

Jay J. Cao, Ph.D.

Research Nutritionist

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EDUCATION:

1981-1985 Nanjing Agricultural University; Major, Animal Science; B.S.
1985-1988 Chinese Academy of Agricultural Science; major, Animal Science; M.Sc.
1992-1994 McGill University; major, Animal Nutrition; M.Sc.
1995-1998 University of Florida, major, Animal Nutrition; Ph.D.

RESEARCH EXPERIENCE:

1985-1991 Research Fellow, Institute of Wild Economic Animals, Chinese Academy of Agricultural Sciences, Jilin, China
1991-1994 Research Assistant (M.Sc. candidate), Department of Animal Science, McGill University, Montreal, Canada
1995-1998 Research Associate (Ph.D. candidate), Animal Science Department, University of Florida, Gainesville, FL
1998-2001 NIH-funded Postdoctoral Associate, Food Science and Human Nutrition, University of Florida, Gainesville, FL
2001-2004 NIH-Funded Postdoctoral Associate, Department of Endocrinology, VA Medical Center, and Department of Medicine, University of California at San Francisco, CA
2004-2005 Research Endocrinologist, Northern California Institute for Research and Education, San Francisco, CA
2005-2006 Nutrition Scientist Manager, Research & Development, Melaleuca, Inc., Idaho Falls, ID
2006- Research Nutritionist, USDA, ARS, GFHNRC, Grand Forks, ND

HONORS AND AWARDS:

Member, Sigma Xi, since 1997

Member, Gamma Sigma Delta, since 1998

Plenary poster, American Society for Bone and Mineral Research 25th annual meeting, September 19-23, 2003

Awarded Life member for academic achievement and contribution to the society, International Chinese Musculoskeletal Society, 2012

Excellence award from the commander of the US Army Research Institute of Environmental Medicine (USARIEM) for successfully designing and conducting a joint project between two federal agencies, USARIEM and USDA ARS GFHNRC, titled "The musculoskeletal response to energy deficit: defining optimal protein intake", 2012

Awarded Life member based on academic achievement and contribution to the society, North American Chinese Society for Nutrition, 2015

Certificate of Appreciation from the American Society of Nutrition for significant contribution, as the chair of CIG, to the educational enrichment and professional development of the ASN's scientific sessions, the annual meeting of Experimental Biology, 2015.

Recognized by the Scientific Report of the 2020 Dietary Guidelines Advisory Committee for the contribution as a peer reviewer of the USDA's Nutrition Evidence Systematic Reviews, 2020

SPECIAL INVITATIONS:

Invited to give two presentations to stakeholder, Northarvest Bean Growers Association, Fargo, ND, April 2007 and March 2008.

Invited to give a presentation titled “Beef protein, acid-base balance on bone health” to members of the North Dakota Beef Commission, Bismarck, ND, February 2008.

Invited to serve on a panel comprised of experts from the U.S. and Canada to develop a list of research priorities for the Northharvest Bean Growers Association to fund in the future, Grand Forks, ND, May 2008.

Invited to serve as Program coordinator, RIS Animal Nutrition, American Society for Nutrition, 2009.

Invited to present “Meat protein, Ca balance, and bone health: Results from a controlled study at GFHNRC” to student organization, Delta Upsilon Fraternity, University of North Dakota, Grand Forks, ND, March 2009.

Invited to present “Meat protein, acid-base balance and calcium balance” to the Center for Experimental Therapeutics and Reperfusion Injury, Department of Anesthesiology, Perioperative and Pain Medicine, Harvard Medical School, Boston, MA, April 2009.

Invited to present “Meat protein, acid-base balance and calcium balance” to faculty and students at the Department of Nutrition, Florida International University, Miami, FL, March 2010.

Invited to serve as a panelist of with five other internationally renowned scientists discussing hot topic research panel and presented “Nutrition, fat, inflammation and bone Health” at the Fifth International Conference on Osteoporosis and Bone Research, Shenzhen, China, October 2010.

Invited to present “Protein intake, acid-base balance and calcium metabolism” at the 4th New York Skeletal Biology and Medicine Conference, Mount Sinai School of Medicine, New York, NY, 2011.

Invited to present “Diet affects calcium metabolism and bone turnover” to the Department of Orthopedics, Brown Albert Medical School, Brown University, Providence, RI, January 2012.

Invited speaker on nutrition, fat, and bone health at the 6th International Conference on Osteoporosis and Bone Research, Xian, China, September 2012.

Invited to present “Diet, obesity and bone metabolism” at the Institute of Molecular Medicine and Genetics, Georgia Regents University, Augusta, GA, February 2014.

Invited to present “Calcium homeostasis and bone metabolic responses to protein diet in humans” at the Department of Pathology, Texas Tech University, Lubbock, TX, September 2014.

Invited to present “Bone changes in high-fat diet induced obese animal model” at the James J. Peters VA Medical Center, the Icahn School of Medicine at Mount Sinai, New York, NY, August 2015.

Invited to present “Diet and bone metabolism” at the Department of Food Science and Human Nutrition, University of Florida, Gainesville, FL, November 2016.

Keynote speaker at Nutrition Working Group, “Protein, acid load, and bone health”, the American Society for Bone and Mineral Research annual meeting, Denver, CO, September 2017

SPECIAL INVITATIONS:

Information officer, International Chinese Musculoskeletal Society (> 1,000 members), 2007 – 2012

Chair for mini-symposium: Dietary Bioactive Compounds IV: Antioxidants and Free Radicals, American Society for Nutrition at Experimental Biology, Washington, DC, 2008.

Chair for mini-symposium: Bone Health in Animal Models, American Society for Nutrition at Experimental Biology, Washington, DC, 2008.

Program Coordinator, RIS Animal Nutrition, American Society for Nutrition, 2009 – 2011

Member, Board of Directors, International Chinese Hard Tissue Society, 2009 – 2012

Chair for mini-symposium: Animal Models of Bone Health and Disease, American Society for Nutrition at Experimental Biology, Anaheim, CA, 2010.

Chair for “Obesity and Bone” at the 6th International Conference on Osteoporosis and Bone Research, Xi’an, China, 2012.

Elected Secretary, President, and Member of Board of Directors, and took a leadership role in organizing scientific programs, North America Chinese Society for Nutrition, 2014 - 2020.

Chair for China Interest Group with about 100 attendees, American Society for Nutrition at Experimental Biology, 2015, 2019.

Program Chair, the 1st Scientific Program, North America Chinese Society for Nutrition, San Diego, CA, 2016.

Lead Judge for the Emerging leader poster competition, Dietary Bioactive Compound Research Interest Group, American Society for Nutrition, 2018-2023.

Chair of the business meeting (> 100 attendees) of the Research Interest Section, Dietary Bioactive Components, American Society for Nutrition, June 2018.

PARTICIPATION IN PROFESSIONAL MEETINGS, TECHNICAL CONFERENCES, WORKSHOPS:

American Society of Animal Science annual meetings (1995-1998). Attended 4 meetings and made 1 presentation.

Sigma Xi (1997). Attended 2 meetings.

Gamma Sigma Delta (1998). Attended 1 meeting.

American Society for Nutrition annual meetings (1998-present). Attended 20 meetings and made 6 presentations.

American Society for Bone and Mineral Research (2001-present). Attended 15 meetings.

International Chinese Hard Tissue Society (2002-present). Attended 14 meetings.

American Heart Association scientific section (2005). Attended 1 meeting.

Workshop “Internship Cultural Awareness” (2007). Attended 1 meeting.

Workshop “Targeting Bone Remodeling for the Treatment of Osteoporosis” (2007). Attended 1 meeting.

Workshop “New York Skeletal Biology and Medicine Conference” (2009 and 2011). Attended 2 meetings.

North America Chinese Society for Nutrition (2014-present). Attended 7 meetings.

Orthopaedic Research Society annual meetings (2020-present). Attended 2 meetings.

Journal of Nutritional Biochemistry editorial board member meeting. Attended 5 meetings.

PROFESSIONAL ADVISORY AND CONSULTING ACTIVITIES:

Served as an *ad hoc* manuscript reviewer for 40 journals. In particular, served as a regular manuscript reviewer for high-impact nutrition and/or bone research related journals: *Am J of Clin Nutr*, *Biological Trace Element Research*, *Bone*, *British J of Nutrition*, *J Bone and Mineral Research*, *Journal of Nutrition*, *Journal of Nutritional Biochemistry*, *Nutrients*. (2006 – present)

Served as an *ad hoc* grant reviewer for international scientific funding agencies and organizations including Ontario Ministry of Agriculture, Canada (2008), Biomedical Research Council National Medical Research Council, Ministry of Health, Singapore (2012).

Served as an *ad hoc* grant reviewer for domestic federal and academic scientific funding agencies and organizations including Florida International University (2009), National Cattlemen’s Beef Association, (2011), Veteran Affairs Merit Review ENDB (2014, 2015, 2016, 2017).

Invited to serve on the editorial board of scientific journals and regularly reviewed manuscripts for these journals such as *Preventive Nutrition and Food Science* (the official Journal of the Korean Society of Food Science and Nutrition, 2001), *Biological Trace Element Research* (2014-present), *J of Nutritional Biochemistry* (2017-present), *J of Nutrition* (2020-present).

Provided professional and technical consultation for American Soybean Association, 2003 - 2006.

Regularly sought for collaboration and consultation on research related bone and nutrition with scientists in academia.

Abstract reviewer for the annual meeting of the American Society for Bone and Mineral Research (2017).

Served as a mentor, American Society for Bone and Mineral Research (2017).

Award jury for the Osborne and Mendel Award, American Society for Nutrition (2017, 2018).
Chair-elect, Chair, and past-chair, Research Interest Section, Dietary Bioactive Components, American Society for Nutrition; planned workshops and student travel awards (2017, 2018, 2019).
Abstract reviewer for annual meetings, American Society for Nutrition (2016, 2017, 2018, 2019, 2020, 2022).

FUNDING SUPPORT:

USDA ARS; 10/2010 - present

Cao, JJ (PI); North Dakota Beef Commission; Effects of high meat weight loss diets on bone health; 10/2007 – 6/2009; \$25,000

Cao, JJ (PI); Northarvest Bean Growers Association; High selenium pinto beans as a value-added product in bone metabolism; 7/2007 – 3/2009; \$27,072

Cao, JJ (PI); Northarvest Bean Growers Association; Antioxidant activity in dry beans – potential for pinto beans to slow age-related bone loss; 7/2007 – 12/2008; \$22,743

Cao, JJ (PI) and Hunt JR (Co-PI); National Cattlemen’s Beef Association; Calcium retention in postmenopausal women as influenced by beef and other dietary components that induce an acid load; 10/2007 – 9/2008; \$156,312

PROFESSIONAL TRAINING AND EDUCATION:

2009 Protection of Human Research Subjects
Collaborative INSTITUTIONAL Training Initiative

2007 New scientist training, USDA ARS Northern Plain Area, Oct 15 – 18, Fort Collins, CO

2007 Internship Cultural Awareness Workshop,
United Tribes Technical College and USDA-ARS Northern Plains Area, Bismarck, ND

2006 Clinical Research Monitoring Workshop for Site Coordinators, Monitors, and Auditors.
The Society of Clinical Research Associates, Chicago, IL

2006 Protection of Human Research Subjects and Collaborative IRB Training Initiative, Idaho Falls, ID

2005 – 2006 Supervisor Development Program, Melaleuca, Inc., Idaho Falls, ID

2005 Interpersonal Communication and Presentation Skills. Executive Training Resource, Inc., Idaho Falls, ID

PUBLICATIONS:

Peer-reviewed:

- 1 **Cao JJ**, Gregoire BR. 2023. Time of day of exercise does not affect the beneficial effect of exercise on bone structure in older female rats. *Frontier in Physiology*. doi: 10.3389/fphy.2023.1142057.
- 2 Peng Y, Langemann S, Kothari P, Liu L, Zhao W, Hu Y, Chen Z, Li J, Cao J, Guo XE, Chen L, Bauman WA, Qin W. 2023. Anti-Siglec-15 antibody prevents marked bone loss after acute spinal cord injury-induced immobilization in rats. *JBMR Plus*. Sep 27. doi: 10.1002/jbm4.10825.
- 3 **Cao JJ**. Calcium consumption is beneficial to bone health in obese, postmenopausal women. *J Nutr*. 2022 Apr 1; 152(4):922-923. doi: 10.1093/jn/nxac008.
- 4 Gera S, Kuo TC, Gumerova AA, Korkmaz F, Sant D, DeMambro V, Sudha K, Padilla A, Prevot G, Munitz J, Teunissen A, van Leent MMT, Post TGJM, Fernandes JC, Netto J, Sultana F, Shelly E, Rojekar S, Kumar P, Cullen L, Chatterjee J, Pallapati A, Miyashita S, Kannangara H, Bhongade M, Sengupta P, Ievleva K, Muradova V, Batista R, Robinson C, Macdonald A,

- Hutchison S, Saxena M, Meseck M, Caminis J, Iqbal J, New MI, Ryu V, Kim SM, **Cao JJ**, Zaidi N, Fayad ZA, Lizneva D, Rosen CJ, Yuen T, Zaidi M. 2022. FSH-blocking therapeutic for osteoporosis. *Elife*. 2022 Sep 20;11:e78022. doi: 10.7554/eLife.78022.
- 5 **Cao, J.J.**, Gregorie, B.R., Michelsen, K., and Shi, X. 2021. Deficiency of PPAR γ in bone marrow stromal cells does not prevent high-fat diet-induced bone deterioration in mice. *J Nutr*. 2021; doi: 10.1093/jn/nxab173.
- 6 **Cao JJ**, Roemmich JN, Sheng X, Jahns L. 2021. Increasing vegetable intake decreases urinary acidity and bone resorption marker in overweight and obese adults: an 8-week randomized controlled trial. *J Nutr* 2021 Nov 2; 151(11):3413-3420. doi: 10.1093/jn/nxab255.
- 7 Zhao, W., Peng, Y., Hu, Y., Guo, X.E., Li, J., **Cao, J.J.**, Pan, J., Feng, J.Q., Cardozo, C., Jarvis, J., Bauman, W.A., and Qin, W. 2021. Electrical Stimulation of Hindlimb Skeletal Muscle has Beneficial Effects on Sublesional Muscle and Bone in a Rat Model of Spinal Cord Injury. *J Neurotrauma*. 2021;144:115825.
- 8 Floden, A.M., Sohrabi, M., Nookala, S., **Cao, J.J.**, Combs, C.K. Salivary A β secretion and altered oral microbiome in mouse models of AD. *Curr Alzheimer's Res*.2020;17(12):1133-1144.
- 9 Elmassry, M.M., Chung, E., **Cao, J.J.**, Hamood, A.N., and Shen, C.L. Osteoprotective effect of green tea polyphenols and annatto-extracted tocotrienol in obese mice is associated with enhanced microbiome vitamin K2 biosynthetic pathways. *J Nutr Biochem*, 2020;86:108492. Doi: 10.1016/j.jnutbio.2020.108492. Epub 2020 Sep 11.
- 10 **Cao JJ**, Gregoire BR, Michelsen K, Picklo MJ. 2020. Decreasing the dietary linoleic: α -linolenic acid ratio from 10 to 4 by changing the former does not prevent adiposity or bone deterioration in obese mice. (*J Nutr*, In Press).
- 11 **Cao JJ**, Ding K, Rosario R, Su Y, Bao Y, Lawrence ME, Hamrich MW, Isales CM, Shi X. 2020. Deletion of PPAR γ in mesenchymal lineage cells protects against aging-induced cortical bone loss in mice. *J Gerontology: Biological Sciences*, 75(5):826-834.
- 12 **Cao JJ**, Gregoire BR, Michelsen K, Picklo MJ. 2020. Dietary long-chain n-3 fatty acids decrease adiposity and mitigate bone deterioration in mice fed a high-fat diet. *J Nutr* 150(1):99-107.
- 13 Yan L, Nielsen FH, Sundaram S, **Cao J.** 2019. Dietary selenium supplementation does not attenuate mammary tumorigenesis-mediated bone loss in male MMTV-PyMT mice. *Bio Trace Elem Res*. doi: 10.1007/s12011-019-01767-7. (FY19)
- 14 Shen L, Smith BJ, Li J, **Cao JJ**, Song X, Newhardt MF, Corry KA, Tomison MD, Tang L, Wang J, Chyu M. 2018. Effect of long-term green tea polyphenols supplementation on bone architecture, turnover, and mechanical properties in middle-aged ovariectomized rats. *Calcified Tissue Int* 104(3):285-300. doi: 10.1007/s00223-018-0489-y
- 15 **Cao JJ**. 2018. Caloric restriction combined with exercise is effective in reducing adiposity and mitigating bone structural deterioration in obese rats. *Ann New York Acad Sci-Marrow* 1433(1):41-52. doi: 10.1111/nyas.13936.
- 16 **Cao JJ**, Whigham LD, Jahns L. 2018. Depletion and repletion of fruit and vegetable intake alters serum bone turnover markers: a 28-wk single-arm experimental feeding intervention. *British J Nutr* 120(5):500-507. doi: 10.1017/S0007114518001642.
- 17 **Cao JJ**, Gregoire BR, Shen C. 2017. High-fat diet decreases bone mass in growing mice with systemic chronic inflammation induced by low-dose slow-release lipopolysaccharide pellets. *J Nutr* 147: 1909-1916.

- 18 **Cao JJ**. 2017. High dietary protein intake and protein-related acid load on bone health. *Curr Osteoporos Rep* October 24. doi: 10.1007/s11914-017-0408-6.
- 19 Yan L, Nielsen FH, Sundaram S, **Cao JJ**. Monocyte chemotactic protein-1 deficiency attenuates and high-fat diet exacerbates bone loss in mice with Lweis lung carcinoma. *Oncotarget*. 8(14): 23303-23311.
- 20 Wu RT, Cao L, Mattson E, Witwer KW, **Cao JJ**, Zeng H, He X, Combs GF, Cheng WH. 2016. Opposing impacts on healthspan and longevity by limiting dietary selenium in telomere dysfunctional mice. *Aging Cell*. 16(1): 125-135.
- 21 Akbar MA, **Cao JJ**, Lu Y, Nardo D, Chen MJ, Elshikha AS, Ahamed R, Brantly M, Holliday LS, Song S. 2016. Alpha-1 antitrypsin gene therapy ameliorates bone loss in ovariectomy-induced osteoporosis mouse model. *Hum Gene Ther*. 9: 679-686.
- 22 Yuan X, **Cao JJ**, He X, Serra R, Qu J, Cao X, Yang S. 2016. Ciliary IFT80 balances canonical versus non-canonical hedgehog signaling for osteoblast differentiation. *Nat Commun*. 7: 11024.
- 23 **Cao JJ** and Gregoire BR. 2016. A high-fat diet increases body weight and circulating estradiol concentrations but does not improve bone structural properties in ovariectomized mice. *Nutrition Research*. 36 (4): 320-327.
- 24 Shen CL, Han J, Wang S, Chung E, Chyu M, **Cao JJ**. 2015. Effects of green tea supplementation on body composition and bone remodeling in obese female rats fed with high-fat diet and caloric restricted diet. *Nutr Res*. 1095-1105.
- 25 Yan L, Nielsen FH, Sundaram S, **Cao JJ**. 2015. High-fat diet enhances and plasminogen activator inhibitor-1 deficiency attenuates bone loss in mice with Lewis lung carcinoma. *Anticancer Research*. 35: 3839-3848.
- 26 Yan L, Graef GL, Johnson LK, **Cao JJ**. 2015. Soy protein is beneficial but high-fat diet and voluntary running are detrimental to bone structure in mice. *Nutr Res*. 35 (6): 523-531.
- 27 Yuan X, **Cao JJ**, Liu T, Li YP, Scannapieco F, He X, Oursler MJ, Zhang X, Vacher J, Li C, Olson D, Yang S. 2015. Regulators of G protein signaling 12 promotes osteoclastogenesis in bone remodeling and pathological bone loss. *Cell Death Differ* 22: 2046-2057.
- 28 **Cao JJ** and Picklo MJ. 2015. Involuntary wheel running improves but does not fully reverse the deterioration of bone structure of obese rats despite decreasing adiposity. *Calcif Tissue Int*. 145-155.
- 29 Zhou Y, Mohan A, Moore DC, Lin L, Zhou FL, **Cao JJ**, Wu Q, Yin YX, Reginato AM, Ehrlich MG, and Yang W. 2015. SHP22 is required for osteoclastogenesis by promoting pre-osteoclast fusion. *FASEB J*. 29 (5): 1635-1645.
- 30 **Cao JJ**, Ou G, Ding K, Yang N, Kream BE, Hamrick MW, Isales CM, Shi X. 2015. Impact of targeted PPAR γ disruption on bone remodeling. *Mol Cell Endocrinol*. 410: 27-34.
- 31 Karl JP, Thompson LA, Niro PJ, Margolis LM, McClung JP, **Cao JJ**, Combs GF Jr, Young AJ, Lieberman HR, Pasiakos SM. 2014. Transient decrements in mood during energy deficit are independent of dietary protein-to-carbohydrate ratio. *Physiology & Behavior*. 139: 524-531.
- 32 Pan G, **Cao JJ**, Ding K, Yang N, Ding K, Fan C, Xiong WC, Hamrick M, Isales CM, Shi XM. Role of glucocorticoid-induced Leucine zipper (GILZ) in bone acquisition. 2014. *J Biol Chem*. 289 (28): 19373-19382.
- 33 **Cao JJ**, Picklo MJ. 2014. N-acetylcysteine supplementation decreases osteoclast differentiation and increases bone mass in mice fed a high-fat diet. *J Nutr* 144 (3): 289-296.

- 34 Gaffney-Stomberg E, **Cao JJ**, Lin GG, Wulff CR, Murphy NE, Young AJ, McClung JP, Pasiakos SM. 2014. Differential effects of dietary protein level and source on bone turnover, density and structure and intestinal calcium transporter expression during energy restriction in rats. *J Nutr.* 144 (6): 821-829.
- 35 Pasiakos SM, Margolis LM, McClung JP, **Cao JJ**, Whigham LD, Combs Jr. GF, Young AJ. 2014. Whole-body protein turnover response to short-term high protein diets during weight loss: a randomized controlled trial. *International J Obesity.* 38: 1015-1018.
- 36 **Cao JJ**, Pasiakos SM, Margolis LM, Sauter ER, Whigham LD, McClung JP, Young AJ, Combs GF Jr. 2014. Calcium homeostasis and bone metabolic responses to high protein, energy deficit diets in healthy young adults: a randomized control trial. *Am J Clin Nutr.* 99 (2): 400-407.
- 37 Carbone JW, Margolis LM, McClung JP, **Cao JJ**, Murphy NE, Sauter ER, Combs, GF Jr., Young AJ, Pasiakos SM. 2013 Effects of energy deficit, dietary protein, and feeding on intracellular regulators of skeletal muscle proteolysis. *FASEB J.* 27 (12):5104-5111.
- 38 Iqbal J, Sun L, **Cao JJ**, Yuen T, Bab I, Leu N, Wagage S, Hunter C, Nebert DW, Zaidi M. 2013. Smoke carcinogens cause bone loss through the aryl hydrocarbon receptor and induction of CYP1 enzymes. *Proc Natl Acad Sci.* 110 (27): 11115-11120.
- 39 Pasiakos SM, **Cao JJ**, Margolis LM, Sauter ER, Whigham LD, McClung JP, Rood JC, Combs Jr. GF, Young AJ. 2013. Effects of high protein diets on fat-free mass and muscle protein synthesis following weight loss: a randomized controlled trial. *FASEB J.* 27 (9):3837-3847.
- 40 Chen JR, Zhang J, Lazarenko OP, **Cao JJ**, Blackburn ML, Badger TM, Ronis MJ. 2013. Soy protein isolates prevent loss of bone quantity associated with obesity in rats through regulation of insulin signaling in osteoblasts. *FASEB J.* 27 (9): 3514-3523.
- 41 Yang S, Li YP, Liu T, He X, Yuan X, Li C, **Cao JJ**, Kim Y. 2013. Mx1-Cre mediated Rgs12 conditional knockout mice exhibit increased bone mass phenotype. *Genesis.* 51 (3):201-209.
- 42 Yan L, Yee JA, **Cao JJ**. 2013. Curcumin reduces trabecular and cortical bone in naïve and Lewis lung carcinoma-bearing mice. *Anticancer Research.* 33 (8): 3153-3162.
- 43 Qin W, Sun L, **Cao JJ**, Peng Y, Wu Y, Creasey G, Li J, Qin Y, Jarvis J, Bauman WA, Zaidi M, Cardozo C. 2013. The central nervous system (CNS)-independent anti-bone resorptive activity of muscle contraction and the underlying molecular and cellular signatures. *J Biol Chem.* 288 (19):13511-13521.
- 44 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. *J Med Food.* 16 (5):421-427.
- 45 Zeng H, **Cao JJ**, Combs Jr. GF. 2013. Selenium in bone health: Roles in antioxidant protection and cell proliferation. *Nutrients* 5 (1): 97-110. (Review)
- 46 Zhu LL, **Cao JJ**, Sun M, Yuen T, Zhou R, Li J, Yuan ZP, Moonga SS, Guo L, Mechanick JI, Iqbal J, Bian Z, Blair HC, Liu P, Zaidi M. 2012. Vitamin C prevents hypogonadal bone loss. *PLoS One* 7 (10): e47058.
- 47 Baliram R, Sun L, **Cao JJ**, Latif R, Huber AK, Blair HC, Zaidi M, Davies TF. 2012. Hyperthyroid-associated osteoporosis is exacerbated by the loss of TSH signaling. *J Clin Invest* 122 (10): 3737-3741.
- 48 Colaianni G, Sun L, Di Benedetto A, Tamma R, Zhu LL, **Cao JJ**, Grano M, Yuen T, Colucci S, Cuscito C, Mancini L, Li J, Nishimori K, Bab I, Lee HJ, Iqbal J, Young WS 3rd, Rosen C,

- Zallone A, Zaidi M. 2012. Bone marrow oxytocin mediates the anabolic action of estrogen on the skeleton. *J Biol Chem*. 287 (34): 29159-29167.
- 49 Jackson MI, **Cao JJ**, Zeng H, Uthus E, Combs GF. 2012. S-adenomethionine dependent protein methylation is required for expression of selenoprotein P and gluconeogenic enzymes in human hepatocytes. *J Biol Chem* 287 (43): 36455-36464.
- 50 Zhu LL, Blair H, **Cao JJ**, Yuen T, Latif R, Guo L, Tourkova IL, Li J, Davies TF, Sun L, Bian Z, Rosen C, Zallone A, New MI, Zaidi M. 2012. Blocking antibody to the beta-subunit of FSH prevents bone loss by inhibiting bone resorption and stimulating synthesis. *Proc Natl Acad Sci*. 109 (36): 14574-14579.
- 51 **Cao JJ**, Gregoire BR, Zeng H. 2012. Selenium deficiency decreases antioxidant capacity and is detrimental to bone microarchitecture in mice. *J Nutr* 142 (8): 1526-1531.
- 52 Yan C, Wang X, **Cao JJ**, Wu M, Gao H. 2012. CCAAT/Enhancer-binding protein gamma is a critical regulator of IL-1 beta-induced IL-6 production in alveolar epithelial cells. *PLoS One*. 7 (4): e35492.
- 53 Yan C, Wu M, **Cao JJ**, Tang H, Zhu M, Johnson PF, Gao H. 2012. Critical role for CCAAT/enhancer-binding protein beta in immune complex-induced acute lung injury. *J Immunol*. 189 (3): 1480-1490.
- 54 Shen CL, **Cao JJ**, Dagda RY, Chanjaplammoitol S, Lu C, Chyu MC, Gao W, Wang JS, Yeh JK. 2012. Green tea polyphenols benefits body composition and improves bone quality in long-term high-fat-diet-induced obese rats. *Nutr Res* 32 (6): 448-457.
- 55 **Cao, JJ**, Gregoire BR, Sun L, Song SH. 2011. Alpha-1 antitrypsin reduces ovariectomy-induced bone loss in mice. *Ann New York Acad Sci* 1240 (1): E31-35.
- 56 Shen CL, Yeh JK, **Cao JJ**, Chyu MC, Wang JS. 2011. Green tea and bone health: Evidence from laboratory studies. *Pharmacol Res* 64: 155-161. (Review)
- 57 Tang H, Yan C, **Cao JJ**, Sarma V, Haura EB, Wu M, Gao H. 2011. An essential role for Stat3 in regulating IgG immune complex-induced pulmonary inflammation. *FASEB J* 25 (12): 4292-4300.
- 58 **Cao JJ**, Hunt JR, Johnson LK. 2011. A diet high in meat protein and potential renal acid load increases absorption and urinary excretion of calcium, without affecting markers of bone resorption or formation in postmenopausal women. *J Nutr* 141 (3): 391-397.
- 59 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. *Calcif Tissue Int*. 88(6): 455-463.
- 60 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. *Inflamm Res* 60: 665-672.
- 61 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. *J Nutr Biochem* 22 (7): 673-680.
- 62 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 Int* 22:327-337.
- 63 **Cao JJ**. 2010. Effects of obesity on bone metabolism. *J Orthopaedic Surgery and Research*. 6: 30.

- 64 **Cao JJ**, Nielsen FN. 2010. Acid diet (high-meat protein) effects on calcium metabolism and bone health. *Curr Opin Clin Nutr Metab Care*. 13: 698-702.
- 65 Yan C, **Cao JJ**, Wu M, Zhang W, Jiang T, Yoshimura A, Gao H. 2010. Suppressor of cytokine signaling 3 inhibits LPS-induced IL-6 expression in osteoblasts by suppressing CCAAT/enhancer-binding protein beta activity. *J Bio Chem*. 285: 37227-39.
- 66 Shen CL, Yeh JK, **Cao JJ**, Tatum OL, Dagda RY, Wang JS. 2010. Synergistic effects of green tea polyphenols and alphacalcidol on chronic inflammation-induced bone loss in female rats. *Osteoporosis Int* 11: 1841-1852.
- 67 Shen CL, Yeh JK, **Cao JJ**, Tatum OL, Dagda RY, Wang JS. 2010. Green tea polyphenols mitigate bone loss of female rats in a chronic inflammation-induced bone loss model. *J Nutr Biochem* 10: 968-974.
- 68 **Cao JJ**, Sun, L, Gao H. 2010. Diet-induced obesity alters bone remodeling leading to decreased femoral trabecular bone mass in mice. *Ann New York Acad Sci* 1192: 292-297.
- 69 **Cao JJ**, Gregoire BR, Sheng XM, Liuzzi JP. 2010. Pinto bean hull extract supplementation favorably affects markers of bone metabolism and bone structure in mice. *Food Research International* 43: 560-566.
- 70 **Cao JJ**, Gregoire BR, Gao, H. 2009. High-fat diet decreases cancellous bone mass but has no effect on cortical bone mass in the tibia in mice. *Bone* 44: 1097 – 1104.
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