



Dr. Jay Cao is the current secretary, webmaster, and acting treasurer and has made significant contributions in the success of the NACSN. Dr. Cao applied tax-exempt status with IRS, registered the NACSN as a non-profit organization with the State of North Dakota, opened society's bank account, collected membership dues, set up society's website and email account, and established society's wechat group. Dr. Cao has actively participated in organizing society activities such as China Interest Group at ASN annual meetings, mentor-mentee program, and the 1<sup>st</sup> NACSN symposium. Dr. Jay Cao is one of the NACSN founding members that have been paying membership fees since the society being established in 2012.

Dr. Cao has been conducting basic and translational nutrition research with multiple animal species and human subjects for over two decades resulting in authorship of **70** peer-reviewed research papers and reviews. Dr. Cao has working experience in academia, government, and nutraceutical industry. In scientific field, Dr. Cao has been known for his contributions in four major research areas: (1). Trace mineral bioavailability in animals; (2). Biomarkers of zinc status in humans; (3). Mechanisms of bone metabolism in aging and obesity; (4). Protein, acid-base balance, and bone health in humans.

# Jay J. Cao, Ph.D.

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## **EDUCATION:**

1995 – 1998	Univ of Florida, Gainesville, FL	Ph.D.	Animal Nutrition
1992 – 1994	McGill Univ, Montreal, Canada	M.Sc.	Animal Nutrition
1981 – 1985	Nanjing Agricultural Univ, China	B.S.	Animal Science

## **WORKING EXPERIENCE:**

2014 –	Research Nutritionist, “Food Factor to Prevent Obesity and Related Diseases” CRIS Unit, USDA ARS GFHNRC
2009 –	Research Nutritionist, Lead Scientist of “Bone Metabolism in Obesity” CRIS Unit, USDA ARS GFHNRC
2006 –	Research Nutritionist, “Mineral Intakes for Optimal Bone Development and Health” CRIS Unit, USDA ARS GFHNRC USDA ARS Grand Forks Human Nutrition Research Center
2003 – 2012	Consultant, American Soybean Association
2005 – 2006	Nutrition Scientist Manager, Melaleuca, Inc., Idaho Falls, ID
2001 – 2005	Postdoc in bone biology, Univ of California at San Francisco
1998 – 2001	Postdoc in human mineral nutrition, Univ of Florida, Gainesville, FL

## **PROFESSIONAL SERVICES:**

Ad Hoc manuscript reviewer for over 30 journals

Ad Hoc Grant reviewer for a dozen funding agencies including NIH and VA Merit Review

Served on the executive board of 2 professional organizations (ICHTS and NACSN)

Editorial board of 5 peer-reviewed journals

Chaired scientific sessions several times at American Society for Nutrition annual meetings and other international meetings

## **PROFESSIONAL MEMBERSHIPS:**

2012 –	Founding member of North America Chinese Society for Nutrition
2002 –	Life member of International Chinese Hard Tissue Society
2005 –	American Society for Nutrition
2001 –	American Society for Bone and Mineral Research
1998 –	Gamma Sigma Delta (Honorary Agricultural Research Society)
1997 –	Sigma Xi (Honorary Scientific Research Society)
1995 – 1998	American Society of Animal Science

## **HONORS AND AWARDS:**

2011 Excellence award from US Army Research Institute of Environmental Medicine

2003 Plenary poster, American Society for Bone and Mineral Research 25<sup>th</sup> annual meeting, September 19 – 23, Minneapolis, MN

- 2002 Postdoctoral fellowship, NIH Diabetes, Endocrinology & Metabolism (DK07418-21)  
1990 Paper of Excellence, Symposium of First Young Chinese Animal Research Scientist, Beijing, China

### **GRANT SUPPORT:**

- Cao, JJ (PI); USDA ARS (5450-51000-053-00D); Food Factors to Prevent Obesity and Related Diseases; 10/2014 - 9/2019  
Cao, JJ (PI); USDA ARS (5450-51000-046-00D); Bone Metabolism in Obesity; 10/2010 - 9/2014  
Cao, JJ (PI); USDA ARS (5450-51000-039-00D); Mineral Intakes for Optimal Bone Health; 10/2006 - 9/2010  
Cao, JJ (PI); North Dakota Beef Commission; Effects of high meat weight loss diets on bone health; 10/2007 – 6/2009;  
Cao, JJ (PI); Northarvest Bean Growers Association; High selenium pinto beans as a value-added product in bone metabolism; 7/2007 – 3/2009;  
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;  
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;

### **INVITED TALKS AND CONFERENCE PRESENTATIONS:**

2015. “Impact of obesity on bone”. James J. Peters VA Medical Center, the Icahn School of Medicine at Mount Sinai, August 11. New York, NY.  
2014. “Calcium homeostasis and bone metabolic responses to high protein in humans”. Texas Tech University, September 16. Lubbock, TX.  
2014. “High-fat diet, obesity, and bone metabolism”. Georgia Regents University, February 10. Augusta, GA.  
2013. “Optimal protein intake for bone health”. CAST-UT, October 26. Salt Lake City, UT.  
2013. “Calcium homeostasis and bone metabolic responses to high protein, energy deficit diets in healthy young adults: a randomized control trial”. Experimental Biology 2013. Boston, MA.  
2012. “Nutrition, fat, inflammation and bone health.” and served as a mini-symposium chair at the 6th International Conference on Osteoporosis and Bone Research, Xian, China, September 21.  
2012. Protein and calcium metabolism. Brown University, January 10.  
2011. Protein intake, acid-base balance and calcium metabolism. The 4th New York Skeletal Biology and Medicine Conference, Mount Sinai School of Medicine, April 27-30, New York, NY.  
2010. Protein intake, acid-base balance and calcium metabolism. The 5th International Conference on Osteoporosis and Bone Research, October 28-31, Shenzhen, China.  
2010. “Obesity, Fat, and bone metabolism”. BIT’s 1<sup>st</sup> Annual World Congress of Endobolism (WCE), Xiamen, China. (1/25-27/2011). (Declined)  
2009. “Acid-base balance and protein intake influence calcium retention and bone health of humans”. Shanghai Jiaotong University School of Medicine, Shanghai, China. (11/3/2009).  
2009. “Protein intake and potential renal acid load influence calcium retention and bone metabolism in postmenopausal women”. Institute for Nutritional Sciences, Chinese Academy of Science, Shanghai, China. (11/2/2009).  
2009. “Meat protein, acid-base balance and calcium balance”. Center for Experimental Therapeutics and Reperfusion Injury, Department of Anesthesiology, Perioperative and Pain Medicine, Harvard Medical School, Boston, MA. (4/27/2009).

2009. "A diet high in dietary meat protein and potential renal acid load increases absorption and urinary excretion of calcium, as well as serum IGF-I in postmenopausal women". Experimental Biology 2009, New Orleans, LA
2009. "Meat protein, Ca balance, and bone health: Results from a controlled study at GFHNRC" Delta Upsilon Fraternity. University of North Dakota. (3/2/2009)
2008. "Effects of Bean Consumption on Cardiovascular Disease Risk Factors and Bone Metabolism Markers in Postmenopausal Women". Northarvest Bean Growers Association. Fargo, ND. (3/2008)
2008. "Relative bone mass decreased in mice fed high dietary fat despite an increase in body mass and bone formation markers". Experimental Biology 2008, San Diego, CA. (4/2008)
2008. "Does Beef Protein Help Rather Than Hinder Calcium Retention in Postmenopausal Women?". North Dakota Beef Commission. Bismarck, ND. (2/26/2008)
2007. "Antioxidant activity in dry beans – potential for pinto beans to slow age-related bone loss". Northarvest Bean Growers Association. Fargo, ND.
2000. "Metallothionein mRNA levels in human mononuclear cells and THP-1 cells undergo major changes by zinc supplementation and depletion". Experimental Biology 2000, Orlando, FL.
1997. "Relative bioavailability of organic Zn sources for chicks". American Society of Animal Science. Denver, Colorado.
1997. "Difference in broiler performance due to source and level of dietary phosphorus". Graduate Student Forum. University of Florida.

### **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**

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1PyOBzxuaYRAe/bibliography/49585673/public/?sort=date&direction=ascending>

#### **Peer-reviewed (Primary authored: 27)**

- 1 **Cao JJ** and Gregoire BR. 2015. A high-fat diet increases body weight and circulating estradiol concentrations but does not improve bone structural properties in ovariectomized mice. *Nutrition Research*. Accepted.
- 2 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.

- 3 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.
- 4 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.
- 5 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.
- 6 **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.
- 7 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.
- 8 **Cao JJ**, Ou G, Ding K, Yang N, Kream BE, Hamrick MW, Isales CM, Shi X. 2015. Impact of targeted PPAR $\gamma$  disruption on bone remodeling. *Mol Cell Endocrinol*. 410: 27-34.
- 9 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.
- 10 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.
- 11 **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.
- 12 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.
- 13 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.
- 14 **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.
- 15 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.
- 16 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.
- 17 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.

- 18 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.
- 19 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.
- 20 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.
- 21 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.
- 22 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.
- 23 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)
- 24 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.
- 25 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.
- 26 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.
- 27 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.
- 28 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.
- 29 **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.
- 30 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.
- 31 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.
- 32 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.

- 33 **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.
- 34 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)
- 35 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.
- 36 **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.
- 37 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.
- 38 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.
- 39 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.
- 40 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.
- 41 **Cao JJ**. 2010. Effects of obesity on bone metabolism. *J Orthopaedic Surgery and Research.* 6: 30. (Review)
- 42 **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. (Review)
- 43 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.
- 44 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.
- 45 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.
- 46 **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.
- 47 **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.
- 48 **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.
- 49 Shen CL, Yeh JK, **Cao JJ**, Wang JS. 2009. Green tea and bone metabolism. *Nutr Res* 29: 437-456. (Review)



- 50 **Cao JJ**, Kurimoto P, Boudignon B, Rosen C, Lima F, Halloran BP. 2007. Aging impairs IGF-I receptor activation and induces skeletal resistance to IGF-I. *J Bone Miner Res* 22: 1271 – 1279.
- 51 **Cao JJ**, Wronski TJ, Iwaniec U, Phleger L, Kurimoto P, Boudignon B, Halloran BP. 2005. Aging increases stromal/osteoblastic cell-induced osteoclastogenesis and alters the osteoclast precursor pool in the mouse. *J Bone Miner Res* 20: 1659 – 1668.
- 52 **Cao JJ**, Singleton PA, Majumdar S, Boudignon B, Burghardt A, Kurimoto P, Wronski TJ, Bourguignon LYW, Halloran BP. 2005. Hyaluronan increases RANKL expression in bone marrow stromal cells through CD44. *J Bone Min Res* 20: 30 – 40.
- 53 Sakata T, Wang YM, Halloran BP, Elaieh HZ, **Cao JJ**, Bikle DD. 2004. Skeletal unloading induces resistance to insulin-like growth factor-I (IGF-I) by inhibiting activation of the IGF-I signaling pathways. *J Bone Miner Res* 19: 436 – 446.
- 54 **Cao JJ**, Luo XG, Davis SR, Henry PR, Cousins RJ, Miles RD, Ammerman CB. 2003. Tissue zinc and metallothionein expression as criteria for relative bioavailability assays of zinc sources in chicks. *Acta Veterina et Zootechnica Sinica*. 34: 227 – 231.
- 55 **Cao JJ**, Venton L, Sakata T, Halloran BP. 2003. Expression of RANKL and OPG correlates with age-related bone loss in male C57BL/6 mice. *J Bone Miner Res* 18: 270 – 277.
- 56 Cousins RJ, Blanchard RK, Popp MP, Liu L, **Cao JJ**, Moore JB, Green CL. 2003. A global view of the selectivity of zinc deprivation and excess on genes expressed in human THP 1 mononuclear cells. *Proc Natl Acad Sci* 100: 6952 – 6957.
- 57 Cousins RJ, Blanchard RK, Moore JB, Cui L, Green CL, Liuzzi JP, **Cao J**, Bobo JA. 2003. Regulation of zinc metabolism and genomic outcomes. *J Nutr* 133: 1521S – 1526S. (Review)
- 58 **Cao JJ**, Henry PR, Davis SR, Cousins RJ, Miles RD, Littell RC, Ammerman CB. 2002. Relative bioavailability of organic zinc sources based on tissue zinc and metallothionein in chicks fed conventional dietary zinc concentrations. *Anim Feed Sci Technol* 101: 161 – 170.
- 59 Halloran BP, Uden P, Duh QY, Kikuchi S, Wieder T, **Cao JJ**, Clark O. 2002. Parathyroid gland volume increases with postmaturational aging in the rat. *Am J Physiol Endocrinol Metab* 282:E557 – 63.
- 60 **Cao JJ**, Liuzzi JP, Bobo JA, Cousins RJ. 2001. Effects of intracellular zinc depletion on metallothionein and ZIP2 transporter expression and apoptosis. *J Leukoc Biol* 70:559 – 66. )
- 61 Guo R, Henry PR, Holwerda RA, **Cao JJ**, Littell RC, Miles RD, Ammerman CB. 2001. Chemical characteristics and relative bioavailability of supplemental organic copper sources for poultry. *J Anim Sci* 79: 1132 – 1141.
- 62 **Cao JJ** Cousins RJ. 2000. Metallothionein mRNA in monocytes and peripheral blood mononuclear cells and in cells from dried blood spots increases after zinc supplementation of human. *J Nutr* 130: 2180 – 2187.
- 63 **Cao JJ**, Henry PR, Guo R, Holwerda RA, Toth JP, Littell RC, Miles RD, Ammerman CB. 2000. Chemical characteristics and relative bioavailability of supplemental organic zinc sources for poultry and ruminants. *J Anim Sci* 78: 2039 – 2054.
- 64 **Cao JJ**, Henry PR, Ammerman CB, Miles RD, Littell RC. 2000. Relative bioavailability of basic zinc sulfate and basic zinc chloride for chicks. *J Appl Poultry Res* 9: 513 – 517.
- 65 **Cao JJ**, Luo XG, Henry PR, Ammerman CB, Littell RC, Miles RD. 1996. Effect of dietary iron concentration, age, and length of iron feeding on feed intake and tissue iron concentration of broiler chicks for use as a bioassay of supplemental iron sources. *Poultry Sci* 75: 495 – 504.



- 66 **Cao JJ**, Chavez ER. 1995. Comparative trace mineral nutritional balance of first-litter gilts under two dietary levels of copper intake. *J Trace Elem Med Biol* 9: 102 – 11.
- 67 Gao XH, Yang FH, **Cao JJ**, Kim SD, Kim DZ, Zhang XW, Wu JX, Wang XW. 1995. The effects of protein and energy levels on growth performance of two-year old male Sika Deer. (*Cervus Nippon Temminck*) meat. *Special Wild Economic Animal and Plant Research* 3: 15 – 19.
- 68 **Cao JJ**, Chavez ER. 1995. The effects of low dietary copper intake during pregnancy on physiological fluids and reproductive performance of first-litter gilts. *J Trace Elem Med Biol* 9: 18 – 27.
- 69 **Cao JJ**, Jiang CS, Tong YR, Pan JR. 1991. The effects of dietary selenium levels on tissue selenium concentrations and fur quality of mink (*Neovison vison*). *Acta Zoonutrimenta Sinica* 2: 10 – 14.
- 70 Kim SD, Cheng YS, **Cao JJ**, Wei HJ, Wang YC. 1990. Analysis of Chemical Composition of Muskrat (*Ondatra zibethica L.*) meat. *J Fur Anim* 48: 15 – 17.

#### **Other publications:**

- 71 **Cao JJ**. 2013. Fish oil linked to healthy body weight and bone Grand Forks Herald (Newspaper article).
- 72 **Cao JJ**. 2012. MyPlate: Good for your bones. Grand Forks Herald (Newspaper article).
- 73 **Cao JJ**. 2011. Phytonutrients are good for bone health. Grand Forks Herald (Newspaper article).
- 74 **Cao JJ**. 2009. Women's Bone Health: Beyond Calcium and Vitamin D. Grand Forks Herald (Newspaper article).
- 75 **Cao JJ**. 2009. The Role of Protein in Bone Health. Grand Forks Herald (Newspaper article).
- 76 **Cao JJ**. 2008. Connecting the dots: from obesity to osteoporosis. Grand Forks Herald (Newspaper article).
- 77 **Cao JJ**. 2007. Build healthy bones with physical activity. Grand Forks Herald (Newspaper article).
- 78 **Cao JJ**. 1998. Characterization of organic zinc sources and their relative bioavailabilities for poultry and sheep. (*Ph.D. Dissertation, University of Florida, Gainesville, FL*).
- 79 **Cao JJ**. 1995. Copper nutrition in first-litter gilts. (*M.Sc. Thesis, McGill University, Canada*).
- 80