

Lin Yan, Ph.D.

Position: Research Nutritionist

Education: Ph.D. Human Nutrition, Texas Tech University, Lubbock, TX, 1990.
M.S. Human Nutrition, Texas Tech University, Lubbock, TX, 1986.
B.S. Medicine, Qingdao Medical College, Qingdao, P.R. China, 1980.

Professional Experience:

2007-Present Research Nutritionist, Grand Forks Human Nutrition Research Center, USDA-ARS, Grand Forks, ND.
2002-2006 Director, Cancer Research, Nutrition Department, The Solae Company (formally DuPont Protein Technologies), St. Louis, MO.
1999-2002 Senior Nutrition Scientist, Nutrition Department, Du Pont Protein Technologies, St. Louis, MO.
1994-1999 Research Associate Professor, Creighton University School of Medicine, Department of Biomedical Sciences, Omaha, NE.
1992-1994 Senior Research Associate, Creighton University School of Medicine, Department of Biomedical Sciences, Omaha, NE.
1990-1992 Post-doctoral Associate, Department of Biological Sciences, Rutgers University Newark, NJ.

Grants and Awards:

1994-1995 The Health Futures Foundation (Omaha, NE), Effect of selenium on osteosarcoma cell adhesion and invasion, Principal Investigator, \$9,000.
1995-1996 The health Futures Foundation (Omaha, NE), Effect of dietary soy supplementation on murine pulmonary metastasis. Principal Investigator, \$10,000.
1996-1997 Nebraska Soybean Board, Chemopreventive and antimetastatic effect of high selenium soybeans, Principal Investigator, \$35,691.
1996-1997 The State of Nebraska Department of Health Cancer and Smoking-Related Diseases Program, Dietary selenium supplementation and cancer metastasis, Principal Investigator, \$20,000.
1997-1998 The State of Nebraska Department of Health, Prevention of cancer metastasis by dietary soybeans, Principal Investigator, \$30,000.
1997-1998 The State of Nebraska Department of Health Cancer and Smoking-Related Diseases Program, Dietary phytoestrogens and prevention of cancer metastasis, Principal Investigator, \$79,314.
1998-1999 The State of Nebraska Department of Health, Antimetastatic effect of high-selenium soybeans, Principal Investigator, \$30,000.
1998-2000 American Institute for Cancer Research, Antimetastatic and anticarcinogenic effect of high-selenium soybeans, Principal Investigator, \$132,000.
2008-2009 Nebraska Soybean Board, Anti-cancer effects of high-selenium soybeans, Principal Investigator, \$10,000.
2008-2010 USDA CSREES grant with Washington State University, Developing wheat varieties for organic agriculture, co-investigator, \$11,000.
2010-2012 USDA CSREES grant with Washington State University, Developing wheat varieties for organic agriculture, co-investigator, \$14,000.
2010-2012 USDA CSREES grant with Washington State University, Mineral quantification of wheat varieties for organic agriculture, co-investigator, \$6,800.

Peer-Reviewed Publications:

1. **Yan L**, Boylan LM and Spallholz JE. Effect of dietary selenium and magnesium on human mammary tumor growth in athymic nude mice. *Nutr Cancer* 16:239-248, 1991.
2. **Yan L**, Yee JA, Boylan LM and Spallholz JE. Effect of selenium compounds and thiols on the human mammary tumor cells. *Biol Trace Element Res* 30:145-162, 1991.
3. **Yan L** and Frenkel GD. Inhibition of cell attachment by selenite. *Cancer Res* 52:5803-5807, 1992.
4. **Yan L** and Spallholz JE. Generation of reactive oxygen species from the reaction of selenium compounds with thiols and mammary tumor cells. *Biochem Pharmacol* 45:429-437, 1993.
5. Yee JA, **Yan L**, Domingues JD, Allan EH and Martin TJ. Plasminogen-dependent activation of latent transforming growth factor beta (TGF-beta) by growing cultures of osteoblast-like cells. *J Cellular Physiol* 157:528-534, 1993.
6. **Yan L** and Frenkel GD. Protein Synthesis is not required for the inhibitory effect of selenite on cell colony formation and RNA synthesis. *Biol Trace Element Res* 40:181-187, 1994.
7. **Yan L** and Frenkel GD. Effect of selenite on cell surface fibronectin receptor. *Biol Trace Element Res* 46:79-89, 1994.
8. **Yan L**, Yee JA, McGuire MH and Graef GL. Effect of dietary supplementation of selenite on pulmonary metastasis of melanoma cells in mice. *Nutr Cancer* 28(2):165-169, 1997.
9. **Yan L**, Yee JA, McGuire MH and Graef GL. Effect of dietary supplementation of soybeans on experimental metastasis of melanoma cells in mice. *Nutr Cancer* 29(1):1-6, 1997.
10. **Yan L**, Yee JA, Li D, McGuire MH and Thompson LU. Dietary flaxseed supplementation and experimental metastasis of melanoma cells in mice. *Cancer Lett* 124:181-186, 1998.
11. Li D, Yee JA, McGuire MH, Murphy PA, and **Yan L**. Soybean isoflavones reduce experimental metastasis in mice. *J Nutr* 129(5):1075-1078, 1999.
12. **Yan L**, Yee JA, Li D, McGuire MH and Graef GL. Dietary supplementation of selenomethionine reduces metastasis of melanoma cells in mice. *Anticancer Res* 19:1337-1342, 1999.
13. Li D, Yee JA, Thompson LU and **Yan L**. Dietary supplementation with secoisolariciresinol diglycoside (SDG) reduces experimental metastasis of melanoma cells in mice. *Cancer Lett* 142(1):91-96, 1999.
14. **Yan L** and Kerr PS. Genetically engineered crops: their potential use for improvement of human nutrition. *Nutr Rev* 60(5):135-141, 2002.
15. **Yan L**, Li D, and Yee JA. Dietary supplementation with isolated soy protein reduces metastasis of mammary carcinoma cells in mice. *Clin Exp Metastasis* 19(6):535-540, 2002.
16. Li D, Graef GL, Yee JA and **Yan L**. Effect of dietary supplementation with high-selenium soy protein on pulmonary metastasis of melanoma cells in mice. *J Nutr*. 134(6):1536-1540, 2004.
17. **Yan L** and Spitznagel EL. A meta-analysis of soyfoods and risk of breast cancer in women. *Int J Cancer Prev* 1(4):281-293, 2004.
18. **Yan L** and Spitznagel EL. Meta-analysis of soy food and risk of prostate cancer in men. *Int J Cancer* 117(4):667-669, 2005.
19. **Yan L** and Spitznagel EL. Soy consumption and prostate cancer risk: a revisit to meta-analysis. *Am J Clin Nutr* 89(4):1155-1163, 2009.
20. **Yan L**, Graef GL, Reeves PG and Johnson LK. Selenium bioavailability from soybean protein isolate and tofu in rats fed a *Torula* yeast-based diet. *J Agric Food Chem* 57(24):11575-11580, 2009.
21. **Yan L**, Spitznagel EL and Bosland MC. Soy consumption and colorectal cancer risk in humans: a meta-analysis. *Cancer Epid Biomarkers Prev* 19(1):148-158, 2010.

22. **Yan L**, Reeves PG and Johnson LK. Assessment of selenium bioavailability from naturally produced high-selenium soy foods in selenium-deficient rats. *J Trace Elements Med Biol* 24(4):223-229, 2010.
23. **Yan L** and DeMars LC. Effects of dietary fat on spontaneous metastasis of Lewis lung carcinoma in mice. *Clin Exp Metastasis* 27(8):581-590, 2010.
24. **Yan L** and Johnson LK. Selenium bioavailability from naturally produced high-selenium peas and oats in selenium-deficient rat. *J Agric Food Chem* 59(11):6305-6311, 2011.
25. **Yan L**, Combs GF, DeMars LC and Johnson LAK. Effects of physical forms of the diet on food intake, growth and body composition changes in mice. *J Am Assoc Lab Animal Sci* 50(4):588-594, 2011.
26. Zeng HW, **Yan L**, Cheng WH and Uthus EO. Dietary selenomethionine increases Exon-specific DNA methylation of the p53 gene in rat liver and colon mucosa. *J Nutr* 141(8): 1464-1468, 2011.
27. **Yan L** and DeMars LC. Effects of non-motorized voluntary running on experimental and spontaneous metastasis in mice. *AntiCancer Res* 31(10):3337-3344, 2011.
28. Murphy KM, Hoagland LA, **Yan L**, Colley M and Jones SS, Genotype \times environment interactions for mineral concentration in grain of organically grown spring wheat. *Agronomy J* 103(6):1734-1741, 2011.
29. **Yan L** and DeMars LC. Dietary supplementation with methylseleninic acid, but not selenomethionine, reduces spontaneous metastasis of Lewis lung carcinoma in mice. *Int J Cancer*, Epub ahead of print, 11/18/2011.
30. **Yan L** and DeMars LC. Long-term voluntary running improves diet-induced adiposity in young adult mice. Submitted to *Nutr Res* (01/26/2012)

Invited Presentations:

1. "Effect of dietary supplementation of flaxseeds on experimental metastasis of melanoma cells in mice," at the 57th Flax Institute of the United States, Fargo, North Dakota, April 1998.
2. "Health benefits of isolated soy protein," at ILSI Soyfoods and Health Workshop, Beijing, China, November 1999.
3. "Health benefits of isolated soy protein," at World Conference and Exhibition on Oilseed Processing and Utilization, Cancun, Mexico, November 2000.
4. "Soy protein and reduced risk of cancer – a health claim petition to the U.S. FDA," at United Soybean Board/American Soybean Association, Chesterfield, Missouri, April 2004.
5. "High-selenium soy protein and cancer metastasis," at University of Nebraska – Lincoln, Lincoln, Nebraska, April 2004.
6. "Soy protein and reduced risk of cancer – a health claim petition to the U.S. FDA," at the Annual Meeting of the American Dietetic Association, Chicago, Illinois, May 2004.
7. "Soy protein and reduced risk of cancer," at Soy Protein Health Benefits Media Workshop, Tokyo, Japan, June 2004.
8. "Soy protein and reduced risk of cancer," at Miki Corporation, Osaka, Japan, June 2004.
9. "Soy protein and reduced risk of certain cancers," at Workshop to media, customers and Korea FDA, Seoul, Korea, June 2004.
10. "Soy protein and reduced risk of cancer," at Health Foundation of Millenary Love, Taipei, Taiwan, June 2004.
11. "Soy protein and reduced risk of cancer," at Uni-President Company, Tainan, Taiwan, June 2004.
12. "Soy protein and reduced risk of cancer," at Amway Company, Guangzhou, China, June 2004.
13. "Soy protein and reduced risk of cancer," at United Soybean Board Scientific Advisory Panel, Chesterfield, Missouri, May 2005.

14. Soy protein and reduced risk of cancer,” at 2005 Institute of Food Technologies Annual Meeting + Food Expo, New Orleans, LA., July 2005.
15. “Soy consumption and prostate cancer risk,” at Doctors’ Forum (a bi-weekly tele-conference program for member physicians of Physicians Committee for Responsible Medicine), sponsored by Physicians Committee for Responsible Medicine, Washington, DC, May 2009.

Current Research Collaborators

Dr. George L. Graef, University of Nebraska-Lincoln
Dr. Edward L. Spitznagel, Washington University
Dr. Robert B. Silver, Wayne State University
Dr. Kevin M. Murphy, Washington State University

National Advisory Activities:

2000-2005 Peer-reviewer, National Cancer Institute Special Emphasis Panels: Cancer Prevention Research Small Grant Program and Small Grant Program for Cancer Epidemiology.

Invited Reviews:

2001 *Cancer Letters, J Nutr,*
2004 *J Nutr, Clin Exp Pharm Physiol*
2005 *J Nutr*
2008 *Am J Clin Nutr, Frontiers of Bioscience*
2010 *Nutrient, Clin Exp Metastasis*
2011 *Clin Exp Metastasis, J Nutr, Int J Cancer, Mol Carcinogenesis*