rehabilitation sciences, family & community medicine, environmental health, food science, psychology, nursing, pharmacology, pharmacy, exercise sciences, biostatistics, animal sciences, and material & fracture engineering.

In conducting the research above, I have secured more than $3+ M external grants (as the Principal Investigator) from federal, foundation, and industry sources. My co-authors and I have published 70+ papers in peer-reviewed journals including invited reviews and 3 book chapters. Our work on mitigation of bone loss, osteoarthritis, and sarcopenia through dietary supplements (i.e., green tea) and exercise (i.e., Tai Chi) have been publicized in major news media and more than 20 million websites (e.g., USA today, MSN.com, etc.). With my experience, vision, and leadership in research, I continue to develop/establish a variety of programs across multiple disciplines that will complement and strengthen my current research and education focus on **the role of nutrition/food, diet, and physical activity in the etiology, prevention, and treatment of chronic diseases** in SOM as well as TTUHSC.

Position and experience

Professor (tenured), 2014-present. Associate Professor (tenured), 2008-2014. Assistant Professor, February 2001-2008. Department of Pathology, School of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX.

Joint Professor, 2014-present. Joint Associate Professor, 2008-2014. Joint Assistant Professor, 2005-2008. Department of Physiology, School of Medicine, Texas Tech University Health Sciences Center, Lubbock, Texas.

Joint Clinical Professor, 2014-present. Joint Clinical Associate Professor, 2008-2014. Joint Clinical Assistant Professor, 2004-2008. Department of Laboratory Sciences and Primary Care, School of Allied Health, Texas Tech University Health Sciences Center, Lubbock, Texas.
Faculty Member, 2001 to present. Southwest Cancer Treatment and Research Center, University Medical Center, Lubbock, Texas.
Adjunct Faculty Member, 2002 to present. Institute of Environmental and Human Health, Texas Tech University, Lubbock, Texas.
Adjunct Graduate Faculty Member, 2002 to present. Texas Tech University, Lubbock, Texas.
Adjunct Assistant Professor, 2002-2008. Adjunct Associate Professor, 2008 to present. Department of Food & Nutrition, Texas Tech University, Lubbock, Texas.
Adjunct Associate Professor, 1995. Department of Food & Nutrition, Providence University, Taiwan. Taught Nutrition.

Honors

Certificate of Merit, Institute of Food Technologists, 1993-1994, 1994-1995.
Neely Treadwell Cancer Investigator Award, 2005.
Fellow, United States Bone and Joint Decade Young Clinical Investigator Workshop Program on the Design and Conduct of Randomized Clinical Trials in Bone and Joint Diseases, 2006.
Unsung Hero, School of Medicine, Texas Tech University Health Sciences Center, 2011.
Chancellor's Council Distinguished Research Award, Texas Tech University System, 2011.
Nominated for "E.V. McCollum Award", American Society for Nutrition, 2013.
Nominated for "The Mary Swartz Rose Senior Investigator Award", American Society for Nutrition, 2014.
Nominated for "Mary Swartz Rose Senior Investigator Award", American Society for Nutrition, 2015.

Certificate

CCRP: Certified Clinical Research Professionals by SoCRA (The Society of Clinical Research Associates), 2010.

Professional society memberships

American Association for Cancer Research (AACR), 1996 - present
American College of Sports Medicine (ACSM), 2004 - present
American Diabetes Association (ADA), 2005 - present
American Oil Chemists' Society (AOCS), 1992 - 1996
merican Society for Bone and Mineral Research (ASBMR), 2005 - present
American Society for Nutrition (ASN), 1990 - present
Center for Enhancing Foods to Protect Health, 2001 - present
Institute of Food Technologists (IFT), 1992 - present
Institute for Healthy Aging, TTUHSC, 2001 - present
International Chinese Hard Tissue Society (ICHTS), 2002 - present
International Society for Clinical Densitometry (ISCD), 2011-present
SoCRA: The Society of Clinical Research Associates, 2010-present
Southwest Cancer Treatment and Research Center, 2001 - present
OsteoArthritis Research Society International (OARSI), 2001 - present

Teaching

Pathology for Medical School Years I & II, including apoptosis and cell repair, inflammation, nutritional deficiency, and herbal medicine, nutrition and bone diseases, 2001 - present.

Serve on PhD Advisory Committee:

1. Ying Liu, The Institute of Environmental and Human Health, TTU, 2002 (changed to different mentor in 2002).
2. Billam M, Institute of Environmental and Human Health, TTU, 2002-2006. Dissertation title: Microsystin-LR, aflatoxin B1 and fumonisin B1 in liver carcinogenesis.
3. Liu H, Institute of Environmental and Human Health, TTU 2002-2005. Dissertation title: Phase IIa chemoprevention trial with green tea polyphenols in high-risk population of liver cancer.

4. Wang Z, Institute of Environmental and Human Health, TTU 2004-2007. Dissertation title: Environmental carcinogens exposure and genetic polymorphisms on human esophageal carcinogenesis.
5. Lee F, Department of Physiology, TTUHSC, 2002-2006. Dissertation title: The effect of acute and chronic exercise training on systemic BDNF, mood, cognition. Other resarch project: Resistance training improves sleep quality in older adults.
6. Bliss R, Department of Physiology, TTUHSC, 2007-2009. Dissertation title: The effect of tumor necrosis factor apha on AMPA induced excitotoxicity in cerebellar purkinje neurons.
7. Chen L, Institute of Environmental and Human Health, TTU 2008-2010. Dissertation title: The effects of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) on human lung epithelial cells.
8. Goswami D, Department of Nutrition, TTU. 2010-2011. Tentative Dissertation title: Green tea and atherosclerosis (changed to different mentor in 2012).
9. Goktas Z, Department of Nutrition, TTU. 2010-2013. Dissertation title: Visfatin, vaspin, apelin, and RBP-4 expression levels in different tissues in severely obese patients.
10. Lu C, Department of Environmental and Human Health, TTU, 2011-present. Dissertation title: Chemotherapeutic sensitization of lung cancer cells by combination therapy.
11. Veni S, Department of Endocrinology, Dr. Alm Post Graduate Institute of Basic Medical Sciences, University of Madras, Taramani Campus, Chennai, India. 2011-2012. Dissertation title: In vitro and in vivo studies on the impact of ethanolic bark extract of Terminali arjuna (Wight & Arnott) on rat bone cells.
12. Zhang J, Department of Nutrition, TTU. 2013-present. Dissertation title: Effect of nanoencapsulated EGCG on atherosclerotic lesion formation.
13. Schuster C, Department of Biology, TTU. 2014-present. Thesis title: The effects of epigallocatechin-3-gallate on obesity-related breast cancer bone metastasis.

Serve on Master Advisory Committees:

1. Raja A, Department of Mechanical Engineering, TTU. 2002-2004. Thesis title: Dietary n-3 polyunsaturated fatty acids prevent aging-induced bone loss in male rats.
2. Jackson TL, Department of Nutrition, TTU, 2008-2009. Thesis title: Obese hemodialysis subjects have lower serum 25-hydroxy vitamin D levels and are taking higher doses of doxercalciferol than normal weight subjects.
3. Bollman L, Department of Nutrition, TTU, 2008-2009. Thesis title: Effects of vitamin D3 supplementation on serum bone specific alkaline phosphatase and intact parathyroid hormone levels in hemodialysis subjects.
4. Chanjaplammootil S, Master Engineering Degree, Healthcare Engineering Program, Department of Mechanical Engineering, TTU 2009-11. Report title: Effect of green tea polyphenols on body composition in obese rats induced by high-fat diet.
5. Rodriguez C, Department of Biology, TTU, 2012-2014. Thesis title: Attachment of fibroblasts to hybrid nanoscale scaffolds. Changed to different advisor.

Supervisor for resident/fellow research project:

1. Oetama B, Department of Pathology, TTUHSC 2001-2004. Project title: (i) Differential effects of selenium compounds on inflamation in human osteoarthritic chondrocyte model, and (ii) Effects of conjugated linoleic acids on inflammation in human osteoarthritis chondrocytes.
2. Allen S, Department of Pathology, TTUHSC, 2004-2005. Project title: Comparison of effects of resistance training and Tai Chi on bone health of the elderly at high risk of osteoporosis.
3. Do T, Nephrology fellow, Department of Internal Medicine, TTUHSC. 2009-2010. Project title: Modified Tai Chi Exercise During Outpatient Hemodialysis Therapy.
4. Lixia Chen, Department of Neuroscience and Pharmacology, TTUHSC, 2012-present. Invited review articles. (i) Fruits and dietary phytochemicals in bone protection; (ii) Green tea and other fruit polyphenols attenuate deterioration of bone microarchitecture; (iii) Functions and mechanisms of green tea catechins in regulating bone remodeling; (iv) Novel insights of dietary polyphenols and obesity; and (v) Therapeutic properties of green tea against environmental insults.

Supervisor for Medical Student Research Project:

1. von Bergen, V, School of Medicine, TTUHSC, 2010-2013 (i) participating in invited review articles (1st review title: CAM exercise for osteoarthritis, and 2nd review title: Polyphenolics for bone health), and (ii) participating in

an ongoing clinical study (project title: Martial Arts Exercise Program for Overweight/Obese Premenopausal Women- a Pilot Study).

2. Chuang E, School of Medicine, TTUHSC, 2010-2013: (i) participating in invited review articles (title: Polyphenolics for osteoarthritis) and (ii) participating in clinical studies (1st project title: Effect of GTP and Tai Chi on lipid profiles and glucose in postmenopausal osteopenic women, and 2nd project title: Martial Arts Exercise Program for Overweight/Obese Premenopausal Women- a Pilot Study).
3. Peihsuan Tsai, School of Medicine, TTUHSC, 2013-present: (i) participating in clinical study (project title: Effect of Tocotrienols on Bone Health), and (ii) participating in Frontier Research (project title: Diabetes and Musculoskeletal Health, Sleep Deficits and Musculoskeletal Health, Depression and Musculoskeletal Health).

Supervisor for PhD student summer project;

1. Wang P, Department of Environmental and Human Health, TTU, 2007. Protective Role of Green Tea Polyphenols (GTP) in Bone Microarchitecture of Aged Female Rats.
2. Poklikuha G. Department of Rehabiliation Sciences, School of Allied Health, TTUHSC. 2008. Project title: Effects of Tai Chi exercise on biomechanical responses in postmenopausal women with low bone mass.
3. Shao C, Department of Environmental and Human Health, TTUH, 2009. Project title: A gel-based proteomic analysis of green tea polyphenols effects on ovariectomized rats.

Supervisor for master student research project;

1. Tran H, Molecular Pathology Graduate Research Program, School of Allied Health, TTUHSC. 2004 - 2005. Project title: n-3 PUFA on osteoblastogenesis: NO production.
2. Badger T, Molecular Pathology Graduate Research Program, School of Allied Health, TTUHSC. 2004 - 2005. Project title: n-3 PUFA on osteoblastogenesis: PGE2 production.
3. Arnold A, Molecular Pathology Graduate Research Program, School of Allied Health, TTUHSC. 2004 - 2005. Project title: n-3 PUFA on osteoblastogenesis: NO protein expression.
4. Locknane G, Molecular Pathology Graduate Research Program, School of Allied Health, TTUHSC. 2004 - 2005. Project title: n-3 PUFA on osteoblastogenesis: COX-2 protein expression.
5. Peterson J, Molecular Pathology Graduate Research Program, School of Allied Health, TTUHSC. 2005-2006. Project title: Effect of long-chain n-3 PUFA on inflammation during osteoblastogenesis.
6. Tubb C, Molecular Pathology Graduate Research Program, School of Allied Health, TTUHSC. 2007-2008. Project title: Effect of green tea polyphenols on fibrosis in female rats with chronic inflammation-induced bone loss.
7. Boatright JD, Department of Rehabilitation Science, School of Allied Health, TTUHSC, 2005-2007. Research activity: participating in clinical trial (project title: Effects of Tai Chi on Status of Elderly Subjects with Knee Osteoarthritis : a Prospective Randomized Controlled Trial).
8. Hagar JM, Department of Rehabilitation Science, School of Allied Health, TTUHSC, 2005-2007. Research activity: participating in clinical trial (project title: Effects of Tai Chi on Status of Elderly Subjects with Knee Osteoarthritis : a Prospective Randomized Controlled Trial).
9. McCaleb JA, Department of Rehabilitation Science, School of Allied Health, TTUHSC, 2005-2007. Research activity: participating in clinical trial (project title: Effects of Tai Chi on Status of Elderly Subjects with Knee Osteoarthritis : a Prospective Randomized Controlled Trial).
10. Quintela MM, Department of Rehabilitation Science, School of Allied Health, TTUHSC, 2005-2007. Research activity: participating in clinical trial (project title: Effects of Tai Chi on Status of Elderly Subjects with Knee Osteoarthritis : a Prospective Randomized Controlled Trial).
11. Camp C, Molecular Pathology Graduate Research Program, School of Allied Health, TTUHSC. 2009 - 2010. Project title: Effect of Tai Chi on 1,25-OH vitamin D of hemodialysis patients.
12. Lo D, Department of Biology, TTU, 2011-2012. Research actitivies: (i) participating in invited review article (review title: Dietary polyphenols for osteoarthritis) and (ii) participating in clinical study (project title: Acupressure's impact on knee pain among osteoarthritic women).

Supervisor for Undergraduate students

1. Thompson E, Department of Biology, TTU 2004-2005. Project titles: (i) Effects of a six-week Tai Chi exercise intervention on gait kinematics in individuals with knee osteoarthritis and (ii) Effect of Tai Chi Exercise on Type

2 Diabetes. 2009. Project title: Intradialytic Modified Tai Chi Exercise Improves Balance in Hemodialysis Patients.
2. Durrer K, TTU/HHMI Undergraduate Research Fellow, Biology major, 2004 – 2006. Project title: Effect of CLA on IL-6 production of osteoblastic-like cells treated with human prostate cancer conditioned media.
3. Catalina R, TTU/HHMI Undergraduate Research Fellow, Biology major, 2008. Project title: Modified Tai Chi on the bone health of hemodialysis patients.
4. Lo D, Department of Moleclular Biology, University of Berkerly, 2009. Project title: Short-term modified Tai Chi exercise on quality of life in hemodialysis patients.
5. Ayankola J, TTU/HHMI undergraduate Research Fellow, Biology major, TTU, 2010-2011: (i) involving in an animal study (title: Green tea and osteoarthritis), and (ii) participating in my ongoing clinical study (title: Martial Arts Exercise Program for Overweight/Obese Premenopausal Women- a Pilot Study -responsible for bone turnover biomarker assessment).

Supervisor for High School Research Program:
1. Lo D, 2004 summer, 2005 summer, and 2006 summer. Project title: Dietary n-3 PUFA on the production of oxidative stress in tissues of middle-aged male rats.
2. Hwang J, 2004 summer. Project title: Dietary n-3 PUFA on the production of inflammatory mediators in middle-aged male rats.

Others:
1. Small Group Facilitator for MSI (4 hours/month): 2005
2. Participated in curriculum of Medical School Year I. Foundation II block and Organ block 2005, 2006
3. Participated in new curriculum design: Nutrition in Medicine- GI Nutrition Design Team, Structure and Function of Cells and Tissues Block, Structure and Function of Major Organ Systems 2005
4. Medical School Year I Students Discussion Group. Texas Tech University Health Sciences Center, 2005-2006, 2013-present.
5. Curriculum development for Sex and Gender-based medicine 2012-present.

Mentoring of Faculty
1. Yan Zhang, PhD, Associate Professor, Department of Family and Community Medicine, TTUHSC, Lubbock, TX. 2008-present.
2. Shu Wang, PhD, Associate Professor, Department of Nutritional Science, TTU, Lubbock, TX. 2008-present.
3. Shengping Yang, PhD, Assistant Professor, Department of Pathology, TTUHSC, Lubbock, TX. 2013-present.
4. Eunhee Chung, PhD, Assistant Professor, Department of Health Exercise and Sport Sciences, TTU, Lubbock, TX. 2014-present.
5. Libo Tan, PhD, Assistant Professor, Department of Human Nutrition, University of Alabama, Tuscaloosa, AL. 2014-present.
6. Dingbo Lin, PhD, Assistant Professor, Department of Nutritional Sciences, Oklahoma State University, Stillwater, OK. 2013-present.

Academically-Related Public Service

Grant reviewer:

(Ad Hoc) NIH Study Panel: Integrative and Clinical Endocrinology and Reproduction Study Section. ICER. June 11-12, 2015.

(Ad Hoc) French National Research Agency (ANR). Scientific Evaluation Panel. Nutrition and Obesity Study Section. June 2015.

(mailer) Beijing National Science Foundation. 2015

(mailer) Health and Medical Research Fund, Food and Health Bureau, Government of Hong Kong Special Administrative Region, China. Topic: Exercise and Health. January 2013.

Study Section. US Army Medical Research and Material Command (USAMRMS) 2012- for Peer Reviewed Medical Research Program (PRMRP) Mechanism: Clinical Trial Award. Topic: Orthopaedic Research Program. August 19-21, 2012.

(mailer) Scientific Review Committee, Diet and Health Initiative, University of Connecticut & University of Connecticut Health Center, Storrs, CT, July 2012.
(mailer) US Army Medical Research and Material Command (USAMRMS) 2012- for Peer Reviewed Medical Research Program (PRMRP). Mechanism: Idea Development Award. Topic: Orthopaedic Research Program, June 2012.
Laura W. Bush Institute for Women's Health seed grant/research scholar, Texas Tech University Health Sciences Center, Lubbock, TX. 2012
National Council for Research and Development, Partnership Programme - Joint Applied Research Projects - PCCA 2011. The program finances joint experimental research and technological development projects, having as results such as products, technologies and innovative services aimed at resolving and implementing solutions to complex socio-economic problems of national priority.
Study Section. US Army Medical Research and Material Command (USAMRMS) 2011- for Peer Reviewed Medical Research Program (PRMRP) Topic: Osteoporosis & Related Bone Disease Panel 2 to evaluate proposals that center on biochemical and molecular treatments of osteoporosis. September 21-22, 2011.
(Mailer) Reviewer for Dairy Farmers of Canada. Topic: Nutrition Research Funding. 2011
(Mailer) Reviewer for Discovery Grant proposal for Natural Sciences and Engineering Research Council of Canada, 2009, 2010, 2011.
(Mailer) Grant proposal reviewer, Oklahoma Agricultural Experiment Station (OAES), 2010.
Study Section and Reviewer for USDA/ARS, Center Project Proposals, FY 2009-2013. Topic: Obesity, Physical Activity, and Bone Health, September 23-25, 2009.
Study Section, 2009, National Institutes of Health/Healthcare Delivery and Methodologies Integrated Review Group. 2009.
Study Section. US Army Medical Research and Materiel Command (USAMRMC) for Peer Reviewed Medical Research Program (PRMRP) Topic: Osteoporosis and Related Bone Diseases-O. July 9-10, 2009.
(Mailer) Reviewer for NIH RFA-OD-09-003 (Challenge Grants) Initiative, 2009.
(Mailer) Reviewer/consultant for South African Medical Research Council, Department of Health, Republic of South Africa 2007.
(Mailer) Reviewer for Canadian Institutes of Health Research / Instituts de recherche en santé du Canada, Innovation Programs Branch / Direction des programmes d'innovation. 2002, 2003.
(Mailer) Reviewer for SickKids Foundation, Toronto, Canada 2006, 2007
(Mailer: ad hoc) Reviewer for United States Department of Agriculture:
Cooperative State Research, Education, and Extension Service, National Research Initiative Competitive Grants Program, Bioactive Food Components for Optimal Health 2005
Reviewer for seed grant, Texas Tech University Health Sciences Center 2005
Reviewer for seed grant, Southwest Cancer Treatment and Research Center 2005
Invited to participate in the election of the Advisory Board of the European Society for the Study of the Aging Male (ESSAM) 2007.

Editorial Board Member for 12 Journals:
Annals of Obesity & Disorders (2016-present)
International Journal of Genuine Traditional Medicine (2011-present)
International Journal of Orthopaedics (2014-present)
International Scholarly Research Network Rheumatology (2010-present)
International Scholarly Research Notes (2014-present)
Journal of Nutritional Biochemistry (2011-present)
Nutrition Discovery (2014-present): Associate Editor
Nutrition Research (2010-present)
The Open Access Journal of Science and Technology (2013-present)
The Open Bone Journal (2008-present)
The Open Nutraceuticals Journal (2008-present)
The Open Access Rheumatology Research and Reviews (2009-present)
World Journal of Orthopaedics (2009-present)

Co-founder and president for the North American Chinese Society for Nutrition (NACSN): *established in April, 2012.*

The North America Chinese Society for Nutrition (NACSN) is a non-profit organization established in April, 2012 in the United States. NACSN's mission is to: provide a platform in nutrition, health and related fields of interest for networking among well-estabolished principal investigators of Chinese descend; promote scientific exchange with Chinese colleagues, particularly those inside China; facilitate graduate education and training of Chinese scientists; support the dissemination and application of nutrition science to improve public health and clinical practice in the Chinese community; promote and facilitate collaboration with nutrition and food industry; advocate for nutrition research and its application to development and implementation of policies and practices related to nutrition in the Chinese community. In this session invited speakers of NACSN will introduce the society to the attendees, share their research highlights covering a wide range of nutrition-related topics including non-communicable chronic diseases, obesity, cancer, micronutrients, nutrition immunology, and nutrigenomics, and discuss potential individual or group collaborations in nutrition research, education, and outreach.

Reviewer for 100+ Journals:

Acta Biochimica et Biophysica Sinica
Acta Pharmacologica Sinica
Advance Practice in Nursing
African Journal of Biotechnology
African Journal of Pharmacy and Pharmacology
American Journal of Chinese Medicine
American Journal of Clinical Nutrition
American Journal of Experimental Agriculture
Amino Acids
Annals of Nutrition Disorders & Therapy
Annals of the New York Academy of Sciences
Antioxidants
Archives of Gerontology and Geriatrics
Archives of Orthopaedic and Trauma Surgery
Archives of Physical Medicine and Rehabilitation
Asia Pacific Journal of Clinical Nutrition
Biomedical Engineering
BMC Complementary and Alternative Medicine
BMC Women's Health
BMC Musculoskeletal Disorders
BioFactors
Bone
Botanics: Targets and Therapy
Brain Research
British Journal of Applied Science & Technology
British Journal of Medicine and Medical Research
British Journal of Nutrition
Calcified Tissue International
Canadian Journal of Physiology and Pharmacology
Cell Biology International
Chemico-Biological Interactions
Clinical Immunology, Endocrine & Metabolic Drugs
Clinical Interventions in Aging
Clinical Medicine Insights: Therapeutics
Clinical Orthopaedics and Related Research
Clinical Nutrition
Clinical Rehabilitation
Complementary Clinical Trials
Contemporary Clinical Trials
Current Drug Targets

Current Medicinal Chemistry
Current Nutrition & Food Science
Drug Design, Development and Therapy
Experimental Biology and Medicine
Environmental Toxicology and Pharmacology
Expert Opinion on Pharmacotherapy
Expert Review of Endocrinology & Metabolism
Evidence Based Complementary and Alternative Medicine
European Journal of Nutrition
Food and Chemical Toxicology
Food & Function
Food & Nutritional Disorders
Food Research International
Food Technology and Biotechnology Journal
Hepatology International
International Journal of Environmental Research and Public Health
International Journal of Food Sciences and Nutrition
International Journal of Medicine and Medical Sciences
International Journal of Medical Sciences
International Journal of Molecular Sciences
International Journal of Nanomedicine
International Journal of Nutrition and Metabolism
International Journal of Green Pharmacy
International Scholarly Research Network
International Scholarly Research Notices
ISRN Rheumatology
Journal of the American College of Nutrition
Journal of Aging and Physical Activity
Journal of Agricultural and Food Chemistry
Journal of Animal Science and Biotechnology
Journal of Animal Science
Journal of Applied Physiology
Journal of Arthritis
Journal of Biomedicine and Biotechnology
Journal of Biological Chemistry
Journal of Bone and Mineral Reserach
Journal of Clinical Medicine and Research
Journal of Experimental Pharmacology
Journal of Gerontology: Biological Sciences
Journal of Healthcare Engineering
Journal of Inflammation
Journal of Medicinal Food
Journal of Medicinal Plants Research
Journal of Natural Product
Journal of Nutrition
Journal of Nutrition, Health, and Aging
Journal of Nutrition and Health Sciences
Journal of Nutritional Biochemistry
Journal of Osteoporosis and Physical Activity
Journal of Orthopaedic Surgery and Research
Journal of Osteoporosis
Journal of Rural Health
Journal of Veterinary Medicine

Lipids
Mediators of Inflammation
Medical Journals
Medical Science Monitor
Mini-Review in Medicinal Chemistry
Molecular Nutrition and Food Research
Mount Sinai Journal of Medicine
Nutrients
Nutrition
Nutrition & Dietetics
Nutrition Discovery
Nutrition Research
Obesity Epidemic
Osteoporosis International
Phyotochemistry Reviews
Polymers
PLoS ONE
Preventive Nutrition and Food Science
Societies
Sport
The Chinese Journal of Physiology
The Ergonomics Open Journal
The New York Academy of Sciences
The Open Bone Journal
The Open Nutraceutical Journal
Pharmacological Research
Physiological Genomics
Public Health Nutrition
Recent Patients on Food, Nutrition & Agriculture
World Journal of Orthopaedics

Department:
Residency Search and Review Committee 2001-2012
Faculty Search Committee 2001-present
P&T Review Committee 2008-present

School of Medicine:
Admissions Committee 2003-present
Faculty Development Advisory Committee 2004-2006
Faculty Appointment Committee 2004-2006
Faculty Research Committee (Faculty Executive Committee) 2008-2010
Faculty Forward Task Force Committee 2009-2011
Communication Council Committee 2008-2010
Faculty Council Executive Committee 2012-2013
Faculty Council Executive Committee - Hearing Committee 2013-2016
Post Tenure Peer Review Committee 2013-2015
Grievance Committee 2013-2016
Faculty Development Leave Committee 2013-2016
Student Conduct Board Hearing (SCBH) committee 2014-2016
Tenure and Promotion Committee 2014-2016

University:
Institutional Animal Care and Use Committee 2004-2006

Executive Council, the Laura W Bush Women's Health Institute (LWBIWH) 2007-present
Texas Tech University Obesity Research Cluster Advisory Board 2013-present
Search Committee, Director and Chief Scientific Officer for the Garrison Institute on Aging 2013-2014
Reviewer for LWBIWH/UMC research scholar grant and research seed grant 2015
Co-Chair, LWBIWH Scientific Advisory Committee, 2015-present
Co-Chair, LWBIWH Gender-Specific medicine & Women's Health Symposium, 2015-present

Others:

Judge for the Student Research Days, Texas Tech University Health Sciences Center and Texas Tech University, 2005-present.

Judge for the poster competition, Research Interest Section, Nutrition-Gene Interaction, American Society for Nutrition, April 18, 2009.

Judge for Student Research Days, Texas Tech University undergraduate research program/Howard Hughes Medical Institute Science Education Program/Collage of Human Sciences/McNair Scholars Program/Honors College, 2005. 2011.

External reviewer for Tenure & Promotion application. Assistant Professor to Associate Professor with tenure, Florida International University, 2014.

External reviewer for Tenure & Promotion application. Assistant Professor to Associate Professor with tenure, George State University, 2014.

Served on an *ad hoc* reviewer to review the applicants for "Research Mobility and International Doctoral Programmes". DAAD - Deutscher Akademischer Austauschdienst German Academic Exchange Service. 2014

Served as the President of North America Chinese Society for Nutrition (NACSN) 2014-2015.

- Initiated and implemented "Faculty Mentor-Mentee Program" is designed to offer mentorship to help our junior members to develop a successful career. The program will also be a great platform for academic communication and research collaboration, career development skills, and general skills. Senior members (associate and full professor, senior managers/CEO in industry, etc.) will serve as mentors. The junior members (assistant professor, postdoc, etc) will be the mentees. Participants (Mentor/Mentee) can choose a mentoring relationship based on criteria such as type of mentoring relationship (i.e., input on grant submission, general career advice, etc.) or based on research interests/topics. Mentor and mentees will be paired on a one-to-one basis. NACSN will provide contact information for both mentor and mentee to begin establishing a mentorship relationship.
- Initiated and implemented "Trainee Mentor-Mentee Program" is designed to offer general career-related advices and it will run as a single group with all trainees. NACSN plans to hold sessions during Experimental Biology meeting, webinars, teleconferences, and produce FAQs for career development. This program is not designed for science issues which should be communicated with their respective advisors instead of NACSN. The trainees include PhD students, PhD candidates, and Postdocs. The mentors will include NACSN members at independent stages of their career (assistant professor to full professor, scientists in industry, etc).
- Initiated and implemented "Travel Award Program" provides two awards in 2015, each at $500, for graduate students and/or postdoctoral fellows (trainees) of NACSN members traveling to the scientific meeting of the American Society of Nutrition as part of Experimental Biology Meeting, 2015. Funding is provided in cash or check at Experimental Biology meeting of the year.
- Worked on Fundraising for NACSN activities at Experimental Biology meeting 2015.
- Organized and sponsored "Obesity and Nutrition" session at 12th Chinese Nutrition Conference on May 16-18, 2015in Beijing, China.
- Organized and co-sponsored "International Forum: China" with Chinese Nutrition Society and American Society for Nutrition at Experimental Biology 2015.

Refereed Journal Publications

1. Brismee JM, Yang S, Lambert ME, Chyu MC, Tsai P, hang Y, Han J, Hudson C, Eunhee C, **Shen CL (corresponding author)** Differences in musculoskeletal health due to gender in a rural multiethnic cohort: a Project FRONTIER study. *BMC Musculoskeletal Disorder*. In press.
2. Wainstein HM, Feldman M, **Shen CL**, Leonard D, Willis BL, Finley CE, U Gruntmanis U , DeFina LF, Higher cardiorespiratory fitness mitigates risk of reduced bone mineral density in men: a cross-sectional study. *Mayo*

Clinic Proceedings 2016 Apr 14. pii: S0025-6196(16)30005-2. doi: 10.1016/j.mayocp.2016.02.025. [Epub ahead of print]

3. DeFina LF, Leonard D, Willis BL, Barlow CE, Finley CE, Jenkins M, Pence BC, Zhang Y, Chyu MC, Lewiecki EM, **Shen CL (corresponding author)**. High cardiorespiratory fitness is associated with reduced risk of low bone density in postmenopausal women. *Journal of Women's Health*, January 2016, ahead of print. doi:10.1089/jwh.2014.5170.
4. Han J, Kalibinuer Y, Yuan Q, Xu S, Li C, Tie R, Yu Y, **Shen CL**, Yang SP (2015) Relationship between Serum Resistin level of Xinjiang Uygur and Han subjects with Metabolic Syndrome. *Clinical Laboratory* 61(12):1941-6.
5. Chyu MC, Austin T, Calisir F, Chanjaplammootil S, Davis MJ, Favela J, Gan H, Gefen A, Haddas R, Hahn-Goldberg S, Hornero R, Huang Y-L, Jensen Ø, Jiang Z, Katsanis JS, Lee J-A, Lewis G, Lovell NH, Luebbers H-T, Morales GG, Matis T, Matthews JT, Mazur L, Ng EYK, Oommen KJ, Ormand K, Rohde T, Sánchez-Morillo D, García Sanz-Calcedo J, Sawan M, **Shen CL**, Shieh J-S, Su C-T, Sun L, Sun M, Sun Y, Tewolde SN, Williams EA, Yan C, Zhang J, Zhang Y-T. Healthcare Engineering Defined – a White Paper. *Journal of Healthcare Engineering* 2015:6(4):635-48.
6. Chen CH, Kang L, Lo HC, Hsu TH**,** Lin FY, Lin YS, Wang Z-J, Chen S-T, **Shen CL (corresponding author).** (2015) Effect of *Trametes versicolo*r (L.:Fr.) Pilát on bone properties in diabetic rats. *Journal of Agricultural and Food Chemistry* 63(42):9232-8.
7. **Shen CL**, Han J, Wang S, Chung E, Chyu MC, Cao JJ. (2015) Green tea supplementation benefits body composition and improves bone properties in obese female rats fed with high-fat diet and caloric restricted diet. *Nutrition Research* 2015 Oct 5. pii: S0271-5317(15)00227-4.
8. **Shen CL**, Syapin PJ, Graef JL, Smith BJ, Brackee G, Fowler AK, Segura I, Bergeson SE (2014) Alcohol-induced bone loss and quality during adolescence is improved by green tea polyphenols. *Journal of Clinical Toxicology.* Special issue title: Drug * Alcohol Abuse. 2014, 4:1.
9. **Shen CL**, Chen L, Wang S, Chyu MC (2014) Effects of dietary fat level and feeding duration on musculoskeletal health in female rats. *Food & Function* 5(3): 598-604.
10. Wang S, Matthan NR, Wu D, Reed D, Bapat P, Yin X, Grammas P, **Shen CL**, Lichtenstein AH (2014) 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* 33(2): 260-6.
11. Wang S, Moustaid-Moussa N, Chen L, Mo H, Shastri A, Su S, Bapat P, Kwun IS, **Shen CL (corresponding author)** (2014) Novel insights of dietary polyphenols and obesity. *Journal of Nutritional Biochemistry* 25(1):1-18.
12. Goktas Z, Owens S, Boylan M, Syn D, **Shen CL**, Reed DB, SanFrancisco S, Wang S (2013). Associations between Tissue Visfatin/Nicotinamide Phosphoribosyltransferase (Nampt), 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.
13. **Shen CL,** Kwun IS, Wang S, Mo H, Chen L, Jenkins M, Brackee G, Chen CH, Chyu MC (2013). Functions and mechanisms of green tea catechins in regulating bone remodeling. *Current Drug Targets* 14(13): 1619-30.
14. Wang S, Miller B, Matthan NR, Wu D, Reed D, Yin X, Grammas P, Moustaid-Moussa N, **Shen CL**, Lichtenstein AH (2013). Aortic Cholesterol Accumulation Correlates with Systemic Inflammation but not Hepatic and Gonadal Adipose Tissue Inflammation in LDL Receptor Null Mice. *Nutrition Research* 33: 1072-82.
15. Phisitkul S, Chyu MC, Zhang Y, Brismée JM, Prabhakar S, Dagda RY, Dagda M, Tang L, Wang JS, **Shen CL (corresponding author)** (2013). Intradialytic modified Tai Chi exercise among end-stage renal disease patients undergoing hemodialysis: an exploratory pilot study. *Alternative and Integrative Medicine* 2: 123. doi: 10.4172/2327-5162.1000123
16. Goktas Z, Moustaid-Moussa N, **Shen CL**, Boylan M, Mo H, Wang S (2013) Effects of bariatric surgery on adipokine-induced inflammation and insulin resistance. *Frontiers in Diabetes Special issue Research Topic: Obesity-induced inflammation and insulin resistance.* 4 (69): 1-13. doi: 10.3389/fendo.2013.00069
17. Chyu MC, Zhang Y, Brismée JM, Dagda RY, Chaung E, Von Bergen V, Doctolero S, **Shen CL (corresponding author)** (2013) Effects of martial arts exercise on body composition, serum biomarkers and quality of life in overweight/obese premenopausal women: a pilot study. *Clinical Medicine Insights- Women's Health* 6: 1-11.

18. **Shen CL**, Zhu W, Gao W, Wang S, Chen L, Chyu MC (2013) Energy restricted diet benefits body composition but degrades bone integrity in middle-aged obese female rats. *Nutrition Research* 33(8): 668-76.
19. **Shen CL**, Chyu MC, Wang JS (2013) Tea and bone health: steps forward in translational nutrition. *American Journal of Clinical Nutrition* 98(6): 1694S-9S.
20. **Shen CL**, Chyu MC, Cao JJ, Yeh JK (2013) Green tea polyphenols improve bone microarchitecture in high-fat-diet-induced obese female rats through suppressing bone formation and erosion. *Journal of Medicinal Food* 16(5):421-427.
21. **Shen CL**, von Bergen V, Chyu MC, Jenkins MR, Mo H, Chen CH, Kwun IS (2012) Fruits and dietary phytochemicals in bone protection. *Nutrition Research* 32(12) :897-910.
22. Qian G, Xue K, Tang L, Wang F, Chyu MC, Pence BC, **Shen CL**, Wang JS (2012) Mitigation of oxidative damage by green tea polyphenols and Tai Chi exercise in postmenopausal women with osteopenia. *PLoS ONE*;7(10):e48090. doi: 10.1371/journal.pone.0048090.
23. Zhang Y, **Shen CL**, Peck K, Brismee J-M, Doctolero S, Lo D-F, Yik S, Lao L (2012). Training Self-administered Acupressure Exercise among Postmenopausal Women with Osteoarthritic Knee Pain: A Feasibility Study and Lesson Learned. *Evidence-Based Complementary and Alternative Medicine* Article ID 570431, 9 pages
    a. doi:10.1155/2012/570431.
24. Mo H, Yeganehjoo H, Shah A, Mo WK, Soelaiman IN, **Shen CL** (2012) Mevalonate Supressive Dietary Isoprenoids and Bone Health. *Journal of Nutritional Biochemistry* 23(12):1543-1551.
25. **Shen CL**, Smith BJ, Lo DF, Chyu MC, Dunn DM, Chen C-H, Kwun I-S (2012) Dietary polyphenols and mechanisms of osteoarthritis. *Journal of Nutritional Biochemistry* 23(11):1367-1377.
26. **Shen CL**, Cao JJ, Dagda RY, Chanjaplammootil S, Lu C, Chyu MC, Gao W, Wang JS, Yeh JK (2012) Green tea polyphenols benefits bone composition and improves bone quality in long-term high-fat-diet-induced obese rats. *Nutrition Research* 32(6): 448-57.
27. Lu C, Zhu W, **Shen CL (corresponding author)**, Gao W (corresponding author) (2012) Green tea polyphenols reduce body weight in rats by modulating obesity-related genes. *PLoS ONE* 7(6):e38332.
28. **Shen CL**, Samathanam C, Graham S, Dagda RY, Chyu MC, Dunn DM (2012) Green tea polyphenols and 1-α-OH-vitamin D_3 attenuate chronic inflammation-induced myocardial fibrosis in female rats. *Journal of Medicinal Food* 15(3):269-77. Epub 2011 Dec 19.
29. **Shen CL**, Chyu MC, Yeh JK, Zhang Y, Pence BC, Felton CK, Brismee JM, Arjmandi BH, Doctolero S, Wang JS (2012) Effect of green tea and Tai Chi on bone health in postmenopausal osteopenic women: a 6-month randomized placebo-controlled trial. *Osteoporosis International* 23(5):1541-52.
30. Chyu MC, von Bergen V, Brismee JM, Zhang Y, Yeh JK, **Shen CL (corresponding author)** (2011) Complementary and alternative exercise for management of osteoarthritis. *Arthritis* Special Issue on Rehabilitation of Patients with Osteoarthritis. Article ID 364319, 1-9. doi:10.1155/2011/364319.
31. **Shen CL**, Yeh JK, Cao JJ, Chyu MC, Wang JS (2011) Green tea band bone health: evidence from laboratory studies. *Pharmacological Research* 64:155-161.
32. **Shen CL**, Samathanam C, Tatum OL, Graham S, Tubb C, Cao JJ, Dunn DM, Wang JS (2011) Green tea polyphenols avert chronic inflammation-induced myocardial fibrosis of female rats. *Inflammation Research* 6(7):665-672.
33. **Shen CL**, Cao JJ, Dagda RY, Tenner TE, Chyu MC, Yeh JK (2011) Supplementation of green tea polyphenols improves bone microstructure and quality in aged, orchidectomized rats. *Calcified Tissue International* 88(6): 455-463.
34. Shao C, Chen L, Lu C, **Shen CL (corresponding author)**, Gao W (corresponding author). (2011) A gel-based proteomic analysis of the effects of green tea polyphenols on ovariectomized rats. *Nutrition* 27: 681-686.
35. **Shen CL**, Yeh JK, Samathanam C, Cao JJ, Stoecker BJ, Dagda RY, Chyu MC, Dunn DM, Wang JS (2011) Protective actions of green tea polyphenols and alfacalcidol on bone microarchitecture in female rats with chronic inflammation. *Journal of Nutritional Biochemistry* 22:673-680.
36. **Shen CL**, Yeh JK, Samathanam C, Cao JJ, Stoecker BJ, Dagda RY, Chyu MC, Dunn DM, Wang JS (2011) Green tea polyphenols attenuate deterioration of bone microarchitecture in female rats with systemic chronic inflammation. *Osteoporosis International* 22:327-337. PMID: 20306019.
37. **Shen CL**, Chyu MC, Pence BC, Yeh JK, Zhang Y, Felton CK, Doctolero S, Wang JS (2010) Green tea polyphenols supplementation and Tai Chi exercise for postmenopausal osteopenic women: safety and quality of life report. *BMC Complementary and Alternative Medicine* 10:76.

38. Chyu MC, James CR, Sawyer SF, Brismee JM, Xu KT, Poklikuha G, Dunn DM**, Shen CL (corresponding author)** (2010) Effect of Tai Chi on balance, gait, physical function, and quality of life in osteopenic postmenopausal women – a randomized controlled study. *Clinical Rehabilitation* 24(12):1080-1090.
39. **Shen CL**, Yeh JK, Cao JJ, Tatum OL, Dagda RY, Wang J-S (2010) Synergistic effects of green tea polyphenols and alphacalcidol on chronic inflammation-induced bone loss in female rats. *Osteoporosis International* 21(11): 1841-1852.
40. **Shen CL,** Yeh JK, Cao JJ, Tatum OL, Dagda RY, Wang J-S (2010) Green tea polyphenols mitigate bone loss of female rats in a chronic inflammation-induced bone loss model. *Journal of Nutritional Biochemistry* 21: 968-974.
41. **Shen CL**, Chyu MC, Yeh JK, Felton CK, Xu KT, Pence BC, Wang J-S (2009) Green tea polyphenols and Tai Chi for bone health: designing a placebo-controlled randomized trial. *BMC Musculoskeletal Disorders* 10:110
42. Chyu MC, **Shen CL** (2009) Tai Chi and the health of bone and joint. *ACSM's Certified News* 19(3):8-9.
43. Chyu MC, **Shen CL** (2009) Martial arts: potential alternative exercise for weight control. *ACSM's Certified News* 19(3):4-6.
44. **Shen CL**, Yeh JK, Cao JJ, Wang J-S (2009) Green tea and bone metabolism (review). *Nutrition Research* 29(7): 437-456. Review. Erratum in: Nutrition Research 2009 Sep;29(9):684.
45. **Shen CL ,** Yeh, JK, Stoecker, BJ, Chyu MC, Wang J-S (2009) Green tea polyphenols mitigate deterioration of bone microarchitecture in middle-aged female rats. *Bone* 44(4): 684-690.
46. **Shen CL**. James CR, Chyu MC, Bixby WR, Brismée JM, Zumwalt MA, Poklikuha G (2008) Effects of Tai Chi on gait kinematics, physical function, and pain in elderly with knee osteoarthritis – a pilot study. *American Journal of Chinese Medicine* 36(2): 219-232.
47. **Shen C-L**, Peterson J, Tatum O, Dunn D (2008) Effect of long-chain n-3 polyunsaturated fatty aid on inflammation mediators during osteoblastogenesis. *Journal of Medicinal Food* (1): 105-110.
48. **Shen CL,** Wang P, Guerrieri J, Yeh JK, Wang JS (2008) Protective effect of green tea polyphenols on bone loss in middle-aged female rats. *Osteoporosis International* 19(7): 979-990.
49. Brismee JM, Paige RL, Chyu, MC, Boatright JD, Hagar, JM, McCaleb JA, Quintela MM, Feng, D, Xu KT, **Shen CL** (**corresponding author**) (2007) "Effects of Tai Chi for knee osteoarthritis were not sustained after detraining". *Focus on Alternative and Complementary Therapies* 12(4): 281-283.
50. **Shen CL**, Yeh JK, Rasty J, Chyu MC, Dunn DM, Li Y, Watkins BA (2007) Improvement of bone quality in gonad-intact middle-aged male rats by long-chain n-3 polyunsaturated fatty acid. *Calcified Tissue International* 80(4): 286-293.
51. **Shen CL**, Williams JS, Chyu M-C, Paige RL, Stephens AL, Chauncey KB, Prabhu FR, Ferris LT, Yeh JK (2007) Comparison of the effect of Tai Chi and resistance training on bone metabolism in the elderly: a feasibility study. *American Journal of Chinese Medicine* 35(3): 369-381.
52. Ferris LT, Williams JS, **Shen CL** (2007) The effect of acute exercise on serum brain-derived neurotrophic factor levels and cognitive function. *Medicine & Sciences in Sports & Exercise* 39(4):728-734.
53. **Shen CL,** Feng D, Esperat MC, Irons BK, Chyu M-C, Valdez GM, Thompson EY. (2007) Effect of Tai Chi Exercise on Type 2 Diabetes. *Integrative Medicine Insights* 2: 1-9.
54. Brismee JM, Paige RL, Chyu MC, Boatright JD, Hagar JM, McCaleb JA, Quintela MM, Feng D, Xu KT, **Shen C-L (corresponding author)** (2007) Group and home-based Tai Chi in elderly subjects with knee osteoarthritis: a randomized controlled trial. *Clinical Rehabilitation* 21: 99-111**.**
55. Iwamoto J, Takade T, Sato Y, **Shen CL**, Yeh JK (2006) Beneficial effect of pretreatment and treatment continuation with risedronate and vitamin K2 on cancellous bone loss after ovariectomy in rats: a bone histomorphometry study. *Journal of Nutritional Science and Vitaminology* 52:307-315.
56. Iwamoto J, Takeda T, Sato Y, **Shen CL,** Yeh JK. (2006) Effect of pre-and post-surgery treatment with risedronate on trabecular bone loss in ovariectomized rats. *Experimental Animals* 55:457-466.
57. **Shen CL**, Wang XJ, Yeh JK (2006) Short-term supplementation of COX-2 inhibitor suppresses bone turnover in gonad-intact middle-aged male rats. *Journal of Bone Mineral Metabolism* 24(6): 461-466.
58. Iwamoto J, Seki A, Takeda T, Sato Y, Yamada H, **Shen CL,** Yeh JK (2006) Preventive effects of risedronate and calcitriol on cancellous osteopenia in rats treated with high-dose glucocorticoid. *Experimental Animals* 55(4): 349-355.
59. Wang XJ, **Shen CL**, Dyson MT, Yin X, Schiffer RB, Grammas P, Stocco DM (2006) The involvement of epoxygenase metabolites of arachidonic acid in cAMP-stimulated steroidogenesis and steroidogenic acute regulatory protein gene expression. *Journal of Endocrinology* 190(3): 871-878.

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61. **Shen CL,** Yeh JK, Rasty J, Li Y, Watkins BA (2006) Protective effect of dietary long- chain n-3 polyunsaturated fatty acids on bone loss in gonad-intact middle-aged male rats. *British Journal of Nutrition* 95: 462-468.
62. Ferris LT, Williams JS, **Shen CL**, O'Keefe KA, and Hale KB (2005) Resistance training improves sleep quality in older adults- a pilot study. *Journal of Sports Science and Medicine* 4: 354-360.
63. Wang XJ, **Shen CL**, Dyson MT, Eimeri S, Orly J, Hutson JC, Stocco DM (2005) Cyclooxygenase-2 regulation of the age-related decline in testosterone biosynthesis. *Endocrinology* 146(10):4202-4208.
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65. **Shen CL**, Hong K-J, KIM SW (2005) Comparative effects of ginger root (Zingiber officinale Rosc.) on the production of inflammatory mediators in normal and osteoarthrotic sow chondrocytes. *Journal of Medicinal Food* 8(2):149-53.
66. Evans JF, Niu QT, Canas JA, **Shen CL**, Aloia JF, Yeh JK (2004) ACTH enhances chondrogenesis in multipotential progenitor cells and matrix production in chondrocytes. *Bone* 35: 96-107.
67. Hong K-J, Dunn DM, **Shen C-L**, Pence BC (2004) Effects of Ganoderma Lucidum on apoptotic and anti-inflammatory function in HT-29 human colonic carcinoma cells. *Phytotherapy Research* 18 (9): 768-770.
68. **Shen CL**, Dunn DM, Henry JH, Li Y, Watkins BA (2004) Decreased production of inflammatory mediators in human osteoarthritic chondrocytes by conjugated linoleic acids. *Lipids* 39(2): 161-166.
69. **Shen CL**, Hong KJ, Kim SW (2003) Effects of ginger (Zingiber Officinale Rosc.) on decreasing the production of inflammatory mediators in sow osteoarthrotic cartilage explants. *Journal of Medicinal Food* 6(4): 323-328.
70. **Shen CL**, Graham S, Morgan DL, Oetama B, Brewton L, Marshall MP, Lai T-Y, Chen YS, Chang YH (2002) Effects of Chinese Herbal Remedy Schisandra arisanensis Hayata on Aggrecans, Morphology, and Production of Inflammatory Mediators by Human Osteoarthritic Chondrocytes and Synoviocytes. *American Journal of Traditional Chinese Medicine* 3(2): 53-63.
71. **Shen CL**, Song W, Pence BC (2001) Interactions of selenium compounds with other antioxidants in DNA damage and apoptosis in human normal keratinocytes. *Cancer Epidemiology Biomarkers & Prevention* 10: 385-390.
72. **Shen CL**, Purewal M, San Francisco S, Pence BC (1998) Absence of PhIP adducts, p53 and Apc mutations, in rats fed a cooked beef diet containing a high level of heterocyclic amines. *Nutrition Cancer* 30 (3): 227-231.
73. Pence BC**, Shen CL**, Dunn DM, Landers M, Purewal M, San Francisco S (1998) Enhancement of colon and stomach carcinogenesis in 1,2-dimethylhydrazine-treated rats fed a diet high in heterocyclic amines. *Zeitschrift fur Lebensmittel-Untersuchung und-Forschung A* 207(6): 455-458.
74. Pence BC , Landers M, Dunn DM, **Shen CL**, Miller MF (1998) Feeding of a well-cooked beef diet containing a high heterocyclic amine content enhances colon and stomach carcinogenesis in 1,2-dimethylhydrazine-treated rats. *Nutrition Cancer* 30 (3): 220-226.
75. Watkins BA, **Shen CL**, McMurtry JP, Xu H, Bain SD, Allen KGD, Seifert MF (1997) Dietary lipids modulate bone prostaglandin E_2 production, insulin-like growth factor-I concentration and formation rate in chicks. *Journal of Nutrition* 127: 1084-1091.
76. Watkins BA, **Shen CL**, Allen KGD, Seifert MF (1996) Dietary (n-3) and (n-6) polyunsaturates and acetylsalicylic acid alter ex vivo PGE_2 biosynthesis, tissue IGF-I levels, and bone morphometry in chicks. *Journal of Bone and Mineral Research* 11(9): 1321-1332.

Published book chapter

1. **Shen CL**, Mo H, Smith BJ, Chen CH, Chen L, Chyu MC, Kwun IS (2013). Green tea and other fruit polyphenols attenuate deterioration of bone microarchitecture. Book title: *Polyphenols in Health and Disease*. Watson RR, Preedy VR, Zibadi S, eds, Elsevier publisher. Volume 1, chapter 52.
2. **Shen CL**, Chyu MC (2012) Green Tea and Bone Health Promotion: as Focus on Bone Mass and Mircoarchitecture. *Book title: Tea in Health and Disease Prevention.* VR Preedy, editor, Elsevier publisher. Volume 1, chapter 51.
3. Kwun IS, **Shen CL** (2011) Chapter II-5: Phytonutrients and bone health. Book title: *Phytonutrients*. The Korean

Nutrition Society, editor, Life Science Publishing Co, Seoul, Republic of Korea.

National/international recognition

2013:

"Fruits and Dietary Phytochemicals in Bone Protection". In http://www.dugdug.com/dr-leslie-shen-discusses-her-work-at-ttu. August 2003. *DugDug.com is to serve the general public through prompt reporting and analysis of significant advances in any branch of science. DugDug bridges the gap between academic journals (that are written by academics, for academics) and mainstream publications. It seeks to take the cutting edge research occurring at academic institutions, and delivering key insights in a way that is easily understandable to casual readers.*

"Green tea to Quell Inflammation". Anti-aging drink. In *MSN Health Living*, March 19, 2013. (*with more than 470 million people worldwide vising MSN every month, MSN is a top online information site, with localized versions available globally in 52 markets and 28 languages*).

"Seed grants produce opportunities for federal funding". Pulse, Winter 2013.

"USBJI Young investigator initiative: why it matters". United States Bone and Joint Initiative. eNewsletter. February 2013.

"Strong bones, strong heart – here's how". Toughening bones with gentle exercise. in *Woman's World Magazine (viewers per month: 3,750,000)*, January 7, 2013.

"Toning with Tai Chi: keep your bones strong for life" in *Woman's World Magazine (viewers per month: 3,750,000)*, 10/28/2013.

2012:

"Drinking Tea May Help Prevent Chronic Illness" in *Detroit Free Press (viewers per month: 1,643,224)*, Sept 21, 2012. Story about "Tea and Bone Health: Steps Forward in Translational Nutrition". Results were from GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"New Reasons to Drink More Tea" in *the Atlantic (viewers per month: 1,460,661)*, Sept 20, 2012. Story about "Tea and Bone Health: Steps Forward in Translational Nutrition". Results were from GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"Smaller Waistlines, Sharper Minds, Stronger Bones and Healtheir Hearts? in *Reuters (viewers per month: 55,696,000)*, Sept 19, 2012. Story about "Tea and Bone Health: Steps Forward in Translational Nutrition". Results were from GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"Smaller Waistlines, Sharper Minds, Stronger Bones and Healtheir Hearts? in *Yahoo (viewers per month: 55,696,000)*, Sept 19, 2012. Story about "Tea and Bone Health: Steps Forward in Translational Nutrition". Results were from GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"Smaller Waistlines, Sharper Minds, Stronger Bones and Healtheir Hearts? in *NBCNEWS.com (viewers per month: 22,607,122)*, Sept 19, 2012. Story about "Tea and Bone Health: Steps Forward in Translational Nutrition". Results were from GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"Drinking Tea May Help Prevent Chronic Illness" in *USA Today News (viewers per month: 9,195,242)*, Sept 19, 2012. Story about "Tea and Bone Health: Steps Forward in Translational Nutrition". Results were from GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"Drink Green Tea": one of 10 soothing solution in *Eating Well Magazine (viewers per month: 500,000)*, May/June 6, 2012. Story about green tea supplementation reduced oxidative stress/inflammation in postmenopausal women. Results were from GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"End inflammation with green tea": Avoid the surprising weak-bone risk, *Women's World Magazine (viewers per month: 3,750,000)*, July 9, 2012. Story about green tea supplementation may avoid the weak-bone risk. Results were GTP and Tai Chi for bone health study (funded by NIH/NCCAM, R21AT003735).

"Preventing Bone Loss with Tai Chi and Green Tea Polyphenols". Staying Healthy Today with Kirk Hamilton, April 26, 2012. http://www.prescription2000.com/Staying-Healthy-Today-Radio-Interviews/2012-04-04-leslie-shen-bone-tai-chi-green-tea.html.

"Distinguished Research Award: Leslie Shen". Faculty who are leading the way. Leading the Way. 2012-2012. A Year in Review.

2011:

"Green Tea and Tai Chi Enhance Bone Health and Reduce Inflammation in Postmenopausal Women" was recently selected as one of 6 research highlights from 1,750 abstracts by the American Society for Nutrition (ASN) at the 2011 Experimental Biology annual meeting. Through the ASN press release, our study is now featured on over a million websites of news media and organizations worldwide.

2010:

"Quality of Life and Safety of Tai Chi and Green Tea Extracts in Postmenopausal Women" was selected as Spotlight Research by *National Center for Complementary and Alternative Medicine/NIH* in December 2010.

2009:

Phone interviewed with contributing editor Body + Soul (a national health magazine; www.wholeliving.com) on Oct 16, 2009.

2008:

"Tea for you and tea for me". Investigations Discoveries. *Pulse*, TX. Summer 2008.
"Tai Chi: the gentle martial art that defeats arthritis". In book: Non-drug approaches to health and healing. Published by Bottom Line Books, June 2008.

2005:

"Managing Osteoarthritis" *Washington Woman magazine*, October issue 2005.
"Tai Chi and Health" Phone interview with *Nature Health magazine*, August 12, 2005.
"TTUHSC psychologist: Tai Chi has health benefits" Lubbock Avalanche-Journal, August 4, 2005.
"Tai chi and health" Radio interview (KLLL, KMMX, KONE, KBTE Radio), July 19, 2005.
Asian Pacific Heritage Month Celebration:http://www.ttuhsc.edu/diversity/forms/diversityNewsletterMay05.pdf

Promoted bone health at the following events:

- Senior News, Lubbock, TX. May 2008.
- Business Expo, Lubbock Civic Center, Lubbock, TX. May 8, 2008.
- Free Skin Cancer Screening. Southwest Cancer Center, Lubbock, TX. May 10, 2008.
- Women and Bone Health. Participated in Community Health Center of Lubbock, Lubbock National Women's Health Week, May 14, 2009.
- National Women's Health Week. Lubbock, TX. May 22, 2008.
- Health & Safety Fair, Maggie Trejo Super Center, Lubbock, TX. June 7, 2008.
- Healthy Lubbock Day, Maxey Park, Lubbock, TX. June 14, 2008.
- 2008 4th on Broadway Celebration. Lubbock, TX. July 4, 2008.
- Team Straight Talk. Sciences Spectrum and Grace Clinic, Lubbock, TX. July 12, 2008.
- Covenant Nurse Alumni Association Brunch, Knipling Center, Lubbock, TX. July 19, 2008.
- Health Fair and Safety, Mae Simmons Community Center, Lubbock, TX. July 21, 2008.
- Healthwise, KCBD studio, Lubbock, TX. July 23, 2008.
- Lubbock's Home & Family Magazine, Lubbock, TX. August issue 2008.

- 2nd Annual Marching Back to School Health Fair, Maggie Trejo Super Center, Lubbock, TX. August 2, 2008.
- Hispanic Church Block Activity, Lubbock, TX. August 9, 2008.
- Senior News, Lubbock, TX. September 2008.
- Community Medical School, Lubbock, TX. September 16 and September 30, 2008.
- American Diabetes Association, Lubbock-Mackenzie Park, TX. September 27, 2008.
- Breast Cancer Awareness, Lubbock-Civic Center, Lubbock, TX. October 4, 2008.
- Women's Expo, Lubbock-Civic Center, Lubbock, TX. October 7, 2008.
- Healthwise, KCBD studio, Lubbock, TX. October 16, 2008.
- National Diabetes Month, Maggie Trejo Super Center, Lubbock, TX. November 14, 2008.
- Business Expo, Lubbock Civic Center, Lubbock, TX. May 4, 2014.
- 2014 4th on Broadway Celebration. Lubbock, TX. July 4, 2014.

Abstracts

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Funded Research:

1. "CurcuWIN and Joint Health: an Efficacy Study". OmniActive Health Technology. $238,648. 6/1/2016-12/31/2017.
   Shen CL (PI, 10%). Brismee JM (5%, Co-I), Zumwalt M (5%, Co-I), Lee J (5%, Co-I).
   The overall objectives are to conduct a randomized double-blinded placebo-controlled trial to test the effects of 12 weeks of CurcuWIN on joint health (pain, stiffness, and function), functional impairment, quality of life, and mechanisms in adults with self-report joint pain.

2. "Clinical Outcomes of an Interprofessional Collaborative Practice (IPCP) Program for Cardiovascular Risk Reduction (CRR) Among Chronic Disease Patients in a Nurse-Managed Health Center".
   Esperat C (PI). **Shen CL** (co-I, 5%). Subcontract for blood parameters. $20,000. 1/1/2016-12/31/2018.

3. "Tocotrienols for Alzheimer's Disease". American River Nutrition, Inc. $50,000. 12/1/2015-6/30/2016.
   Shen CL (PI, 10%). Mo H (Co-PI), Xia W (Co-PI).
   The goal of this study is to evaluate the potential benefits of tocotrienols on Alzheimer Disease-related brain markers in mice.

4. "Effects of bioactive compounds (tocotrienols and geranylgeraniol) on type 2 diabetic rats". American River Nutrition, Inc. $ 99,830. 2/1/2015-7/31/2016.
   Shen CL (PI, 15%). Dufour J (Co-PI), Brackee G (Co-PI), Chung E (Co-PI), Moustaid-Moussa N (Co-PI).
   The goal of this study is to evaluate the potential benefits of T3, GG, and T3+GG on glucose metabolism, musculoskeletal health, energy homeostasis, and gut microbiota composition in T2DM rats.

5. "Using behavioral economics to achieve improved healthy behavior outcomes in breast cancer survivors" Obesity Research Center Pilot and Feasibility Grants. $5,000; Laura W. Bush Institutes for Women's Health $6,000. Texas Tech University: $7,000. 12/1/2014-11/30/2015.
   Lyford C (PI). **Shen CL** (Co-PI, 5%), Shafer A (Co-PI), Arentz C (Co-PI), Yang SP (Co-PI)
   The goal of this study is to determine, compared to the control group, if 12-weeks of social media intervention would increase compliance with ACS recommendations and health related quality of life, reduce physiological and psychological distress in breast cancer survivors.

6. "Nutrition and Obesity" Texas Tech University Transdisciplinary Research Academy. $4,000. 4/1/2014-3/31/2015.
   Moustaid-Moussa (PI). **Shen CL** (5%) (Co-investigator)
   The goal of this study is to specifically investigate mechanisms by which omega 3 polyunsaturated fatty acids ameliorate obesity and related metabolic disorders.
7. "The effects of epigallocatechin-3-gallate on obesity-related breast cancer bone metastasis". Texas Tech University Transdisciplinary Research Academy. $4,000. 4/1/2014-3/31/2015.
   Gollahon (PI). **Shen CL** (Co-PI, 5%)
   The goal of this study is to investigate (1) whether the green tea cathechin epigallocatechin-3-gallate (EGCG) can counteract the effects of obesity on breast cancer through modulating estrogen receptor status and (2) whether EGCG will promote bone health, attenuating metastatic progress.

8. "How do various omega-3 fatty acids alone or in combination influence the risk for osteoporosis, obesity, and neural degenerative diseases" Omega Proteins. $5,802. 8/1/13-12/31/13.
   Ballou MA (PI), Wang S (Co-investigator), **Shen CL** (Co-PI, 5%)
   The goal of this study is to evaluate the effects of different omega-3 fatty acids on bone-, obesity-, and neural degeneration-related parameters.

9. "Sex and Gender-Based Medicine Triad-Osteoporosis".
   PI: Casanova R. Co-investigator: Bergeson S, **Shen CL** (5%), Song M, Dickerson R. Laura Bush Institute for Women's Health. $25,000. 2012-2013.
   The objective is to establish a Triad module covering basic science, pharmacology, clinical application.

10. "Effect of green tea polyphenols on alcohol-induced bone loss". **PI: Shen CL**. Co-investigator: Syapin P and Bergeson S (Texas Tech University Health Sciences Center). Funded by Laura W. Bush Institute for Women's Health. $7500. 5/1/2013-4/30/2014.
    The objective is to study the effects of green tea polyphenols on bone matrix, bone microstructure, and bone strength along with safety and mechanistic profiles in young male rats using a binge drinking model.

11. "Effect of tocotrienols on bone health: a pilot study". **Shen CL (Principal Investigator)**, Mo H (co-investigator, Texas Woman's University, Denton, TX), Felton CK (collaborator, TTUHSC, OB/GYN), Shengping Yan (collaborator, TTUHSC, Pathology), Soelaiman, Ima Nirwana, PhD (collaborator, Dept. of Pharmacology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia), and Pence BC (consultant, TTUHSC, Pathology). Funded by American River Nutrition, Inc., Hadley, MA. $113,160. 1/1/2013-12/31/20014.
    The objective is to evaluate the effects of toccotrienols on bone turnover biomarkers and safety in postmenopausal women.

12. "Preparation for GTP Long-Term Clinical Study on Bone Health". National Complementary and Alternative Medicine (NCCAM)/NIH. 1 U01 AT006691. 09/30/2012-6/30/2017. $1,585,149. PI: **Shen CL (Principal Investigator)**. Co-investigator: Wang JS (University of Georgia), Song X (University of Georgia). Collaborators: Jenkins M (TTUHSC), Brackee G (TTUHSC), Felton CK (TTUHSC). Consultant: Mitchell K (TTUHSC), Dunn DM (TTUHSC), Pence BC (TTUHSC), Lewiecki ME (New Mexico Clinical Research & Osteoporosis Center).

    The objective is to collect the preliminary data for a future long-term GTP clinical trial with an optimal dose in postmenopausal women with low bone mass.

    "GTP and Tai Chi for Musculoskeletal Health". National Complementary and Alternative Medicine (NCCAM)/NIH. 1 R01 AT006691-01A1. 07/1/2012-06/30/2017. Total requested: $3,021,034.
    Received an impact score of 13 and 3% tile at NIH study section. NCCAM then decided to convert this R01-AT006691 to U01-AT006691 to supplement additional funding for more preliminary data collection prior to this R01. **PI: Shen CL (Principal Investigator)**. Co-investigator: Wang JS (University of Georgia), Song X (University of Georgia), Chyu MC (Texas Tech University) Collaborators: Felton CK (TTUHSC). Consultant: Pence BC (TTUHSC), Zhang Y (TTUHSC), Brismee JM (TTUHSC), Magaziner J (University of Maryland).
    The objective is to study effect of green tea polyphenols and Tai Chi on bone remodeling, fat deposition, and muscle integrity in overweight/obese postmenopausal women with low bone mass.

13. "Acupressure's impact on knee pain among osteoarthritic women". UMC Women's Health Scholar Program. Zhang Y (Principal Investigator). **Shen CL** (co-investigator), Peck K, Brismee JM. $20,000. 03/01/2011-2/28/2013.
    The goal is to study the effect of 12-wk acupressure on pain management in osteoarthritic women.

14. "Understanding and Improving the Health of Rural West Texans". The CH Foundation
    PI: O'Bryant SE. Co-investigatosr: Johnson L, Dentino A, Momeni P, Bergeson S, Grammas P, Jenkins M, Zhang Y, Syapin P, **Shen CL**, Covington C. $50,000. 12/1/2010-11/30/2011.
    The objective is to obtain multiplex assays on over 200 samples from the Project FRONTIER biobank in order to study the biological mediators of health outcomes among rural-dwelling adults and elders.

15. "Martial Arts Exercise Program for Overweight/Obese Premenopausal Women- a Pilot Study". **Shen CL (Principal Investigator)**. Ragain M, Zhang Y, Chyu MC. Laura W. Bush Institute for Women's Health & Universty Medical Center Women's Innovation Fund, $5,000, 1/1/2010-12/31/2011.
    The objective is to evaluate the effects of martial arts exercise on bone metabolism and turnover biomarkers, body composition, and quality of life in overweight/obese premenopausal women.

16. "Performance of osteoporosis risk assessment tools in diagnosing osteoporosis in postmenopausal Hispanic women". PI: Mittal N (Internal Medicine, TTUHSC, Lubbock), participating researcher: **Shen CL**. LWBIWH & UMC seed grant, $10,000, 2008-2010.
    The objective is to evaluate the osteoporosis risk assessment tools in postmenopausal Hispanic women in order to assist in osteoporosis diagnosis.

17. "Effect of GTP on obesity and bone loss". **Shen CL (Principal Investigator)**. Wang JS, Yeh JK, Cao JJ. Winthrop-University Hospital. $11,230 and Laura W. Bush Institute for Women's Health, $17,000 (11/1/2009-10/31/2010).
    The objective is to study the effect of green tea polyphenols on promoting weight loss and improving bone quality along with related mechanisms in female rats.

18. "GTP and male osteoporosis". **Shen CL (Principal Investigator)**. Wang JS, Yeh JK, Cao JJ. Winthrop-University Hospital. $8,000. 4/1/2009-3/31/2010.
    The objective is to study the effect of green tea polyphenols on bone metabolism and related mechanisms in male rats.

19. "GTP and Tai Chi for Bone Health: a Pilot Study." **Shen CL (Principal Investigator)**, Wang JS, Chyu MC, Felton CK, Arjmandi BH, Yeh JK, Magaziner J, Xu KT, Pence BC, Brismee JM. National Institutes of Health (NIH)/National Center for Complementary and Alternative Medicine (NCCAM) $572,740, 9/1/2007-8/31/2010.
The objective is to study the effect of exercise (Tai Chi) and green tea polyphenols supplementation on bone metabolism and oxidative stress in postmenopausal women with low bone mass.

20. "Modified Tai Chi Exercise During Outpatient Hemodialysis Therapy." **Shen CL (Principal Investigator in basic science)**, Phisitkul S (Principal Investigator in clinical science), Prabhakar S, Chyu MC, Brismee JM. Clinical and Basic Science Seed Grant, TTUHSC. $20,000 (1/1/2008-8/31/2009).
The objective of this study is to evaluate the effect of exercise (Tai Chi) on musculoskeletal health in outpatients receiving hemodialysis therapy.

21. "Effect of green tea polyphenols on bone loss and atherosclerosis." **Shen CL (Principal Investigator)**, Wang JS. Women Health Research Institute, Texas Tech University Health Sciences Center. $20,000, 9/1/2007-8/31/2009.
The objective of this study is to elucidate the bioavailability, efficacy, and mechanisms of green tea polyphenols in preventing bone loss and fibrosis of coronary vessel in middle-aged female rats in a chronic inflammation-induced bone loss and atherosclerosis model.

22. "Tai Chi for fitness and wellness in the elderly." **Shen CL (Principal Investigator)**, Chyu MC. Carillon senior living campus. $6,000, 1/1/04-12/31/08.
The objective is to establish a community-based exercise program and to investigate the long-term benefits of Tai Chi in fitness and wellness of the elderly.

23. "Effect of green tea polyphenols on breast cancer survivors: a pilot study." **Shen CL (Principal Investigator)**, Wang JS, Cobos E. Southwest Cancer Treatment and Research Center, Oncology Development Award. $15,000, 1/1/06-12/31/07.
The objective is to test a dietary supplement, green tea polyphenol (Polyphenon E), for feasibility, safety, bioavailability, and efficacy in breast cancer survivors.

24. "Effect of Tai Chi on self-efficacy of Diabetes." CM Esperat (Principal Investigator), **Shen CL (co-investigator)**, Chyu MC, Feng D, Zhang Y. School of Nursing, Texas Tech University Health Sciences Center. $20,000, 1/1/06-8/31/07.
The objective is to improve the adherence rate of exercise protocol in type 2 diabetes through enhancing subjects' self-efficacy.

25. "Effect of green tea polyphenols on bone loss in aged estrogen-deficient female rats." **Shen CL (Principal Investigator)**, Wang JS, Yeh JK. Lubbock Endowed Professorship. $20,000, 1/1/06-12/31/06.
The objective is to evaluate the bioavailability, mechanisms, and efficacy of green tea polyphenols in preventing bone loss in middle-aged ovariectomized rats.

26. "Effect of Tai Chi on Biomechanical responses related to risk of falls in postmenopausal women with osteoporosis." **Shen CL (Principal Investigator at Texas Tech University Health Sciences Center)**, Chyu MC (Principal Investigator at Texas Tech University), Sawyer S, James R, Brisemee JM, Xu KT. Texas Tech University seed grant. $8,980, 1/1/2005-12/31/2006.
The objective of this study is to evaluate the efficacy of short-term (24 wks) group Tai Chi intervention on risk of falls in elderly osteoporotic women.

27. "Preventive effects of risedronate and vitamin K administration prior to ovariectomy on bone loss in rats-short and –long term study." **Shen CL (Principal Investigator)**. Winthrop-University Hospital. $26,000, 10/1/2003-9/30/2006.
The objective of this study is to evaluate the effects of risedronate and vitamin K on the prevention of bone loss in ovariectomized female rats through bone histomorphometric measurements

28. "Effect of CLA on IL-6 production of osteoblastic cells." **Shen CL (Principal Investigator)**. Neely Treadwell Cancer Investigator Award. $15,000, 1/17/2005-1/26/2006.
    The objective of this study is to evaluate the effects of conjugated linoleic acid on interleukin-6 production in a co-culture of prostate cancer cells and osteoblastic cells.

29. "Effect of Tai Chi on glycemic index of type II diabetes." **Shen CL (Principal Investigator)**, Chyu MC, Esperat CM, Feng D, Irons B. School of Nursing, Texas Tech University Health Sciences Center. $10,000, 8/1/2004-7/31/2005.
    The objective of this study is to investigate the effect of Tai Chi on blood sugar and hemoglobin A1C in subjects with type-II diabetes.

30. "Molecular modifier of n-3 fatty acids on bone metabolism." **Shen CL (Principal Investigator)**, McMahon K, Dunn DM. Texas Tech University Health Sciences Center School of Medicine seed grant. $19,600, 9/1/2003-2/28/2005.
    The objective of this study is to evaluate the role of n-3 PUFA on osteoblastogenesis using bone marrow stromal cells.

31. "Effect of n-3 polyunsaturated fatty acids on osteoblastogenesis." **Shen CL (Principal Investigator)**, McMahon K. South Plains Foundation. $7,000, 9/1/2004-8/31/2005.
    The objective of this study is to investigate the effect of EPA vs. AA on the expression of inflammatory mediators, cyclooxygenase-2 and inducible nitric oxide synthase.

32. "Exercise and Osteoarthritis." **Shen CL (Principal Investigator)**, Chyu MC, Brismee JM. School of Allied Health, Texas Tech University Health Sciences Center. $5,000, 1/1/2004-12/31/2004.
    The objective of this study is to compare the effects of Tai Chi versus control on pain and range of motion in the elderly with clinical osteoarthritis of the knee, a prospective randomized controlled trial.

33. "Effects of dietary lipids on flexural strength and histomprphometry of osteoporotic animal bone model." **Shen CL (Principal Investigator at Texas Tech University Health Sciences Center)**, Rasty J (Principal Investigator at Texas Tech University), M-C Chyu. Texas Tech University. $20,000, 6/1/2002-5/31/2003.
    The objective of this study is to evaluate the effects of dietary lipids on bone mechanical strength, bone histomorphometry, bone fatty acid composition, and bone formation biomarkers in aged male rats.

34. "Improving bone health of breeding female pigs." **Shen CL (Principal Investigator at Texas Tech University Health Sciences Center)**, Kim SW (Principal Investigator at Texas Tech University), Texas Tech University. $10,000, 6/1/2002-5/31/2003.
    The objective of this study is to investigate the effects of ginger root extract and fish oil on the production of prostaglandin E2 and nitric oxide in swine osteoarthritic chondrocytes.

35. "Effects of exercise on bone metabolism of the elderly in west Texas." **Shen CL (Principal Investigator)**, Chyu MC, Chauency KB, Williams JS, Prabhu FR. Helen Jones Foundation/Carillon Research and Education Center. $20,000, 9/1/2002-12/31/2003.
    The objective of this study is to compare the effects of Tai Chi vs. resistance training on biochemical markers of bone metabolism in postmenopausal women directly related to osteoporosis.

36. "Role of cyclooxygenase-2 in testosterone biosynthesis in male aging." Wang XJ, **Shen CL (co-investigator)**, Institute of Healthy Aging, Texas Tech University Health Sciences Center. $50,000, 11/1/2002-10/31/2003.
    The objective of this study is to illustrate the role of cyclooxygenase-2 on StAR gene expression, testosterone production, and bone histomorphometry during the process of male aging using both animal and cell models.

Pending

1. "Qi Gong for Low Back Pain Relief: a Mechanistic Study"
   NIH/NCCIH. 9/1/2016-8/31/2021. $2,298,014

Shen CL (PI). Neugebauer V (co-PI), Brismee JM (co-I), Zumwalt M (co-I), Chyu MC (co-I), Lee J (co-I), Umeda M (co-I), Wang JS (co-I).
The overall objectives are to conduct two randomized controlled trials testing the effects of Badaunjin qi gong (BQG) alone (R61) and BQG in combination with green tea polyphenols (R33) on pain-related mechanisms (namely oxidative stress, conditioned pain modulation processing, and cognitive appraisal) and on pain-related functional outcomes in chronic low back pain.

2. "Prevention of Alzheimer's Disease by Dietary Tocotrienols."
   Bright Focus Foundation. 7/1/2016-6/30/2019. $300,000.
   Xia WM (PI), Mo H (Co-PI), **Shen CL** (Co-PI).
   The goal of this study is to determine if dietary tocotrienols can reduce Aß, Tau, and phosphorylated Tau (pTau) and memory impairment through down-regulation of the mevalonate pathway and Rho prenylation.

3. "Developmental exposure to methylparaben: a pilot study"
   NIH. 12/01/16-11/30/18. $159,153
   Zhao L (PI). **Shen CL** (co-investigator). Wang Shu (co-investigator)
   The overall objective is to study the effects of developmental exposure to methylparaben on adipogenesis and osteoblastogenesis in a mouse model and explore the underlying mechanisms

Invited Lectures/Oral Presentations

1) Regulatory role of dietary conjugated linoleic acids (CLA) on osteoarthritis of the elderly, invited presentation to Scientific Advisory Committee, Institute for Healthy Aging on February 14, 2001.
2) Effects of exercise intervention on bone metabolism of the elderly in west Texas, invited presentation to Carillon Research and Education Committee, Lubbock, Texas on March 28, 2002.
3) Effect of Chinese herbal remedy on osteoarthritis, invited presentation to Toxicology Department, Veteran General Hospital, Taipei, Taiwan on May 31, 2002.
4) Effects of conjugated linoleic acids on decreasing the production of inflammatory mediators by human osteoarthritis chondrocytes. Invited presentation at Annual Meeting of Experimental Biology, San Diego, CA on April 12, 2003.
5) Lipids and bone health, as an invited seminar speaker at Department of Pharmacology, TTUHSC on April 29, 2003.
6) Diet and bone health, as an invited seminar speaker at Journal Club, Department of Pathology, TTUHSC on June 13, 2003.
7) Effects of exercise on bone metabolism of the elderly in west Texas. Presented at Carillion Research and Education Committee, Carillon Senior Living Campus, Lubbock on August 28, 2003.
8) Effects of exercise on bone metabolism of the elderly in west Texas. Presented at Carillion Research and Education Committee, Carillon Senior Living Campus, Lubbock on August 28, 2003.
9) A comparison of Tai Chi versus conditioning exercise program on pain, range of motion, frequency of falls and physical functioning in an elderly population with clinical osteoarthritis of the knee and/or hip: a prospective randomized controlled trial, presented at Carillon Research and Education Committee, Carillon Senior Living Campus, Lubbock on November 6, 2003.
10) Effects of exercise on bone metabolism of the elderly in west Texas, presented at Carillon Research and Education Committee, Carillon Senior Living Campus, Lubbock on December 4, 2003 (final report).
11) Effects of dietary lipids on bone metabolism of the middle-aged male rats. Invited presentation at Journal Club of Pathology Department on December 12, 2003.
12) Effects of Exercise on Bone Metabolism of the Elderly in West Texas. Journal Club of Pathology Department on March 12, 2004.
13) Dietary n-3 polyunsaturated fatty acids modulate the production of inflammatory mediators in tissues of middle-aged male rats, invited presentation at Annual Meeting of Experimental Biology, Washington, DC on April 17, 2004.
14) Dietary n-3 polyunsaturated fatty acids prevent aging-induced bone loss in male rats, invited presentation at Annual Meeting of Experimental Biology, Washington DC on April 20, 2004.

15) Comparison of effects of resistance training and Tai Chi on bone metabolism of the elderly, invited presentation at Annual Meeting of American Collage of Sport Medicine, Indianapolis on June 5, 2004.
16) Research of Tai Chi as an alternative exercise therapy in Asian Pacific Heritage Month. Lubbock, Texas on May 10, 2005.
17) Nutrition, Physical Activity, and Bone Health, invited presentation at Okalahoma State University, Stillwater, OK on February 20, 2006.
18) Nutrition, Physical Activity, and Bone Health, invited presentation at Florida State University, Tallahassee, FL on March 13, 2007.
19) Nutrition, Physical Activity, and Bone Health, invited presentation at Oregon State University, Corvallis, OR on June 5, 2007.
20) Tai Chi and Bone Health, invited presentation at Healthy Aging of Lubbock, TX on June 9, 2007.
21) Nutrition, Physical Activity, and Bone Health, invited presentation at Winthrop-University Hospital, Mineola, NY on July 5, 2007.
22) Exploring Integrative and Complementary Medicine: Session Three: Tai Chi and Bone Health. Outreach Class, Texas Tech University on October 11, 2007.
23) Nutrition, Physical Activity, and Bone Health, invited presentation at University of Maryland, School of Medicine, Baltimore, MD on December 5, 2007.
24) Nutrition, Physical Activity, and Bone Health, invited presentation at School of Arts and Sciences, Providence University, Taiwan on December 26, 2007.
25) Nutrition, Physical Activity, and Bone Health, invited presentation at Aging Interest Researcher Group, Garrison Institute on Aging, Lubbock, TX on January 18, 2008.
26) Nutrition, Physical Activity, and Bone Health, invited presentation at Department of Nutrition, Hospitality, and Retailing. Texas Tech University, Lubbock, TX on March 4, 2008.
27) Effect of green tea polyphenols on chronic inflammation-induced bone loss in female rats. The Annual Meeting of Experimental Biology, 2008. San Diego Convention Center, San Diego, CA on April 7, 2008.
28) Vitamin D and Musculoskeletal Health. The 5th Annual Aging Symposium. Lubbock, TX on April 10, 2008.
29) Martial Arts Exercise and Nutrition Education for Overweight/Obese Children. Sid Richardson Foundation, Fort Worth, TX on May 5, 2008.
30) Green Tea and Bone Health. Leadership Texas Program, Amarillo, TX on August 12, 2008.
31) Vitamin D and Musculoskeletal Health. Geriatric Symposium- The Fitness prescription: Should Grandma Pump Iron? Amarillo on TX, November 7, 2008.
32) Nutrition, Physical Activity, and Bone Health. Solae LLC, St. Louis, MO on April 6, 2009.
33) Green Tea and Bone Health. Lubbock Dietetic Association, Lubbock, TX on April 15, 2009.
34) Synergistic effect of green tea polyphenols and vitamin D on chronic inflammation-induced bone loss in female rats. The Annual Meeting of Experimental Biology, 2009. New Orleans, LA on April 20, 2009.
35) Epidemic Obesity in China. President's Forum on International Health, Lubbock, TX on May 20, 2009.
36) Tai Chi and Bone Health. Lubbock Rotary Club, Lubbock, TX on June 10, 2009.
37) Nutrition and Bone Health. Department of Nutritional Science, Fu Jen Catholic University, Taiwan on June 24, 2009.
38) Green tea and bone health. USDA Grand Forks Human Nutrition Research Center, Grand Forks, ND on September 24, 2009.
39) Obesity/bone health and green tea research. Laura W. Bush Institute for Women's Health National Advisory Board Meeting. Amarillo, TX on April 22, 2010.
40) Green tea and bone health to Winthrop-University Hospital, Mineola, NY on June 4, 2010.
41) Nutrition factors in bone diseases-clinical integration. Department of Nutrition, Texas Tech University, Lubbock, TX on April 5, 2011.
42) Green tea and bone health to US Food Service, Lubbock, TX on May 18, 2011.
43) How to write a review article? Department of Nutrition, Texas Tech University, Lubbock, TX on November 17, 2011.
44) How to write a clinical grant proposal in NIH format? Department of Nutrition, Texas Tech University, Lubbock, TX on November 17, 2011.
45) Green tea and bone health: from bench to clinical trial, School of Pharmacy, Distinguished Speaker, Amarillo, TX on December 16, 2011.

46) Healthy eating and bone health, Daughter/Mother Program, Atkins Middle School, Lubbock, TX on March 4, 2012.
47) Healthy eating and bone health, Daughter/Mother Program, Wilson Middle School, Lubbock, TX on March 8, 2012.
48) Nutrition factors in bone diseases-clinical integration. Department of Nutrition, Texas Tech University, Lubbock, TX on April 3, 2012.
49) Green tea and bone health: from bench to clinical trial. Bioscience Research Center, Andong National University, Andong, South Korea on June 11, 2012.
50) Experimental design/model for nutrition and bone health study. Fu Jen University, Taipei, Taiwan on June 20, 2012.
51) Green tea and bone health: from bench to clinical trial. Fu Jen University, Taipei, Taiwan on June 20, 2012.
52) How to write a review article about one nutrient/group nutrients on bone health. Fu Jen University, Taipei, Taiwan on June 20, 2012.
53) How to prepare proposal about nutrition and bone health: cell, animal and clinical trial. Fu Jen University, Taipei, Taiwan on June 20, 2012.
54) Effect of GTP and Tai Chi on bone health. The Annual Meeting of International Academy on Nutrition and Aging, Albuquerque, NM on July 13, 2012.
55) Green tea and women's health. San Angelo Community-sponsored by Angelo State University, San Angelo, TX on September 12, 2012.
56) Tea and bone health: steps forward in translational nutrition. Fifth International Scientific Symposium on Tea & Human Health at the U.S. Department of Agriculture in Washington DC on September 19, 2012.
57) Green tea for women's health. The Lunch 'n Learn-Community Matters, Amarillo National Bank, Amarillo, TX. November 7, 2012.
58) Green tea and bone health: a translational approach, Department of Nutrition, Texas Tech University, Lubbock, TX on March 25, 2013.
59) Green tea for women's health. American Association of University Women Lubbock Betty Anderson Branch. March 27, 2013.
60) Shen CL. Tea and bone health: steps forward in translational nutrition. A Special Session for the North America Chinese Society for Nutrition (NACSN), Annual Meeting of Chinese Society for Nutrition. Hangzhou, China. May 17, 2013.
61) Shen CL. Dietary polyphenols in management of osteoporosis. West Lake Frontiers in Nutrition Research Training Program (WFNRTP), Hangzhou, China. May 19, 2013.
62) Shen CL. How to interact with media and general public. West Lake Frontiers in Nutrition Research Training Program (WFNRTP), Hangzhou, China. May 19, 2013.
63) Shen CL. Nutrition and musculoskeletal health (invited by Taiwanese Osteoporosis Association) Taipei, Taiwan. August 24, 2013.
64) Shen CL. Nutrition and musculoskeletal health, Fu Jen University, Taipei, Taiwan on August 26, 2013.
65) Shen CL. Clinical Nutrition Investigation and Women' Bone Health. Texas Tech University. Obesity Research Cluster Annual Meeting and Networking Event. Texas Tech University, Lubbock, TX. May 14, 2014.
66) Shen CL. Nutrition and Bone Disorders. Department of Nutritional Sciences, Texas Tech University, Lubbock, TX. April 2, 2014.
67) Shen CL. Nutrition and Bone Health. Osher Lifelong Learning Institute (OLLI), Texas Tech University. October 8, 2014.
68) Shen CL. Tea and bone health: translational nutrition approach. Department of Nutritional Sciences, University of Connecticut, Storrs, CT. November 13, 2014.
69) Shen Cl. Nutrition and Bone Health. Intergrative Medicine Lecture, Spring Series, TTUHSC, Lubbock, TX. February 11, 2015.
70) Shen CL. Tea polyphenols in bone protection. American Society for Nutrition, Dietary Bioactive Components, RIS Topic Session "*The Role of Dietary Bioactive Components in Bone Health and Development.* Experimental Biology 2015, Boston, MA. March 30, 2015.
71) Shen CL. Nutrition and Bone Disorders. Department of Nutritional Sciences, Texas Tech University, Lubbock, TX. April 8, 2015.
72) Shen CL. Tea and Health. Women's Health Committee, University Medical Center, Lubbock, TX. May 12, 2015.

73) Shen CL. "Tea polyphenols in bone protection". 12th China Nutrition Science Congress, Beijing, China. May 17, 2015.
74) Shen CL. "Dietary polyphenols and obesity: translational nutrition approaches". 12th China Nutrition Science Congress, Beijing, China. May 18, 2015.
75) Shen CL. "Clinical Trial of FDA-IND Green Tea Polyphenols for Bone Health". The Society of Clinical Research Associates, (SOCRA) annual meeting. Denver, CO. September 18, 2015.
76) Shen CL. Tea polyphenols in bone protection: a translational research approach. The 8th Conference and Exhibition of the International Society for Nutraceuticals and Functional Foods (ISNFF), Wuxi, China, September 22, 2015.
77) Shen CL. Tea polyphenols in bone protection: a translational research approach. Providence University, Taiwan. September 29, 2015.
78) Shen CL. Gender differences in musculoskeletal health: a project FRONTIER Study. Sex- and Gender-Based Medicine & Women's Health Symposium. October 23, 2015, Lubbock, TX.
79) Shen CL. Dietary polyphenols in bone and obesity. TTUHSC Garrison Institute on Aging, November 3, 2015, Lubbock, TX.
80) Shen CL. "Qi Gong for low back pain relief: a Mechanistic study". SOM Center of Excellence for Translational Neuroscience and Therapeutics club, Lubbock, TX. 12/2/2015.
81) Shen CL. "Tea polyphenols for bone health: lessons from animals to humans". Cornell Biotechnology Club, Cornell University, Ithaca, NY, 3/14/2016.
82) Shen CL. "Tocotrienols for bone health: a pilot clinical study". 2nd Bone Symposium. National University of Malaysia (Unversiti Kebangsaan Malaysia), Kuala Lumpur, Malaysia, 3/31/2016.
83) Shen CL. "Green Tea and Bone Health: From Bench to Clinical Trial". Symposium Session: Natural Products: Biological Effects and Therapeutic Potential in Human Disease, Sponsored by American Federation for Medical Research. Annual Meeting of Experimental Biology, San Diego, CA, 4/6/2016.
84) Shen CL. "Dietary tocotrienols for bone health: from animals to humans. The first Annual Symposium of the new Center of Excellence for Translational Neuroscience and Therapeutics (CTNT), 4/21/2016, Lubbock, TX.