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EDUCATION

- Ph.D. May 2002: Major in Nutrition
University of Nebraska, Lincoln
Dissertation: “Regulation of gene expression by dietary fatty acids in cholesterol metabolism”
- M.S. May 1998: Major in Nutritional Science and Dietetics
University of Nebraska, Lincoln
Thesis: “Influence of dietary cholesterol and fatty acids on the composition of plasma low-density lipoproteins”
- M.S. Feb 1994: Major in Food Chemistry
Kyung Hee University, Seoul, South Korea
Thesis: “Effect of addition of dietary fibers on the quality of Julpyun”
- B.S. Feb 1991: Major in Foods and Nutrition
Kyung Hee University, Seoul, South Korea

PROFESSIONAL EXPERIENCE

Department Head (January 2019 – Present)

Department of Nutritional Sciences, University of Connecticut, Storrs, CT

Professor (August 2017 – Present).

Department of Nutritional Sciences, University of Connecticut, Storrs, CT

Associate Professor (July 2010 – July 2017),

Department of Nutritional Sciences, University of Connecticut, Storrs, CT

Member (October 2014 – Present)

Institute for Systems Genomics, University of Connecticut & The Jackson Laboratory

Assistant Professor (July 2005 – June 2010),

Department of Nutrition and Health Sciences, University of Nebraska, Lincoln, NE

Courtesy Appointment as Assistant Professor (December 2009 – July 2010),

Department of Food Science and Technology, University of Nebraska, Lincoln, NE

Postdoctoral Fellow (June 2002 – June 2005),

Department of Pathology, Wake Forest University School of Medicine, Winston-Salem, NC

HONORS/AWARDS

- Fellow, American College of Nutrition, July 2019.
- Volunteer Recognition Award, American Heart Association, June 2019.
- Excellence in Research Award, College of Agriculture, Health and Natural Resources, University of Connecticut, February 2019.

- International Scholar, Department of Food and Nutrition, Kyung Hee University, Seoul, South Korea, 2017.
- Fellow, American Heart Association, Arteriosclerosis, Thrombosis, and Vascular Biology Council, May 2013.
- American Society for Nutrition, KNS Award, 2011.
- Recognition of Junior Faculty for Excellence in Research, Agriculture Research Division, University of Nebraska-Lincoln, 2009.
- Luella Selover Memorial Scholarship, 2001.
- Widaman Trust Distinguished Graduate Assistant Award, 2000.
- Undergraduate Scholarship, Kyung Hee University, Seoul, South Korea, 1989.

NOTABLE PROFESSIONAL ACTIVITIES

- Grant reviewer, NIH Hepatobiliary pathophysiology (HBPP), October 2020 (ad hoc).
- Adjunct professor, Department of Food and Nutrition, Yonsei University, Seoul, South Korea, September 2019 – August 2020.
- Grant reviewer, NIH COBRA, June 2020 (ad hoc).
- Grant reviewer, NIH Hepatobiliary pathophysiology (HBPP), February 2020 (ad hoc).
- Grant reviewer, American Heart Association Career Development Award Organ Basic Sciences 2, January 2020.
- Visiting research scholar, Department of Internal Medicine, Section of Rheumatology, Allergy and Clinical Immunology, Yale School of Medicine, September 2018 – December 2018.
- International Scholar, Kyung Hee University, Seoul, South Korea 2017-2018.
- Grant reviewer, American Heart Association Lipid & Thrombosis Fellowship, September 2018.
- Grant reviewer and Acting chair, NIH ZRG1 DKUS-H(54)R, March 2018 (ad hoc).
- Grant reviewer, American Heart Association Lipid Bsc 2 Fellowship, February 2018.
- Grant reviewer, NIH Hepatobiliary pathophysiology (HBPP), June 2017 (ad hoc).
- Grant reviewer, American Heart Association Lipid Bsc 2, April 2017.
- Grant reviewer, NIH ZRG1 EMNR-V, July 2016 (ad hoc).
- Grant reviewer, American Heart Association Lipid Bsc 2, April 2016.
- Grant reviewer, NIH Integrative Nutrition and Metabolic Processes (INMP) Study Section, February 2016 (ad hoc).
- Grant reviewer, American Heart Association Lipid Bsc 2, October 2015.
- Grant reviewer, NIH Integrative Nutrition and Metabolic Processes (INMP) Study Section, October 2015 (ad hoc).
- Grant reviewer, American Heart Association Lipid Bsc 2, April 2015.
- Grant reviewer, American Heart Association Lipid Bsc 2, October 2014.
- Grant reviewer, American Heart Association Strategically Focused Research Networks (SFRN) grant, May 2014.
- Grant reviewer, American Heart Association Lipid Bsc 2, April 2014.
- Grant reviewer, NIH NCCAM Special Emphasis Panel ZAT1 SM25, March 2012.
- Editorial board member, Journal of Nutritional Biochemistry, July 2010-present.
- Editorial board member, Journal of Human Nutrition and Food Science, July 2013-present.
- Review editor, Journal of Medicinal Food, January 2011-present.
- Editorial board member, Nutrition Research and Practice, January 2016-present.
- Editorial board member, Integrative Medicine Research, January 2016-present.
- Editorial board member, Journal of Nutrition and Intermediary Metabolism, July 2014-present.

- Editorial board member, Journal of Nutrition and Health, May 2011-present.
- Editorial board member, Endocrinology & Diabetes Research, May 2012-present.
- Editorial board member, Food and Nutrition Sciences, August 2012-March 2014.

SOCIETY MEMBERSHIPS

- Premium member, American Heart Association (Since 2010)
- Member, Korean Society for Food Science and Nutrition (Since 2011)
- Member, Korean-American Scientists and Engineers Association (Since 2018)
- Member, American Association for the Advancement of Science (Since 2005)
- Regular Member, American Society for Nutrition (Since 2006)
- Early Career Member, American Heart Association, Council of Atherosclerosis, Thrombosis and Vascular Biology (2003-2010)
- Associate Member, American Society for Nutritional Science (2003-2005)
- Student Member, American Society for Nutritional Sciences (1998-2002)
- Registered Dietitian, Korean Society for Registered Dietitian (Since 1991)

PUBLICATIONS

Peer-Reviewed Articles

1. H. Kang, Y. Lee, M.-B. Kim, S. Hu, H. Jang, Y.-K. Park, **J.-Y. Lee**. Sex-dependent inflammatory responses exist in diet-induced obesity mice with macrophage-specific deletion of histone deacetylase 4. *Metabolism* 2021; (In review).
2. H. Kang, Y.-K. Park, **J.-Y. Lee**. Nicotinamide riboside, an NAD⁺ precursor, attenuates inflammation and oxidative stress by activating sirtuin 1 in alcohol-stimulated macrophages. *Lab Invest* 2021; (In review).
3. M.-B. Kim, Y. Lee, M. Bae, H. Kang, S. Hu, T. X. Pham, **J.-Y. Lee**, Y.-K. Park. Sugar kelp (*Saccharina latissimi*) inhibits hepatic inflammation and fibrosis in a mouse model of diet-induced nonalcoholic steatohepatitis. *J Nutr Biochem* 2021; (In review).
4. C. T. Le, H. N. Dong, S. Y. Park, Y. K. Cho, H. Baek, D.-H. Choi, W. S. Park, S. Lee, Y. Lee, **J.-Y. Lee**, E.-H. Cho. Succinate induces liver fibrosis in a mouse model and GPR91 acts as an early marker of hepatic fibrosis. *Biochem Biophys Res Comm* 2021; (In review).
5. M.-B. Kim, H. Kang, Y. Li, Y.-K. Park, **J.-Y. Lee**. Fucoxanthin inhibits lipopolysaccharide-induced inflammation and oxidative stress by activating nuclear factor E2-related factor 2 via the phosphatidylinositol 3-kinase/AKT pathway in macrophages. *Eur J Nutr* 2021; (2nd round review).
6. A. C. Donepudi, Y. Lee, **J.-Y. Lee**, J. D. Schuetz, J. E. Manautou. Multidrug resistance-associated protein 4 (Mrp4) is a novel genetic factor in the pathogenesis of obesity and diabetes. *FASEB J* 2021; (In press).
7. C. Caceres, M.-B. Kim, M. Bae, T. X. Pham, Y. Lee, S. Hu, E. O'Neill, B. Kim, Y.-K. Park, **J.-Y. Lee**. The effect of cranberry consumption on lipid metabolism and inflammation in human apolipoprotein A-I transgenic mice fed a high fat and high cholesterol diet. *Br J Nutr* 2021; (In press).
8. S.-Y. Yu, M.-B. Kim, Y.-K. Park, M. Bar, H. Kang, S. Hu, T. X. Pham, R. Carpenter, J. Lee, O.-H. Lee, **J.-Y. Lee**, Y.-C. Kim. Anthocyanin-rich aronia berry extract mitigates high-fat and high-sucrose diet-induced adipose tissue inflammation by inhibiting NF- κ B activation in macrophages. *J Med Food* 2021; (In press).

9. H. Kang, Y.-K. Park, **J.-Y. Lee**. Inhibition of alcohol-induced inflammation and oxidative stress by astaxanthin is mediated by its opposite actions in the regulation of sirtuin 1 and histone deacetylase 4 in macrophages. *BBA Mol Cell Biol of Lipids* 2021; (In press). epub ahead of print on October 13, 2020.
10. H. Kang, Y. Lee, M. Bae, Y.-K. Park, **J.-Y. Lee**. Astaxanthin inhibits alcohol-induced inflammation and oxidative stress in macrophages in a sirtuin 1-dependent manner. *J Nutr Biochem* 2020; 85:108477. epub ahead of print on August 12, 2020.
11. M.-B. Kim, Y. Lee, M. Bae, H. Kang, T.X. Pham, S. Hu, **J.-Y. Lee**, Y.-K. Park. Comprehensive characterization of metabolic, inflammatory and fibrotic changes in a mouse model of non-alcoholic steatohepatitis. *J Nutr Biochem* 2020; 85:108463. epub ahead of print on July 10, 2020.
12. S. Hu, M. Bae, Y.-K. Park, **J.-Y. Lee**. n-3 PUFA inhibit TGF β 1-induced pro-fibrogenic gene expression by ameliorating the repression of PPAR γ in hepatic stellate cells. *J Nutr Biochem* 2020; 85:108478. epub ahead of print on June 15, 2020.
13. M. Bae, Y. Lee, T. X. Pham, Y.-K. Park, S. Hu, **J.-Y. Lee**. Astaxanthin inhibits the reduction of glycolysis during the activation of hepatic stellate cells. *Life Sci* 2020; 256: 117926. epub ahead of print on June 12, 2020.
14. A. C. Donepudi, G. J. Smith, O. Aladeloku, Y. Lee, S. J. Toro, M. Phof, A. L. Slitt, **J.-Y. Lee**, J. D. Schuetz, L. Wang, J. E. Manautou. Lack of multidrug-resistance associated protein 4 worsens partial hepatectomy-induced hepatic steatosis. *Toxicol Sci* 2020; 175:301-311. epub ahead of print on March 6, 2020.
15. C. L. Miller, C. Jiang, G. H. Norris, C. Carcia, S. Seibel, L. Anto, **J.-Y. Lee**, C. N. Blesso. Cow's milk polar lipids reduce atherogenic lipoprotein cholesterol, modulate gut microbiota, and attenuate atherosclerosis development in LDL-receptor knockout mice fed a Western-type diet. *J Nutr Biochem* 2020; 79: 108351. epub ahead of print on Jan 23, 2020.
16. M. Bae, M.-B. Kim, Y.-K. Park, **J.-Y. Lee**. Health benefits of fucoxanthin in the prevention of chronic disease. *BBA Mol Cell Biol of Lipids* 2020; 1865:158618. epub ahead of print on January 10, 2020.
17. S. Hu, E.-H. Cho, **J.-Y. Lee**. Histone deacetylase 9: Its role in the pathogenesis of diabetes and other chronic diseases. *Diabetes Metab J* 2020; 44: 234-244. epub ahead of print on March 24, 2020
18. Q. Hu, S. Hu, E. Fleming, **J.-Y. Lee**, Y. Luo. Chitosan-Caseinate-Dextran Ternary Complex Nanoparticles for Potential Oral Delivery of Astaxanthin with Significantly Improved Bioactivity. *Int J. Biol Macromole* 2020; 151: 747-756.
19. Q. Hu, **J.-Y. Lee**, Y. Luo. Nanoparticles targeting hepatic stellate cells for the treatment of liver fibrosis. *Engineered Sci* 2019; 6:12-21.
20. Y. Lee, C. Y. Han, M. Bae, Y.-K. Park, **J.-Y. Lee**. Egg phospholipids exert inhibitory effect on intestinal cholesterol absorption in mice. *Nutr Res Pract* 2019; 13:295-301. epub ahead of print on June 20, 2019.
21. D. Li, C. Rodia, Z. Johnson, M. Bae, A. Muter, A. Heussinger, N. Tambini, A. Longo, H. Dong, **J.-Y. Lee**, A. B. Kohan. Intestinal basolateral lipid substrate transport (BLST) is linked to chylomicron secretion and is regulated by apoC-III. *J Lipid Res* 2019; 60:1503-1515.
22. M. Bae, Y. Lee, Y.-K. Park, D. Shin, P. Joshi, S. Hong, N. Alder, Sung I. Koo, **J.-Y. Lee**. Astaxanthin attenuates the increase in mitochondrial respiration during the activation of hepatic stellate cells. *J Nutr Biochem* 2019; 71:82-89. epub ahead of print on June 20, 2019.
23. T. X. Pham, M. Bae, M.-B. Kim, Y. Lee, S. Hu, H. Kang, Y.-K. Park, **J.-Y. Lee**. Nicotinamide riboside, an NAD⁺ precursor, attenuates the development of liver fibrosis in a diet-induced

- mouse model of liver fibrosis. *BBA Molecular Basis of Disease* 2019; 1865:2451-2463. epub ahead of print on June 11, 2019.
24. Y. Lee, S. Hu, Y.-K. Park, **J.-Y. Lee**. Protective actions of carotenoids against non-alcoholic fatty acids disease. *Prev Nutr Food Sci* 2019; 24:103-113.
 25. M. Bae, M.-B. Kim, H. Kang, Y.-K. Park, **J.-Y. Lee**. Comparison of carotenoids for their anti-fibrogenic effects in hepatic stellate cells. *Lipids* 2019; 54:401-410. epub ahead of print on May 29, 2019.
 26. M.-B. Kim, M. Bae, S. Hu, H. Kang, Y.-K. Park, **J.-Y. Lee**. Fucoxanthin exerts anti-fibrogenic effects in hepatic stellate cells. *Biochem Biophys Res Comm* 2019; 513 (3): 657-662. epub ahead of print on April 11, 2019.
 27. Y. Lee, **J.-Y. Lee**. Blackcurrant (*Ribes nigrum*) Extract Exerts an Anti-inflammatory Action by Modulating Macrophage Phenotypes. *Nutrients* 2019; 11(5);975.
 28. C. M. White, **J.-Y. Lee**. The impact of turmeric or its curcumin extract on liver health: A systemic review of clinical trials. *Pharm Pract* 2019; 17(1):1350.
 29. T. X. Pham, Y. Lee, M. Bae, S. Hu, H. Kang, M.-B. Kim, Y.-K. Park, **J.-Y. Lee**. Spirulina supplementation in a mouse model of liver fibrosis reduced the pro-inflammatory response of splenocytes. *Br J Nutr* 2019; 121:748-755. epub ahead of print on February 26, 2019
 30. Y. Lee, T. X. Pham, M. Bae, S. Hu, E. O'Neill, O. K. Chun, M. J. Han, S. I. Koo, Y.-K. Park, **J.-Y. Lee**. Blackcurrant (*Ribes nigrum*) prevents obesity-induced non-alcoholic steatohepatitis in mice. *Obesity* 2019; 27:112-120.
 31. C. L. Miller, G. H. Norris, C. Jiang, J. Kry, A. Vitols, C. Carcia, Y.-K. Park, **J.-Y. Lee**, C. N. Blesso. Long-term supplementation of black elderberry improves HDL function, but promote hyperlipidemia with no effect on atherosclerosis development in apolipoprotein E-knockout mice. *Mol Nutr Food Res* 2018; 62: 1800404. epub ahead of print on September 29, 2018.
 32. Q. Hu, M. Bae, E. Fleming, **J.-Y. Lee**, Y. Luo. Biocompatible polymeric nanoparticles with exceptional gastrointestinal stability as oral delivery vehicles for lipophilic bioactives. *Food Hydrocolloids* 2018; 89:386-395.
 33. T. Wang, Q. Hu, **J.-Y. Lee**, Y. Luo. Solid lipid-polymer hybrid nanoparticles by in-situ conjugation for oral delivery of astaxanthin. *J Agr Food Chem* 2018; 66:9473-9480. epub ahead of print on August 21, 2018.
 34. C. Farruggia, M.-B. Kim, M. Bae, Y. Lee, T. X. Pham, Y. Yang, M. J. Han, Y.-K. Park, **J.-Y. Lee**. Astaxanthin exerts anti-inflammatory and antioxidant properties in macrophages in NRF2-dependent and independent manners. *J Nutr Biochem* 2018; 62:202-209. epub ahead of print on September 19, 2018.
 35. J. Wu, Y.-K. Park, M. Lin, **J.-Y. Lee**, L. Wang. Loss of PDK4 switches the hepatic NF- κ B/TNF pathway from pro-survival to pro-apoptosis. *Hepatology* 2018; 68:1111-1124. epub ahead of print on March 30, 2018.
 36. T. Wang, M. Bae, **J.-Y. Lee**, Y. Luo. Solid lipid-polymer hybrid nanoparticles prepared with natural biomaterials: A new platform for oral delivery of lipophilic bioactives. *Food Hydrocolloids* 2018; 84:581-592.
 37. T. X. Pham, M. Bae, Y. Lee, Y.-K. Park, **J.-Y. Lee**. Transcriptional and post-transcriptional repression of histone deacetylases by docosahexaenoic acid in macrophages. *J Nutr Biochem* 2018; 57:162-169. epub ahead of print on March 10, 2018. (PMID: 29734115)
 38. M. Bae, Y.-K. Park, **J.-Y. Lee**. Food components with antifibrotic activity and implications in prevention of liver disease. *J Nutr Biochem* 2018; 55:1-11. Epub ahead of print on November 16, 2017. (PMID: 29268106)

39. B. Kim, M. Bae, Y.-K. Park, H. Ma, T. Yuan, N. Seeram, **J.-Y. Lee**. Blackcurrant anthocyanins stimulated cholesterol transport via post-transcriptional induction of LDL receptor in Caco-2 cells. *Eur J Nutr* 2018; 57:405-415. Epub ahead of print on July 17, 2017. (PMID: 28718016)
40. T.X. Pham, **J.-Y. Lee**. Epigenetic regulation of adipokines. *Int J Mol Sci* 2017; 18:1740; doi:10.3390/ijms18081740.
41. T. X. Pham, Y.-K. Park, M. Bae, **J.-Y. Lee**. The potential role of an endotoxin-like mechanism for the anti-inflammatory effect of *Spirulina platensis* in macrophages: Insight into energy phenotype. *J Med Food* 2017; 20: 201-210. Epub ahead of print on January 25, 2017. (PMID: 28121488).
42. B. Kim, C. Farruggia, C. S. Ku, T. X. Pham, Y. Yang, M. Bae, Casey J. Wegner, N. J. Farrell, E. Harness, Y.-K. Park, Sung I. Koo, **J.-Y. Lee**. Astaxanthin inhibited inflammation and fibrosis in the liver and adipose tissue of mouse models of diet-induced obesity and nonalcoholic steatohepatitis. *J Nutr Biochem* 2017; 43:27-35. epub ahead of print on March 2, 2016. (PMID: 28193580)
43. L. Xie, T. M. Vance, B. Kim, S. Lee, C. Caceres, Y. Wang, **J.-Y. Lee**, O. K. Chun, B. W. Bolling. Aronia berry polyphenol consumption reduces plasma total and low-density lipoprotein cholesterol in former smokers without lowering biomarkers of inflammation and oxidative stress: a randomized trial. *Nutr Res* 2017; 37:67-77. (PMID: 28215316)
44. Y. Yang, M. Bae, Y.-K. Park, Y. Lee, T. X. Pham, S. Rudraiah, J. Manautou, S. I. Koo, **J.-Y. Lee**. Histone deacetylase 9 plays a role in the anti-fibrogenic effect of astaxanthin in hepatic stellate cells. *J Nutr Biochem* 2017; 40: 172-177. epub ahead of print on Nov 12, 2016. (PMID: 27915160).
45. S. M. Pillai, N. H. Sereda, M. L. Hoffman, E. V. Valley, T. D. Crenshaw, Y.-K. Park, **J.-Y. Lee**, S. A. Zinn, K. E. Govoni. The effect of poor maternal nutrition during gestation on bone development and mesenchymal stem cell activity in offspring. *PlosOne* 2016; 11:e0168382. (PMID: 27942040)
46. B. Kim, S. Lee, Y.-K. Park, C. S. Ku, T. X. Pham, C. J. Wegner, Y. Yang, S. I. Koo, O. K. Chun, **J.-Y. Lee**. Blueberry, blackberry, and blackcurrant differentially affect plasma lipids and pro-inflammatory markers in diet-induced obesity mice. *Nutr Res Pract* 2016; 10:494-500. (PMID: 27698956).
47. T. X. Pham, Y.-K. Park, **J.-Y. Lee**. Anti-inflammatory effects of *Spirulina platensis* extract via the modulation of histone deacetylases. *Nutrients* 2016; 8:E381. Epub ahead of print on June 21, 2016. (PMID: 27338466).
48. T.X. Pham, **J.-Y. Lee**. Anti-inflammatory effect of *Spirulina platensis* in macrophages is beneficial for adipocyte differentiation and maturation by inhibiting Nuclear factor- κ B pathway in 3T3-L1 adipocytes. *J Med Food* 2016; 19:535-542. epub ahead of print on May 20, 2016. (PMID: 27206252)
49. S. Patel, A. Akalkotkar, J. J. Bivona III, **J.-Y. Lee**, Y.-K. Park, M. Yu, S. Colpitts, M. Vajdy. Vitamin A or E and a catechin synergize as vaccine adjuvant to enhance immune responses in mice through induction of early interleukin-15 but not interleukin-1 β responses. *Immunology* 2016; 148:352-362. epub ahead of print on May 2, 2016. (PMID: 27135790)
50. M. Surendran-Nair, A. Kollanoor-Johny, S. Ananda-Baskaran, C. Norris, **J.-Y. Lee**, K. Venkitanarayanan. Selenium reduces enterohemorrhagic *Escherichia coli* O157:H7 verotoxin production and globotriaosylceramide receptor expression on host cells. *Future Microbiol* 2016; 11:745-756. epub ahead of print on May 18, 2016. (PMID: 27191971)

51. L. Xie, S. Lee, T. M. Vance, Y. Wang, B. Kim, **J.-Y. Lee**, O. K. Chun, B. W. Bolling. Bioavailability of anthocyanins and colonic polyphenol metabolites following consumption of aronia berry extract. *Food Chem* 2016; 211:860-868. (PMID: 27283706)
52. Y. Yang, M. Bae, B. Kim, Y.-K. Park, S. I. Koo, **J.-Y. Lee**. Astaxanthin prevents and reverses the activation of mouse primary hepatic stellate cells. *J Nutr Biochem* 2016; 29:21-26. epub ahead of print on Nov 24, 2015. (PMID: 26895661)
53. C. E. Dugan, D. Aguilar, Y.-K. Park, **J.-Y. Lee**, M-L. Fernandez. Dietary consumption lowers systemic inflammation and liver enzymes in typically low-dairy consumers with clinical characteristics of metabolic syndrome. *J Am Coll Nutr* 2016; 35:255-261. epub ahead of print on Nov 23, 2015. (PMID: 26595359)
54. G. Karim., K. Menzies, D. Ryu, C. J. Wegner, X. Wang, E. R. Ropelle, N. Moullan, H. Zhang, A. Perino, V. Lemos, B. Kim, Y.-K. Park, P. Alessandra, T. X. Pham, Y. Yang, C. S. Ku, S. I. Koo, A. Fomitchova, C. Canto, K. Schoonjans, A. A. Sauve, **J.-Y. Lee***, J. Auwerx. Eliciting the mitochondrial unfolded protein response via NAD⁺ repletion prevents fatty liver disease. *Hepatology* 2016; 63:1190-1204. epub ahead of print on Sept 25, 2015. (PMID: 26404765) *
Shared corresponding authorship.
55. S. Lee, B. Kim, S. D. Y, T. Vance, J.S Lee, **J.-Y. Lee**, S. I. Koo, D.O. Kim, M. H. Drissi, O. K. Chun. Relationship between oxidative stress and bone mass in obesity and effects of berry supplementation on bone remodeling in obese male mice: an exploratory study. *J Med Foods* 2015; 18:476-482. epub ahead of print on Sept 8, 2014. (PMID: 25198411)
56. C. S. Ku, B. Kim, T. X. Pham, Y. Yang, Y.-K. Park, C. L. Weller, T. Carr, **J.-Y. Lee**. Hypolipidemic effect of a blue-green alga (*Nostoc commune*) is attributed to its nonlipid fraction by decreasing intestinal cholesterol absorption in C57BL/6J mice. *J Med Food* 2015; 18:1214-1222. epub ahead of print on July 10, 2015. (PMID: 26161942)
57. C. S. Ku, B. Kim, T. X. Pham, Y. Yang, C. J. Wegner, Y.-K. Park, M. Balunas, **J.-Y. Lee**. Blue-green algae inhibit the development of atherosclerotic lesions in apolipoprotein E knockout mice. *J Med Food* 2015; 18:1299-1306. epub ahead of print on Nov 13, 2015. (PMID: 26566121)
58. M-Y. Chung, E. Mah, C. Masterjohn, S. K. Noh, H. J. Park, R. M, Clark, Y.-K. Park, **J.-Y. Lee**, R. S. Bruno. Green tea lowers hepatic COX-2 and prostaglandin E2 in rats with dietary fat-induced nonalcoholic steatohepatitis. *J Med Food* 2015; 18:648-655. epub ahead of print on Dec 2, 2014. (PMID: 25453513)
59. T. Benn, B. Kim, Y.-K. Park, Y. Yang, T. X. Pham, C.S. Ku, C. Farruggia, E. Harness J. A. Smyth, **J.-Y. Lee**. Polyphenol-rich blackcurrant extract exerts hypocholesterolemic and hypoglycemic effects in mice fed a diet containing high fat and cholesterol. *Br J Nutr* 2015; 113:1697-1703. (PMID: 25899149)
60. Y. Yang, B. Kim, Y.-K. Park, S. I. Koo, **J.-Y. Lee**. Astaxanthin prevents transforming growth factor β 1-induced pro-fibrogenic gene expression by inhibiting Smad3 activation in hepatic stellate cells. *Biochimica Biophysica Acta* 2015; 1850:178-185. (PMID: 25450180)
61. Y. Yang, T. X. Pham, C. J. Wegner, B. Kim, C. S. Ku, Y.-K. Park, **J.-Y. Lee**. Astaxanthin lowered plasma triglyceride and increased hepatic antioxidant gene expression in diet-induced obesity mice. *Br J Nutr* 2014; 112:1797-1804. (PMID: 25328157)
62. T. Benn, B. Kim, Y.-K. Park, C. J. Wegner, E. Harness, T-G. Nam, D-O. Kim, J. S. Lee, **J.-Y. Lee**. Polyphenol-rich blackcurrant extract prevents inflammation in diet-induced obesity mice. *J Nutr Biochem* 2014; 25:1019-1025. (PMID: 25034502)
63. W. Sittiwong, D. K. Zinnel, R. J. Fenton, D. Marshall, C. F. Story, B. Kim, **J.-Y. Lee**, R. Powers, R. G. Barletta, P. H. Dussault. Development of cyclobutene- and cyclobutane-

- functionalized fatty acids with inhibitory activity against *Mycobacterium tuberculosis*. *ChemMedChem* 2014; 9:1838-1849. (PMID: 24902951)
64. C. J. Andersen, **J.-Y. Lee**, C. N. Blesso, T. P. Carr, M-L. Fernandez. Egg intake during carbohydrate restriction alters peripheral blood mononuclear cell inflammation and cholesterol homeostasis in metabolic syndrome. *Nutrients* 2014; 6:2650-2667. (PMID: 25045936)
 65. Y. Yang, Y.-K. Park, B. Kim, **J.-Y. Lee**. Effects of long-term supplementation of blue-green algae on lipid metabolism in C57BL/6J mice. *J Nutr Health and Food Sci* 2014; 2:1-6. (PMID: 25614902)
 66. S. Lee, B. Kim, Y. Yang, T. X. Pham, Y.-K. Park, J. Manatou, S. I. Koo, O. K. Chun, **J.-Y. Lee**. Berry anthocyanins suppress the expression and secretion of pro-inflammatory mediators in macrophages by inhibiting nuclear translocation of NF- κ B independent of NRF2-mediated mechanism. *J Nutr Biochem* 2014; 25:404-411. (PMID: 24565673)
 67. C. Masterjohn, Y.-K. Park, **J.-Y. Lee**, S. K. Noh, R. S. Bruno. Dietary fructose feeding increases adipose methylglyoxal accumulation in association with low expression and activity of glyoxalase-2. *Nutrients* 2013; 5:3311-3328. (PMID: 23966111)
 68. Y. Yang, B. Kim, **J.-Y. Lee**. Astaxanthin: structure, metabolism, and health benefits. *J Hum Nutr Food Sci* 2013; 1:1003 (1-11).
 69. C. Masterjohn, E. Mah, Y.-K. Park, R. Pei, **J.-Y. Lee**, J. E. Manatou, R. S. Bruno. Acute glutathione depletion induces hepatic methylglyoxal accumulation by impairing its detoxification to D-lactate. *Expt Biol Med* 2013; 238:360-369. (PMID: 23760001)
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GRANTS

Active

- **National Institute of Health (R01)** 1R01DK108254-01, “Nutritional transcriptomics approach for the role of astaxanthin in liver fibrosis”, 9/25/2015-8/31/2021, \$1,385,494.
Role in project: Principal Investigator
- **National Institute of Health (Supplement)** 3R01DK108254-04S1, “Nutritional transcriptomics approach for the role of astaxanthin in liver fibrosis”, 9/01/2018-8/31/2021, \$159,750.
Role in project: Principal Investigator
- **United States Department of Agriculture, AFRI** Grant 2015-05512 (GRANT11874093), “Protective action of blackcurrant against obesity-associated inflammation: Linking macrophage plasticity to energy metabolism”, 12/01/2015-11/30/2020, \$499,946.
Role in project: Principal Investigator
- **UConn Research Excellence Program**, “Identification of molecular mediator for sex differences in metabolism”, 6/01/2019-12/31/2020, \$25,000.
Role in project: Principal Investigator
- **United States Department of Agriculture, AFRI**, “Enhanced stability and bioavailability of astaxanthin encapsulated in multilayer-coated lipid particles”, 4/15/2017-8/31/2020, \$149,801.
Role in project: Co-program director (PI: Yangchao Luo)
- **United States Department of Agriculture, AFRI Seed Grant, 2016-08864**, “Anti-fibrogenic action of astaxanthin in adipose tissue: A mechanism to inhibit obesity-associated inflammation”, 4/01/2017-3/31/2021, \$150,500.
Role in project: Co-investigator (PI: Young-Ki Park)
- **United States Multistate Hatch, CONS00992**, “Effect of nutrients on the activation of hepatic stellate cells”, 10/01/2018-9/30/2021, \$60,000.
Role in project: Principal Investigator
- **United States Department of Agriculture, Multi-state Hatch, CONS00916**, “W-4002, Nutrient Bioavailability—Phytonutrients and Beyond”, 10/01/2018-9/30/2021, \$1,000 for travel.
Role in project: Principal Investigator

Pending

- **National Institute of Health R21**, “Role of histone deacetylase 4 in alcoholic liver disease”, 4/01/2021-3/31/2023, \$442,750.
Role in project: PI
- **National Institute of Health R01**, “The cardiolipin-dependent assembly and function of the mitochondrial ADP/ATP carrier”, 9/01/2020-8/31/2024.
Role in project: Co-I (PI: Nathan Alder)

Completed

- **United States Department of Agriculture, AFRI**, “Enhanced stability and bioavailability of astaxanthin encapsulated in multilayer-coated lipid particles”, 4/15/2017-4/14/2020, \$149,801.
Role in project: Co-program director (PI: Yangchao Luo)

- **Dairy Management Inc.**, “Milk phospholipids for the prevention of atherosclerosis”, 3/01/2017-2/28/2019, \$95,038.
Role in project: Co-investigator (PI: Christopher Blesso)
- **United States Department of Agriculture, Multi-state Hatch, CONS00916**, “W-3002, Nutrient Bioavailability—Phytonutrients and Beyond”, 10/01/2013-9/30/2018, \$1,000 for travel.
Role in project: Principal Investigator
- **National Institute of Health (R15) 1R15AT00861001**, “Metabolites from edible blue-green algae for obesity-induced inflammation”, 12/15/2014-12/14/2018, \$453,820 (my share \$149,692).
Role in project: Co-investigator (PI: Marcy Balunas)
- **United States Department of Agriculture, AFRI Postdoctoral Fellowship, 2016-04624**, “A novel role of Spirulina in the regulation of macrophage phenotype for the prevention of NASH”, 1/15/2017-1/14/2019, \$152,000.
Role in project: Mentor (PI: Tho X. Pham)
- **United States Department of Agriculture, Hatch CONS00972**, “Role of bioactive components in hepatic stellate cell activation”, 10/01/2016-9/30/2018, ~\$70,000.
Role in project: Principal Investigator
- **Nutricia Research Foundation Research Grant**, “Mechanistic understanding of the effect of cranberries on HDL metabolism”, 2/01/2015-1/31/2018, \$64,375.
Role in project: Principal Investigator
- **Egg Nutrition Center**, “Pilot study for evaluating the effect of egg phospholipids on the modulation of cholesterol homeostasis”, 7/01/2015-6/30/2017, \$49,964.
Role in project: Principal Investigator
- **United States Department of Agriculture, Hatch CONS00872**, “Transcriptional regulation of fatty acid binding protein 4 by dietary fatty acids in macrophages”, 10/01/2011-9/30/2016, \$69,996.
Role in project: Principal Investigator
- **United States Department of Agriculture, AFRI Seed Grant, CONS2014-06619**, “Black elderberry as a novel functional food: Protection from HDL dysfunction in chronic inflammation”, 2/1/2015-1/31/2017, \$149,857.
Role in project: Co-Investigator
- **University of Connecticut Scholarship Facilitation Fund**, “Regulation of adipose tissue fibrosis by astaxanthin”, 1/01/2016-12/31/2016, \$2,000.
Role in project: Principal Investigator
- **University of Connecticut Research Excellence Program**, “Gene therapy for the prevention of liver fibrosis”, 3/15/2015-3/14/2016, \$24,875.
Role in project: Principal Investigator
- **United States Department of Agriculture, AFRI (2012-67018-19290)**, “Bioactivity of astaxanthin in the prevention of hepatic inflammation”, 02/01/2012-01/31/2016, \$459,646.
Role in project: Principal Investigator
- **United States Department of Agriculture, AFRI Equipment Grant, CONS 2013-03483**. “Use of a cell bioenergetics analyzer to determine the effect of diet and bioactive food components on energy metabolism”, 12/01/2013-11/30/2015, \$50,000.
Role in project: Principal Investigator
- **United States Department of Agriculture, AFRI Predoctoral Fellowship 2014-01870**, “Bioactivity of Spirulina platensis in the prevention of obesity-associated inflammation and insulin resistance by the modulation of histone deacetylases”, 1/01/2015-12/31/2015, \$39,500.
Role in project: Mentor (PI: Tho X. Pham)

- **National Institute of Health (R21AT005152)**, “Evaluation of athero-protective role of blue-green algae”, 09/30/2009-08/31/2013, \$387,365.
Role in project: Principal Investigator
- **State of Connecticut Department of Public Health**, “The effect of chokeberry polyphenols on biomarkers of cardiovascular disease and antioxidant defense in former smokers”, 08/01/2012-5/31/2015, \$417,076 (my share \$87,000).
Role in project: Co-PI (PI: Bradley Bolling, University of Connecticut)
- **Fuji Chemical Industry Co.**, “Role of astaxanthin in the prevention of hepatic stellate cell activation”, 07/01/2013-07/31/2014, \$22,950.
Role in project: Principal Investigator
- **University of Connecticut College of Agriculture and Natural Resources Equipment Competition**, “Li-Cor Odyssey CLx Infrared Imaging System”, September 2012, \$54,300.
Role in project: Principal Investigator
- **United States Department of Agriculture, Hatch CONS0080**, “Efficacy of chokeberry polyphenols to reduce oxidative stress and atherosclerosis in the ApoE knockout mouse”, 10/01/2011-9/30/2016, \$69,996.
Role in project: Co-investigator (PI: Bradley Bolling, University of Connecticut)
- **United States Department of Agriculture, Multi-state Hatch, CONS00891**, “N-3 polyunsaturated fatty acids and human health and disease”, 10/01/2012-9/30/2013.
Role in project: Principal Investigator
- **Nutricia Research Foundation Research Grant**, “Chokeberry polyphenols promote bone health by inhibiting inflammation-induced bone resorption”, 1/01/2013-12/31/2014, \$63,181.
Role in project: Collaborator
- **Connecticut Innovations**, Advanced Technology Phase I STTR, “A novel vaccine against vaginal transmission of Chlamydia trachomatis”, 05/01/2014-11/30/2014, \$40,000 direct costs (no F&A; my share \$10,000).
Role in project: UConn Investigator (PI: Michael Vajdy at EpitoGenesis)
- **United States Department of Agriculture, Multi-state Hatch, CONS00916**, “Nutrient Bioavailability-Phytonutrients and Beyond”, 10/01/2012-9/30/2013, \$1,000 for travel.
Role in project: Principal Investigator
- **University of Connecticut Faculty Large Grant**, “Regulatory mechanism for adipocyte fatty acid binding protein expression by fatty acids in macrophages”, 7/01/2011-6/30/2012, \$25,000.
Role in project: Principal Investigator
- **National Egg Board**, “Effect of egg intake on reverse cholesterol and insulin resistance in subjects classified with metabolic syndrome”, 09/01/2010-31/2011, \$127,315.
Role in project: Co-investigator (PI: Maria-Luz Fernandez, University of Connecticut)
- **United States Department of Agriculture (NRI2007-35200-18298)**, National Research Initiative Competitive Grants Program, “Regulation of cholesterol absorption by plant sterol and stanol esters”, 08/01/2007-07/31/2011, \$466,915 (My share: \$185,863).
Role in project: Co-Program director (PD: Timothy Carr, University of Nebraska-Lincoln)
- **United States Department of Agriculture (NRI2008-35200-18699)**, National Research Initiative Competitive Grants Program, “Evaluation of the Bioactivity of Green Tea in an Animal Model of Hepatic Oxidative Stress”, 01/01/2008-12/31/2010, \$458,868 (Subcontract \$23,921).
Role in project: Collaborator (PI: Richard Bruno, University of Connecticut)

- **University of Connecticut Major Research Equipment Competition**, “Preparative- and Mass Spectrometry-Based HPLC: Critical Analytical Tools To Establish A Bioactive Food Components and Health Core Laboratory”, \$248,358.86.
Role in project: Collaborator
- **United States Department of Agriculture, Hatch (NEB-36-065)**, “Identification and Characterization of Bioactive Compounds with Cholesterol-lowering and Anti-inflammatory Properties from a Blue-green Alga *Nostoc commune*”, 01/01/2007-12/31/2012, \$61,500. (Actual award \$43,050 due to PI’s institutional change June 2010)
Role in project: Principal Investigator
- **Nebraska Gateway for Nutrigenomics**, University of Nebraska-Lincoln Vice Chancellor of Research, “Regulation of histone deacetylase 3 by fatty acids”, 12/01/2009-11/30-2010, \$11,480.
Role in project: Principal Investigator
- **Faculty Seed Grant**, University of Nebraska-Lincoln Research Council, “Modulation of cholesterol transporters in macrophages during inflammation”, 01/01/2009-12/31/2009, \$10,000.
Role in project: Principal Investigator
- **Strategic Cluster Grant**, University of Nebraska-Lincoln, Office of the Vice Chancellor for Research, “Pilot work in preparation for the R21 grant submission”, 02/20/2009-12/31/2009, \$12,500.
Role in project: Co-investigator (PI: Patrick Dussault, University of Nebraska-Lincoln)
- **National Science Foundation, SBIR Phase II (IIP-0724411)**, “An innovative photobioreactor for commercial production of Astaxanthin from genetically improved *Haematococcus pluvialis* strains”, 07/01/2007-06/30/2009, \$448,550 (Subcontract \$21,635).
Role in project: Collaborator (PI: Fan Lu, Algaen Corporation)
- **Institute of Agricultural and Natural Resources Equipment Grant**, University of Nebraska-Lincoln, Purchase of an infrared imaging systems for research and teaching purposes, 02/01/2008-06/01/2008, \$51,950.
Role in project: Co-investigator
- **Faculty Seed Grant**, University of Nebraska-Lincoln Research Council, “Transporter-mediated mechanism for the absorption of cholesterol and plant sterols”, 01/01/2007-12/31/2007, \$10,000.
Role in project: Principal Investigator
- **Interdisciplinary Grant**, University of Nebraska-Lincoln Research Council, “Identification of bioactive compounds with cholesterol-lowering and anti-inflammatory properties in *Nostoc commune*, a blue-green alga”, 01/01/2007-12/31/2007, \$20,000.
Role in project: Principal Investigator
- **Layman Award**, University of Nebraska Foundation, “Regulation of ATP-binding cassette transporter A1 by fatty acids”, 05/01/2006-04/30/2007, \$9,970.
Role in project: Principal Investigator
- **University of Connecticut, (National Institute of Health, 5R21AT001363-02)**, “Hypocholesterolemic action of green tea extracts”, 2006, \$5,000 (subcontract).
Role in project: Collaborator

OTHER RESEARCH ACTIVITIES

- Expert panel member for a FDA GRAS application of INNOBIO® astaxanthin products in April 2015.

TEACHING ACTIVITIES

Courses

- **NUSC 4236 Metabolism and Functions of Nutrients**, 4 Cr, Spring 2019, Department of Nutritional Sciences, University of Connecticut, enrollment 66.
Instructor rating (median 4.0/5.0, University median 4.1), Course rating (median 3.8/5.0, University median 3.9)
- **NUSC 4236 Metabolism and Functions of Nutrients**, 4 Cr, Spring 2018, Department of Nutritional Sciences, University of Connecticut, enrollment 80.
Instructor rating (median 5.0/5.0, University median 4.1), Course rating (median 4.5/5.0, University median 3.8)
- **NUSC 6313 Nutrition and Gene Expression**, 3 Cr, Fall 2017, Department of Nutritional Sciences, University of Connecticut, enrollment 8 (co-taught with Dr. Hedley Freake).
Instructor rating (median 5.0/5.0, University median 4.4), Course rating (median 4.5/5.0, University median 4.2)
- **NUSC 4236 Metabolism and Functions of Nutrients**, 4 Cr, Spring 2017, Department of Nutritional Sciences, University of Connecticut, enrollment 87.
Instructor rating (median 5.0/5.0, University median 4.3), Course rating (median 4.0/5.0, University median 4.0)
- **FNS 6634 Inflammation, Diets and Chronic Disease (Grad course)**, 3 Cr, Winter 2016, Department of Food and Nutrition, Yonsei University, Seoul, South Korea, enrollment 11.
- **NUSC 5398-001 Special Topics: Inflammation, Diets and Chronic Disease**, 3 Cr, Fall 2016, Department of Nutritional Sciences, University of Connecticut, enrollment 9.
Instructor rating (median 5.0/5.0, University median 4.2), Course rating (median 5.0/5.0, University median 4.0)
- **NUSC 4236 Metabolism and Functions of Nutrients**, 4 Cr, Spring 2016, Department of Nutritional Sciences, University of Connecticut, enrollment 80.
Instructor rating (median 5.0/5.0, University median 4.3), Course rating (median 4.0/5.0, University median 3.9)
- **NUSC 6313 Nutrition and Gene Expression**, 3 Cr, Fall 2015, Department of Nutritional Sciences, University of Connecticut, enrollment 8 (co-taught with Dr. Hedley Freake).
Instructor rating (median 5.0/5.0, University median 4.3), Course rating (median 5.0/5.0, University median 4.3)
- **NUSC 4236 Principles of Nutrition**, 4 Cr, Spring 2015, Department of Nutritional Sciences, University of Connecticut, enrollment 72.
Instructor rating (median 5.0/5.0, University median 4.2), Course rating (median 4.0/5.0, University median 4.0)
- **NUSC 5398-001 Special Topics: Inflammation, Diets and Chronic Disease**, 3 Cr, Fall 2014, Department of Nutritional Sciences, University of Connecticut, enrollment 7.
Instructor rating (median 4.5/5.0, University median 4.2), Course rating (median 4.5/5.0, University median 4.0)
- **NUSC 4236 Principles of Nutrition**, 4 Cr, Spring 2014, Department of Nutritional Sciences, University of Connecticut, enrollment 63.
Instructor rating (median 5.0/5.0, University median 4.1), Course rating (median 4.0/5.0, University median 3.8)
- **NUSC 6313 Nutrition and Gene Expression**, 3 Cr, Fall 2013, Department of Nutritional Sciences, University of Connecticut, enrollment 6 (co-taught with Dr. Hedley Freake).

- Instructor rating (median 5.0/5.0, University median 4.3), Course rating (median 5.0/5.0, University median 4.2)
- **NUSC 5394 Seminar**, 1 Cr, Fall 2013, Department of Nutritional Sciences, University of Connecticut, enrollment 6.
Instructor rating (median 5.0/5.0, University median 4.2), Course rating (median 5.0/5.0, University median 3.9)
 - **NUSC 4236 Principles of Nutrition**, 4 Cr, Spring 2013, Department of Nutritional Sciences, University of Connecticut, enrollment 63.
Instructor rating (median 5.0/5.0, University median 4.1), Course rating (median 4.0/5.0, University median 3.9)
 - **NUSC 5399 Independent Study in Nutritional Science**, 2 Cr, Spring 2013, Department of Nutritional Sciences, University of Connecticut, enrollment 2 (Tho Pham, Ellen Harness).
 - **NUSC 5200 Macronutrients**, 3 Cr, Fall 2012, Department of Nutritional Sciences, University of Connecticut, enrollment 11 (co-taught with Drs. Rodriguez and Mobley).
Course rating 9.1/10
 - **NUSC 5399 Independent Study in Nutritional Science**, 3 Cr, Fall 2012, Department of Nutritional Sciences, University of Connecticut, enrollment 1 (Sanggil Lee).
 - **NUSC 4236 Principles of Nutrition**, 3 Cr, Spring 2012, Department of Nutritional Sciences, University of Connecticut, enrollment 60.
Course rating 9.1/10
 - **NUSC 4237W Writing in Nutrition**, 1 Cr, Spring 2012, Department of Nutritional Sciences, University of Connecticut, enrollment 20.
Course rating 9.0/10
 - **NUSC 5394 Seminar**, 1 Cr, Fall 2011, Department of Nutritional Sciences, University of Connecticut, enrollment 9.
Course rating 9.7/10
 - **NUSC 5399 Independent Study in Nutritional Science**, 3 Cr, Spring 2011, Department of Nutritional Sciences, University of Connecticut, enrollment 1.
 - **NUSC 5399 Independent Study in Nutritional Science**, 2 Cr, Fall 2011, Department of Nutritional Sciences, University of Connecticut, enrollment 3.
 - **NUSC 6313 Nutrition and Gene Expression**, 3 Cr, Spring 2011, Department of Nutritional Sciences, University of Connecticut, enrollment 17 (co-taught with Dr. Hedley Freake).
Course rating 9.6/10
 - **NUSC 5398-001 Special Topics: Inflammation, Diets and Chronic Disease**, 2 Cr, Fall 2010, Department of Nutritional Sciences, University of Connecticut, enrollment 20.
Course rating 9.3/10
 - **NUSC 4299 Independent Study: Molecular Nutrition Techniques**, 3 Cr, Fall 2010, Department of Nutritional Sciences, University of Connecticut, enrollment 1.
 - **NUTR 455 Advanced Nutrition**, Spring 2010, Instructor, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, enrollment 58.
Course rating 4.2/5
 - **NUTR 455 Advanced Nutrition**, Spring 2009, Instructor, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, enrollment 54.
Course rating 3.6/5
 - **NUTR 896 Atherosclerosis**, Fall 2008, Instructor, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, enrollment 7.

Course rating 4.7/5

- **NUTR 986 Graduate Seminar**, Fall 2008, Instructor, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, enrollment 17.

Course rating 3.5/5

- **NUTR 455 Advanced Nutrition**, Spring 2008, Instructor, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, enrollment 27.

Course rating 3.7/5

- **NUTR 921 Nutrition Seminar**, Spring 2008, Instructor, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, enrollment 9.
- **NUTR 498 Research Experiences**, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln. Gina Hoelsing (Spring 2006, 1 credit), Katrina Conrad (Summer 2007, 1 credit), Stephanie Larson (Spring 2008, 1 credit), Megan Thompson (Fall 2008, 2 credits) Michaela Piccolo (Spring 2009, 1 credit).

Guest lectures

- PHAR 6455 Advanced Toxicology, November 2020 Department of Pharmaceutical Sciences, University of Connecticut, 1 class meeting.
Topic: Obesity, Inflammation and Oxidative Stress.
- UNIV 1810 Research Design and Methods, September 2020, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Blackcurrant for the prevention of nonalcoholic fatty liver disease in obesity.
- NUSC 6319 Research Design and Methods, April 2020, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Use of animals in biomedical and nutrition research.
- NUSC 4295 Dietary Supplements and Nutraceuticals, November 2019, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- NUSC 4295 Dietary Supplements and Nutraceuticals, November 2018, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- NUSC 6319 Research Design and Methods, April 2018, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Use of animals in biomedical and nutrition research.
- NUSC 4295 Dietary Supplements and Nutraceuticals, October 2017, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- SPSS 3230 Biotechnology-Science, Impact, Perception, Ethics, October 2017, Department of Plant Science and Landscaping, University of Connecticut, 1 class meeting.
Topic: Nutrition and Biotechnology.
- NUSC 4295 Special Topics, Dietary Supplements and Nutraceuticals, November 2016, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- PHAR 6455 Advanced Toxicology, November 2016, Department of Pharmaceutical Sciences, University of Connecticut, 1 class meeting.
Topic: NAFLD.

- NUSC 4295 Special Topics, Dietary Supplements and Nutraceuticals, November 2015, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- PHAR 6455 Advanced Toxicology, December 2013, Department of Pharmaceutical Sciences, University of Connecticut, 1 class meeting.
Topic: NAFLD.
- NUSC 4295 Special Topics, Dietary Supplements and Nutraceuticals, November 2015, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- NUSC 4295 Special Topics, Dietary Supplements and Nutraceuticals, November 2014, Department of Nutritional Sciences, University of Connecticut, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- PHAR 6455 Advanced Toxicology, December 2013, Department of Pharmaceutical Sciences, University of Connecticut, enrollment 10, 1 class meeting.
Topic: Oxidative stress and obesity.
- NUSC 4295 Special Topics, Dietary Supplements and Nutraceuticals, November 2013, Department of Nutritional Sciences, University of Connecticut, enrollment 13, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- NUSC 4295 Special Topics, Dietary Supplements and Nutraceuticals, October 2012, Department of Nutritional Sciences, University of Connecticut, enrollment 13, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- Department of Foods and Nutrition, Wonkwang University, Iksan, Jeonbuk, South Korea, October 2012. Enrollment 100, 1 class.
Topic: Dietary supplements and food components for the prevention of heart disease.
- NUSC 4295 Special Topics, Dietary Supplements and Nutraceuticals, November 2011, Department of Nutritional Sciences, University of Connecticut, enrollment 9, 1 class meeting.
Topic: Dietary supplements and food components for the prevention of heart disease.
- FDST 870 Nutraceuticals and Functional Foods, Spring 2010, Department of Food Science and Technology, University of Nebraska-Lincoln, enrollment 7, 2 class meetings.
Topic: Inflammation.
- Lecture, November 2007, Department of Food and Nutrition, Pusan National University, South Korea, enrollment 130, 1 class meeting.
Title: Cholesterol metabolism and atherosclerosis.
- BIOC 949 Biochemistry of Nutrition, Fall 2001, Department of Animal Science, University of Nebraska-Lincoln, enrollment 10, 2 class meetings.
Topic: Body cholesterol metabolism and Gene regulation.
- NUTR 455 Advanced Nutrition, Fall 2001, Department of Nutritional Science and Dietetics, University of Nebraska-Lincoln, enrollment 75, 1 class meeting.
Topic: Biotechnology in nutrition.
- NUTR 151 Introduction to Nutrition (Honors Section), Fall 2000, Department of Nutritional Science and Dietetics, University of Nebraska-Lincoln, enrollment 24, 1 class meeting.
Topic: Body energy balance.

Major Adviser/Committee Chair

- **Olivia Corvino, PhD** in Nutritional Sciences, University of Connecticut, In progress.
- **Hyungryun Jang, PhD** in Nutritional Sciences, University of Connecticut, In progress.

- **Hyunju Kang, PhD** in Nutritional Sciences, University of Connecticut, In progress.
- **Siqi Hu, PhD** in Nutritional Sciences, University of Connecticut, Completed in June 2020.
Dissertation title: The roles of bioactive compounds and histone deacetylase 9 in the development of obesity-induced inflammation and fibrosis.
(Currently, Postdoc at UC San Diego School of Medicine)
- **Yoojin Lee, PhD** in Nutritional Sciences, University of Connecticut, Completed in May 2020.
Dissertation title: Dietary and epigenetic regulation of obesity-associated metabolic dysfunctions and inflammation.
(Currently, Postdoc at Harvard Medical School)
- **Minkyung Bae, PhD** in Nutritional Sciences, University of Connecticut, Completed in May 2018.
Thesis title: Comprehensive evaluation of the anti-fibrogenic effect of astaxanthin in hepatic stellate cells. (Currently, Assistant Professor in the Department of Food and Nutrition, Changwon National University, South Korea)
- **Tho Pham, PhD** in Nutritional Sciences, University of Connecticut, Completed in December 2015.
Thesis title: Anti-inflammatory mechanism of *Spirulina platensis*: its regulation of histone deacetylases, endotoxin tolerance, and energy metabolism in macrophages.
(Currently, Postdoc at Boston University School of Medicine)
- **Callie Ferruggia, MS** in Nutritional Sciences, University of Connecticut, Completed in December 2014.
Thesis title: The anti-inflammatory, antioxidant, and hepato-protective effects of astaxanthin.
- **Tyler Benn, MS** in Nutritional Sciences, University of Connecticut, Completed in August 2014.
Thesis title: Prevention of Inflammation, Hyperglycemia, and Hypercholesterolemia by Polyphenol-Rich Blackcurrant Extract in obesity.
- **Cindy Yang, PhD** in Nutritional Sciences, University of Connecticut, Completed in August 2014.
Dissertation title: Health benefits of astaxanthin, a xanthophyll carotenoid: Protective functions against non-alcoholic fatty liver disease and steatohepatitis.
(Currently, Instructor at Weill Cornell Medical College)
- **Chai Siah Ku, PhD** in Nutritional sciences, University of Connecticut, Completed in August 2014.
Dissertation title: Effect of edible blue-green Algae, *Nostoc commune* Var. *Sphaeroides* Kützing and *Spirulina platensis*, on the prevention of hyperlipidemia, inflammation, and atherosclerosis.
(Currently, Research Associate at Atreca)
- **Casey Wegner, MS** in Nutritional Sciences, University of Connecticut, Completed in May 2014.
Thesis title: Nicotinamide riboside's impact on lipid metabolism in apolipoprotein E deficient mice.
(Currently, business analyst at the University of Michigan Medical School)
- **Chai Siah Ku, MS** in Nutrition, University of Nebraska-Lincoln, Completed in August 2010.
Thesis title: Regulation of ATP binding cassette transporter A1 and G1 expression by fatty acids.
(Currently, research associate at Atreca)
- **Sara Coleman, MS** in Nutritional Sciences, University of Nebraska-Lincoln, Completed in May 2010.
Thesis title: Unsaturated fatty acids repress the expression of adipocyte fatty acid-binding protein, aP2, in RAW 264.7 macrophage.
- **Heather Rasmussen, PhD** in Nutrition, University of Nebraska-Lincoln, Completed in December 2008.
Dissertation title: Biological functions of a blue-green alga, *Nostoc commune* var. *sphaeroides* *kützing* (*N. commune*).
(Currently, Assistant Professor, Department of Clinical Nutrition, Rush University Medical Center)

- **Sarah Ehlers**, MS in Nutrition, University of Nebraska-Lincoln, Completed in May 2008.
Thesis title: Modulation of high-density lipoprotein metabolism in obesity-related insulin resistance.
(Currently, senior food scientist at ConAgra)

Associate Committee Member

- **Liya Anto**, PhD in Nutritional Sciences, University of Connecticut, In progress.
- **Erika Fleming**, MS in Nutritional Sciences, University of Connecticut, In progress.
- **Brandon Smith**, PhD in Animal Science, University of Connecticut, In progress.
- **Deepa Kuttappan**, PhD in Animal Science, University of Connecticut, In progress.
- **Emily Ng**, PhD in Molecular and Cellular Biology, University of Connecticut, In progress.
- **Soowan Lee**, PhD in Pharmaceutical Sciences, University of Connecticut, In progress.
- **Qiaobin Hu**, PhD in Nutritional Sciences, University of Connecticut, Completed in July 2019.
- **Courtney Millar**, PhD in Nutritional Sciences, University of Connecticut, Completed in July 2019.
- **Diana Li**, PhD in Nutritional Sciences, University of Connecticut, Completed in June 2019.
- **Taoran Wang**, PhD in Nutritional Sciences, University of Connecticut, Completed in June 2019.
- **Cayla Rodia**, PhD in Nutritional Sciences, University of Connecticut, Completed in June 2019.
- **Bruno Lemos**, PhD in Nutritional Sciences, University of Connecticut, Completed in February 2019.
- **Olaimoji Aladelokun**, PhD in Physiology and Neurobiology, University of Connecticut, Terminated in 2018.
- **Gregory Norris**, PhD in Nutritional Sciences, University of Connecticut, Completed in May 2018.
- **Gabrielle West**, MS in Nutritional Sciences, University of Connecticut, Completed in August 2017.
- **Amanda Missimer**, PhD in Nutritional Sciences, University of Connecticut, Completed in May 2017.
- **Diana Dimarco**, PhD in Nutritional Sciences, University of Connecticut, Completed in May 2017.
- **Ana Gabriela Murillo Solis**, PhD in Nutritional Sciences, University of Connecticut, Completed in August 2016.
- **Liyang Xie**, PhD in Nutritional Sciences, University of Connecticut, Completed in January 2016.
- **Joselin Raja**, PhD in Animal Science, University of Connecticut, Terminated in August 2015.
- **Nicholas Farrell**, MS in Nutritional Sciences, University of Connecticut, Completed in June 2015.
- **Maria Hoffman**, PhD in Animal Science, University of Connecticut, Completed in December 2014.
- **David Aguilar**, PhD in Nutritional Sciences, University of Connecticut, Completed in August 2014.
- **Sanggil Lee**, PhD in Nutritional Sciences, University of Connecticut, Completed in December 2014.
- **Daniel Freidenreich**, PhD in Kinesiology, University of Connecticut, Completed in October 2014.
- **Ana Gabriela Murillo Solis**, MS in Nutritional Sciences, University of Connecticut, Completed in May 2014.
- **Carrie Cucci**, PhD in Nutritional Sciences, University of Connecticut, Completed in 2013.
- **Catherine Anderson**, PhD in Nutritional Sciences, University of Connecticut, Completed in August 2013.
- **Lei Cao**, MS in Nutritional Sciences, University of Connecticut, Completed in August 2012.
- **Christopher Blesso**, PhD in Nutritional Sciences, University of Connecticut, Completed in August 2012.
- **Christopher Masterjohn**, PhD in Nutritional Sciences, University of Connecticut, Completed in August 2012.
- **Allyson Bower**, MS in Nutritional Sciences, University of Connecticut, Completed in August 2012.
- **Jung Eun Kim**, PhD in Nutritional Sciences, University of Connecticut, Completed in May 2012.

- **Leelyn Chung**, MS in Nutritional Sciences, University of Connecticut, Completed in May 2011.
- **Andrew Brown**, PhD in Nutrition, University of Nebraska-Lincoln, Discontinued.
- **Wantanee Sittiwong**, PhD in Chemistry, University of Nebraska-Lincoln, Discontinued.
- **Silvina Salvi**, PhD in Psychology, University of Nebraska-Lincoln, Discontinued.
- **Mark Ash**, MS in Nutrition, University of Nebraska-Lincoln, Completed in May 2010.
Thesis title: The effects of phytosterol stearates and raspberry seed oils on lipid metabolism.
- **Shakhlo Yarbavee**, PhD in Nutrition, University of Nebraska-Lincoln, Completed in December 2009.
Dissertation title: In vitro digestion/Caco-2 cell model for assessing dietary folate bioavailability.
- **Valerie Pestinger**, MS in Nutrition, University of Nebraska-Lincoln, Completed in December 2009.
Thesis title: The Biological Functions of Biotinylated Histones H3 and H4
- **Yousef Hasssan**, PhD in Nutrition, University of Nebraska-Lincoln, Completed in August 2009.
Dissertation title: Identification and characterization of holocarboxylase synthetase/protein interactions at the molecular level.
- **Elliot Jesch**, PhD in Nutrition, University of Nebraska-Lincoln, Completed in December 2008.
Dissertation title: Regulation of gene expression by dietary plant sterols in cholesterol absorption and metabolism.
- **David Guderian**, PhD in Nutrition, University of Nebraska-Lincoln, Discontinued.
- **Erin Smith**, MS in Nutrition, University of Nebraska-Lincoln, Completed in May 2007.
Thesis title: Biological functions of biotin in stress tolerance and malignant transformation.
- **Davis Sinani**, MS in Biochemistry, University of Nebraska-Lincoln, Completed in December 2007.
Thesis title: Distinct mechanisms for CTR1-mediated copper and cisplatin transport.
- **David Schuett**, MS in Nutritional Sciences, University of Nebraska-Lincoln, Completed in May 2008.
Thesis title: Regulation of cholesterol transport by dietary fatty acids in mice.
- **Jia Tse Hoi**, MS in Nutritional Sciences, University of Nebraska-Lincoln, Completed in December 2008.
Thesis title: Effects of sorghum dried distillers grain lipid extract on cholesterol metabolism in hamsters.

Undergraduate Research Supervisor

- **Anqi Cheng**, Research experience, University of Connecticut, August 2020-December 2020.
- **Victoria Kostour**, Research experience, University of Connecticut, August 2020-December 2020.
- **Lorenzo Ross**, McNair Scholar, Research experience, University of Connecticut, January 2020-December 2020.
- **William Odell**, Research experience, University of Connecticut, January 2020-December 2020.
- **Nouxi Fan**, Work study, University of Connecticut, January 2020-April 2020.
- **Khush Patel**, Research experience, University of Connecticut, January 2020-April 2020.
- **Emily McManus**, Research experience, University of Connecticut, January 2019-April 2020.
- **Brooke Fay**, Research experience, University of Connecticut, August 2019-January 2020.
- **Molly Vanluling**, Undergraduate Honors Research, University of Connecticut, January 2019-April 2020.
Honors thesis title: Sex differences in mouse NAD⁺ metabolism
- **Olivia Corvino**, Research experience, University of Connecticut, January 2019-May 2020.
- **Dana Chamberlain**, Research experience, University of Connecticut, August 2019-January 2020.

- **Dana Chamberlain**, Bridging the Gap Summer Undergraduate Research Program, University of Connecticut, Summer 2018 & 2019.
- **Maussi Arrunategu**, Bridging the Gap Summer Undergraduate Research Program, Manchester Community College, Summer 2017.
- **Catherine Han**, Undergraduate Honors Student, University of Connecticut, August 2015-May 2017.
- **Edward O'Neill**, Undergraduate Honors Student, University of Connecticut, June 2015-May 2017.
- **Christian Caceres**, Undergraduate Honors Student, University of Connecticut, August 2014-May 2017.
- **Christina Jiang**, University Scholar, University of Connecticut, January 2015-May 2017.
- **Katelyn McFadden**, University Scholar, University of Connecticut, January 2014-May 2015.
- **Ellen Harness**, Undergraduate Honors Student, University of Connecticut, August 2012-May 2015.
- **Alyssa Perkins**, Undergraduate Honors Student, University of Connecticut, August 2012-Dec 2014.
- **Nicholas Farrell**, Research experience, University of Connecticut, August 2012-April 2013.
- **Jennifer Carpenter**, Research experience, University of Connecticut, June 2011-Aug 2011.
- **Tho Pham**, Undergraduate Creative Activities and Research Experiences Award, University of Nebraska-Lincoln, June 2009 – May 2010.
Project title: Regulation of ABC transporters by fatty acids
- **Anthony Nguyen**, Undergraduate Creative Activities and Research Experiences Award, University of Nebraska-Lincoln, August 2008 – May 2010.
Project title: Modulation of ATP-binding cassette transporters by inflammation in macrophages
- **Chai Siah Ku**, Undergraduate Creative Activities and Research Experiences Award, University of Nebraska-Lincoln, August 2007 – December 2008, Presented at Undergraduate Research Conference in April 2008.
Project title: Cholesterol-lowering effect of *Nostoc Commune*, a blue-green Alga
- **Kara Blobaum**, Undergraduate Honor's Research Program, University of Nebraska-Lincoln, Completed in May 2008.
Thesis title: Mechanisms underlying the modulation of the expression of cellular cholesterol regulatory proteins by *Nostoc commune*, a blue-green alga
- **Stephanie Larson**, Undergraduate Creative Activities and Research Experiences Award, University of Nebraska-Lincoln, August 2007 – May 2008.
Project title: High-density lipoprotein metabolism in obesity
- **Mark Heffley**, Undergraduate Creative Activities and Research Experiences Award, University of Nebraska-Lincoln, August 2006 – May 2007.
Project title: Regulatory mechanism for the expression of ATP-binding cassette transporters in inflammation

Awards/Honors of Advisees

- **Mi-Bo Kim**, Finalist, ASN Emerging Leader Poster Competition in the Carotenoids and Retinoids Topical Area, June 2020.
- **Hyunju Kang**, Finalist, ASN Emerging Leader Poster Competition in the Carotenoids and Retinoids Topical Area, June 2020.
- **Mi-Bo Kim**, Postdoctoral Fellowship, National Research Foundation of Korea, \$42,000, "Anti-inflammatory effect of fucoxanthin by the regulation of macrophage M1/M2 phenotypes and energy metabolism", 9/01/19-08/31/20.
- **Minkyung Bae**, First place in Carotenoids and Retinoids, ASN Emerging Leader Poster Competition, June 2018.

- **Siqi Hu**, First place in Medical Nutrition, ASN Emerging Leader Poster Competition, June 2018.
- **Minkyung Bae**, Eaton Award, Department of Nutritional Sciences, University of Connecticut, November 2017.
- **Tho Pham**, First place, ASN Emerging Leader Poster Competition, April 2017.
- **Yoojin Lee**, Finalist, ASN Emerging Leader Poster Competition, April 2017.
- **Tho Pham**, USDA NIFA Predoctoral Fellowship (USDA AFRI NIFA 2014-01870), 1/1/2015-12/31/2015, \$39,500.
- **Tho Pham**, Eaton Award, Department of Nutritional Sciences, University of Connecticut, April 2014
- **Cindy Yang**, Eaton Award, Department of Nutritional Sciences, University of Connecticut, April 2014
- **Bohkyung Kim**, Postdoctoral Fellowship, National Research Foundation of Korea, \$30,000, “Regulation of genes for transintestinal cholesterol efflux (TICE) by polyphenol-rich blackcurrant extract”, 10/01/12-09/30/13.
- **Casey Wegner**, PhenHRIG 2012 Student Research Awards, PhenHRIG, April 2012.
- **Casey Wegner**, Oral presentation competition, College of Agriculture and Natural Resources, Graduate Student Research Forum, University of Connecticut, March 2012.
- **Yue Yang**, Oral presentation competition College of Agriculture and Natural Resources, Graduate Student Research Forum, University of Connecticut, March 2011.
- **Chai Siah Ku**, David H & Annie E. Larrick Student Travel Grant from Agricultural Research Division, University of Nebraska-Lincoln, April 2010.
- **Chai Siah Ku**, College of Education and Health Sciences Travel Grant, University of Nebraska-Lincoln, April 2010.
- **Sara Coleman**, David H & Annie E. Larrick Student Travel Grant from Agricultural Research Division, University of Nebraska-Lincoln, April 2010.
- **Sara Coleman**, College of Education and Health Sciences Travel Grant, University of Nebraska-Lincoln, April 2010.
- **Heather Rasmussen**, Widaman Trust Graduate Fellowship, 2006.
- **Heather Rasmussen**, David H & Annie E. Larrick Student Travel Grant from Agricultural Research Division, University of Nebraska-Lincoln, 2007 & 2008.
- **Heather Rasmussen**, College of Education and Health Sciences Travel Grant, University of Nebraska-Lincoln, 2006, 2007 & 2008.
- **Sarah Ehlers**, David H & Annie E. Larrick Student Travel Grant, Agricultural Research Division, University of Nebraska-Lincoln, 2008.
- **Sarah Ehlers**, College of Education and Health Sciences Travel Grant, University of Nebraska-Lincoln, 2008.
- **Heather Rasmussen**, John Borrlson Fellowship from the Office of Graduate Studies, University of Nebraska-Lincoln, 2007.

Poster/Oral Presentation of Advisees at the University level

- **Yoojin Lee (PhD student)**, CAHNR Graduate Research Forum, University of Connecticut, March 2017. (Oral)
Title: Blackcurrant (*Ribes nigrum*) Consumption Prevents Non-alcoholic Steatohepatitis (NASH) in Diet-induced Obesity Mice.
- **Minkyung Bae (PhD student)**, CAHNR Graduate Research Forum, University of Connecticut, April 2016. (Oral)

Title: Astaxanthin attenuated the expression of fibrogenic gene induced by high glucose alone and in combination with transforming growth factor β 1 in hepatic stellate cell.

- **Christian Caceres (UG Honors)**, UConn STEM Seminar Series, March 2016 (Oral)
Title: Health benefits of cranberries in human apolipoprotein AI transgenic mice on an atherogenic diet.
- **Minkyung Bae (PhD student)**, CANR Graduate Research Forum, University of Connecticut, April 2015. (Oral)
Title: Protective functions of astaxanthin against non-alcoholic fatty liver disease/steatohepatitis/fibrosis.
- **Tho Pham (PhD student)**, CANR Graduate Research Forum, University of Connecticut, April 2014. (Oral)
Title: Degradation of chromatin modifiers, histone deacetylases, by *Spirulina platensis* extract in macrophages.
- **Tho Pham (PhD student)**, CANR Graduate Research Forum, University of Connecticut, April 2013. (Oral)
Title: Anti-inflammatory properties of *Spirulina platensis* organic extract through the degradation of histone deacetylases in macrophages was beneficial for adipocyte differentiation.
- **Yue Yang (PhD student)**, CANR Graduate Research Forum, University of Connecticut, April 2013. (Oral)
Title: Astaxanthin prevents transforming growth factor β 1-induced expression of fibrogenic genes and production of reactive oxygen species in hepatic stellate cells.
- **Chai Siah Ku (PhD student)**, CANR Graduate Research Forum, University of Connecticut, March 2012. (Oral)
Title: Lipid extract from blue-green algae reduces the production of pro-inflammatory cytokines.
- **Bohkyung Kim (Postdoc)**, CANR Graduate Research Forum, University of Connecticut, March 2012. (Oral)
Title: polyphenol-rich chokeberry extract regulates expression of cholesterol and lipid metabolism genes in Caco-2 cells.
- **Casey Wegner (PhD student)**, CANR Graduate Research Forum, University of Connecticut, March 2012. (Oral)
Title: Differential regulation of intestinal cholesterol flux by EGCG and resveratrol: Potential role of histone deacetylases and sirtuins in transintestinal cholesterol efflux.
- **Chai Siah Ku (PhD student)**, CANR Graduate Research Forum, University of Connecticut, March 2011.
Title: Safety assessment and hypolipidemic effects of edible blue-green algae. (Oral)
- **Yue Yang (PhD student)**, CANR Graduate Research Forum, University of Connecticut, March 2011. (Oral)
Title: Astaxanthin from *Haematococcus pluvialis* lowered plasma lipid concentrations and increased antioxidant defense mechanism in apolipoprotein E knockout mice.
- **Tho Pham (PhD student)**, CANR Graduate Research Forum, University of Connecticut, March 2011. (Poster)
Title: Regulation of histone deacetylases by fatty acids in RAW 264.7 macrophages.
- **Anthony Nguyen (Undergraduate)**, Research Fair, University of Nebraska-Lincoln, April 2010. (Poster)
Title: Hypolipidemic and anti-oxidant properties of astaxanthin-rich extract from *Haematococcus pluvialis* in apolipoprotein E knockout mice. (Poster)

- **Tho Pham (Undergraduate)**, Research Fair, University of Nebraska-Lincoln, April 2010. (Poster)
Title: Regulation of histone deacetylase activity by fatty acids in RAW 264.7 macrophages.
- **Chai Siah Ku (Undergraduate)**, Research Fair, University of Nebraska-Lincoln, April 2008.
(Poster)
Title: Modulation of the expression of cellular cholesterol regulatory proteins by the lipid extract of *Nostoc commune var. sphaeroides kutzing*, a blue-green alga.

Postdoctoral Researcher Supervisor

- **Minkyung Bae**, PhD, University of Connecticut, May 2018 – Present.
- **Mi-Bo Kim**, PhD, University of Connecticut, August 2017 – Present.
- **Tho X Pham**, PhD, University of Connecticut, January 2016 – Present.
- **Bohkyung Kim**, PhD, University of Connecticut, October 2010 – May 2015.
(Currently, Assistant Professor in the Department of Food Science and Nutrition, Pusan National University, South Korea)
- **Heather Rasmussen**, PhD, University of Nebraska-Lincoln, January 2009 – June 2009.
- **Jeongmin Seo**, PhD, University of Nebraska-Lincoln, March 2008 – January 2010.

Visiting Scientists

- **Hyunjung Baik**, Associate Professor, Department of Medicine, Kangwon National University, August 1, 2019-July 31, 2020.
- **Eunhee Cho**, Associate Professor, Department of Medicine, Kangwon National University, August 1, 2018-January 31, 2020.
- **Kun Young Park**, Professor and Chair, Department of Food Science and Nutrition, Pusan National University, July 2013 – August 2013.
- **Se Na Kim**, MS, Department of Food and Nutrition, Kyung Hee University, March 2007 - June 2007.

Other teaching activities

- External review of dissertation proposal, Sambhu Muraleedharan Pillai, Department of Animal Science, University of Connecticut, August 2015.
- External review of dissertation proposal, Swetha Rudriiah, Department of Pharmaceutical Sciences, University of Connecticut, August 2013.

PROFESSIONAL ACTIVITIES

Professional Development

- Cornell Faculty Leadership and Professional Development Program, June 22-26, 2015.
- MultiState Hatch meeting, Minneapolis, MN, October 2012.
- Carestream In Vivo Imaging Workshop, Boston, CT, December 2011.
- Nutmegger IFT meeting, New Haven, CT, May 2011.
- Scholarly Enhancement Program, College of Education and Human Sciences, University of Nebraska-Lincoln, August 2006 – May 2008.
- Peer Review in Teaching Project, University of Nebraska-Lincoln, August 2007 – May 2008.
- USDA CSREES Grantsmanship Workshop, Washington, DC, September 2006.
- Grant Writing Workshop, University of Nebraska-Lincoln, March 2006.

- Atherosclerosis measurement training, Dr. John Parks's laboratory, Department of Pathology, Wake Forest University School of Medicine, May 2006.
- Mouse lymph duct cannulation training, Dr. Partick Tso's laboratory, Department of Pathology, University of Cincinnati School of Medicine. November 2005.
- Fellow, Preparing Future Faculty Program, College of Human Resources and Family Science, University of Nebraska, Lincoln, NE. August 2001 – May 2001.

Invited Presentations

- Senescence group, Center on Aging, UConn Health, December 2020.
Title: Role of macrophage histone deacetylase 4 in the development of nonalcoholic fatty liver disease
- Department of Food and Nutrition, Yonsei University, Seoul, South Korea, November 2020 (virtual).
Title: Mechanistic understanding of the role of astaxanthin in the prevention of alcohol-induced inflammation in macrophages.
- STEM seminar series, UConn, March 2020
Title: Science behind human nutrition: Its role in metabolic disease prevention.
- Department of Food and Nutrition, Ewha Womans University, Seoul, South Korea, January 2020.
Title: Role of astaxanthin and histone deacetylase 4 in the development of metabolic and inflammatory diseases
- Department of Food and Nutrition, Yonsei University, Seoul, South Korea, December 2019.
Title: Role of nicotinamide riboside in the pathogenesis of liver fibrosis: Sex-dependent NAD metabolism in the liver
- The 20th Frontier Scientists Workshop, University of Hawaii hosted by The Korean Academy of Science and Technology, November 2019.
Title: Nicotinamide riboside: a new player on the block for the prevention of fatty liver disease
- Department of Biology, Fairfield University, October 2019.
Title: Prevention of fatty liver disease by astaxanthin
- International Symposium, The Korean Society of Food Science and Nutrition, Jeju, South Korea, October 2019.
Title: Astaxanthin, histone deacetylase 9, and metabolic and inflammatory diseases in obesity
- Department of Food and Nutrition, Yonsei University, Seoul, South Korea, October 2019.
Title: Role of astaxanthin and histone deacetylase 4 in the development of metabolic and inflammatory diseases
- College of Pharmacy, The Catholic University of Korea, Bucheon, South Korea, October 2019.
Title: Role of astaxanthin and histone deacetylase 4 in the development of metabolic and inflammatory diseases
- Senescence group, Center on Aging, UConn Health, October 2019.
Title: Sex-dependent NAD metabolism in the liver
- Cardiometabolism group, UConn Health, September 2019.
Title: Sex-dependent NAD metabolism in the liver
- Department of Nutritional Sciences and UConn Health Joint Conference, University of Connecticut, September 2019.
Title: Role of class II histone deacetylases in obesity-associated metabolic and inflammatory disease
- Department of Animal Science, University of Connecticut, October 2019.

Title: Novel effects of astaxanthin on the modulation of histone deacetylase 9 for the prevention of liver fibrosis

- NYU Winthrop Hospital, New York, February 2019.
Title: Novel effect of astaxanthin on the modulation of histone deacetylases and energy phenotype in hepatic stellate cells for the prevention and therapy for liver fibrosis
- Department of Food and Nutrition, Yonsei University, Seoul, South Korea, May 2018.
Title: Nicotinamide riboside: a new player on the block for the prevention of fatty liver disease
- College of Pharmacy, The Catholic University of Korea, Bucheon, South Korea, May 2018.
Title: Nicotinamide riboside: a new player on the block for the prevention of fatty liver disease
- Department of Food and Nutrition, Pusan National University, South Korea, May 2018.
Title: Fighting against fatty liver disease: A role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Food and Nutrition, Jeju National University, South Korea, May 2018.
Title: Fighting against fatty liver disease: A role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Food and Nutrition, Chungnam National University, South Korea, May 2018.
Title: Fighting against fatty liver disease: A role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Chemical Engineering, Chungnam National University, South Korea, May 2018.
Title: Role of astaxanthin, a red pigment carotenoid, in the prevention of fatty liver disease: marrying human nutrition with chemical engineering
- USDA Human Nutrition Research Center on Aging at Tufts University, February 2018.
Title: Novel effect of astaxanthin on the modulation of histone deacetylases and energy phenotype in hepatic stellate cells for the prevention and therapy for liver fibrosis
- USDA MultiState Hatch Annual Meeting, Tucson, AZ, February 2018.
Title: Novel effect of astaxanthin on the modulation of histone deacetylases and energy phenotype in hepatic stellate cells for the prevention and therapy for liver fibrosis
- International Symposium, The Korean Society of Food Science and Nutrition, Gyeongju, South Korea, November 2017.
Title: Blackcurrant for the prevention of nonalcoholic fatty liver disease in obesity
- College of Pharmacy, The Catholic University of Korea, Bucheon, South Korea, November 2017.
Title: Novel effect of astaxanthin on the modulation of histone deacetylases and energy phenotype in hepatic stellate cells for the prevention and therapy for liver fibrosis
- International Congress on Obesity and Metabolic Syndrome, Seoul, South Korea, September 2017.
Title: Prevention of nonalcoholic fatty liver disease by astaxanthin in obesity
- Department of Food and Nutrition, Ewha Woman's University, Seoul, South Korea, June 2017.
Title: Fighting against fatty liver disease: potential role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Food and Nutrition, Changwon University, South Korea, June 2017.
Title: Fighting against fatty liver disease: potential role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Food and Nutrition, KyungHee University, Seoul, South Korea, May 2017.
Title: Role of Nutrition for Disease Prevention in Obesity
- Department of Food and Nutrition, Yonsei University, Seoul, South Korea, May 2017.
Title: Fighting against fatty liver disease: potential role of astaxanthin in the prevention and therapy for liver fibrosis

- Department of Medicine, Kangwon University School of Medicine, South Korea, May 2017.
Title: Fighting against fatty liver disease: potential role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Food and Nutrition, Hallym University, South Korea, May 2017.
Title: Fighting against fatty liver disease: potential role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Food Science, China Agricultural University, China, March 2017.
Title: Fighting against fatty liver disease: A potential role of astaxanthin in the prevention and therapy for liver fibrosis
- Department of Food and Nutrition, Yonsei University, Seoul, South Korea, January 2017.
Title: Comprehensive evaluation of protective roles of blackcurrant against liver disease in obesity
- Department of Human Nutrition, Virginia Tech University, November 2016.
Title: Fight against liver fibrosis: potential role of astaxanthin in the prevention and therapy for liver fibrosis
- International Conference of the Korean Nutrition Society, Junju, South Korea, October 2016
Title: Nutrigenomics: Targeting histone modifiers with bioactive food components for disease prevention
- Department of Food and Nutrition, Ewha Woman's University, Seoul, South Korea, October 2016
Title: Comprehensive evaluation of protective roles of blackcurrant against liver disease in obesity
- International Biomedical Materials Symposium, Chunchon, South Korea, September 2016.
Title: Benefits of astaxanthin, a red pigment, for healthy liver
- EB 2016 International Forum-Korea, San Diego, April 2016.
Title: A novel role of astaxanthin in the modulation of histone deacetylase 9 for the prevention of liver fibrosis
- Food Science and Human Nutrition, University of Florida, March 2016.
Title: A novel role of astaxanthin in the prevention of liver fibrosis
- Department of Nutritional Sciences, Texas Tech University, February 2016.
Title: A novel role of astaxanthin in the modulation of histone deacetylase 9 for the prevention of liver fibrosis
- Department of Nutrition, University of North Carolina Chapel Hill, January 2016.
Title: A novel role of astaxanthin in the modulation of histone deacetylase 9 for the prevention of liver fibrosis
- Nutrition Research Institute, Kannapolis, NC, January 2016.
Title: A novel role of astaxanthin in the modulation of histone deacetylase 9 for the prevention of liver fibrosis
- Department of Pathobiology and Veterinary Sciences, University of Connecticut, November 2014.
Title: Health benefits of astaxanthin, a xanthophyll carotenoid: Protective functions against non-alcoholic fatty liver disease/steatohepatitis/fibrosis
- World Congress on the Role of Inflammation in Exercise, Health and Disease Keynote Lecture, American College for Sports Medicine, Orlando, FL, May 2014.
Title: Natural products for the prevention of inflammatory diseases: Mechanistic Insight
- USDA MultiState Hatch W2002 Annual Meeting, Lincoln, NE, June 2013.
Title: Gut for cholesterol removal? Roles of berries on TICE, a newly appreciated pathway for cholesterol removal via intestine
- American Chemistry Society Meeting, New Orleans, April 2013.

Title: Effect of anti-inflammatory properties of a blue-green alga *Spirulina platensis* on adipocyte differentiation and maturation

- Korean Society for Food Science and Nutrition Annual Meeting, Jeju, South Korea, November 2012.

Title: Obesity and Nonalcoholic fatty liver disease (NAFLD): Role of astaxanthin in the prevention of NAFLD

- Department of Foods and Nutrition, Wonkwang University, Iksan, Jeonbuk, South Korea, October 2012.

Title: What can blue-green algae offer to humans? Natural product for heart-protection and beyond

- Annual Symposium, College of Ecology, Kyung Hee University, Seoul, South Korea, October 2012.

Title: Are women at higher or lower risk for heart disease than men?

- Department of Food Science and Biotechnology, Kyung Hee University, Suwon, South Korea, October 2012.

Title: What can blue-green algae offer to humans? Natural product for heart-protection and beyond.

- USDA MultiState Hatch Annual Meeting, Minneapolis, MN, October 2012.

Title: Regulation of FABP4 by fatty acids in macrophages.

- Department of Food Science and Human Nutrition, University of Maine, September 2012.

Title: What can blue-green algae offer to humans? Natural product for heart-protection and beyond.

- Southeast Lipid Research Conference, Pine Mountain, GA, October 2011.

Title: Regulation of histone deacetylase expression by fatty acids.

- Department of Nutrition and Food Sciences, University of Rhode Island, May 2011.

Title: Blue-green algae; Natural products for heart-protection.

- Department of Pathobiology and Veterinary Sciences, University of Connecticut, April 2011.

Title: Blue-green algae; Potential natural products for cardio-protection.

- Department of Pharmaceutical Sciences, University of Connecticut, April 2011.

Title: Blue-green algae; Potential natural products for cardio-protection.

- Department of Nutrition, University of Massachusetts-Amherst, October 2010.

Title: ATP-binding cassette transporters and their regulation by fatty acids.

- Department of Animal Science, University of Connecticut, October 2010.

Title: Regulation of ATP-binding cassette transporters by fatty acids: ABCA1 and ABCG1.

- Northeast Functional Foods Forum, Beltsville, MD, May 2010.

Title: Hypolipidemic and anti-oxidant properties of astaxanthin-rich extract from *Haematococcus pluvialis* in apolipoprotein E knockout mice.

- Northeast Functional Foods Forum, Beltsville, MD, May 2010.

Title: Biological functions of blue-green algae: Safety and potential health benefits in the prevention of atherosclerosis.

- Nebraska Gateway for Nutrigenomics, University of Nebraska-Lincoln, March 2010.

Title: Regulation of ATP-binding cassette transporters by fatty acids.

- Department of Nutritional Sciences, University of Connecticut, December 2009.

Title: Regulation of ATP-binding cassette transporters by fatty acids.

- Experimental Biology Meeting, San Diego, California, April 2008.

Title: *Nostoc commune* var *sphaeroides* Kutzinger, a blue-green alga, lowers plasma cholesterol levels by promoting fecal neutral sterol excretion in mice.

- NIH National Heart, Lung and Blood Institute (NHLBI), Bethesda, MD, February 2008.

Title: Evaluation of high-density lipoprotein metabolism in obesity-related insulin resistance.

- International Symposium on Health and Human Ecology, Pusan National University, South Korea, November 2007.
Title: High-density lipoprotein for heart protection.
- Department of Food and Nutrition, Pusan National University, South Korea, November 2007.
Title: Unveiling pathways for high-density lipoprotein formation.
- OLLI meeting, Lincoln, Nebraska, February 2006.
Title: From genetics to the prevention of heart disease.
- Molecular and Cellular Pathobiology Department Seminar, Wake Forest University School of Medicine, Winston-Salem, North Carolina, June 2005.
Title: Potential role of ATP-binding cassette transporter A1 (ABCA1) in inflammation.
- Experimental Biology meeting, San Diego, California, April 2005.
Title: Lipidation attenuates the role of apolipoprotein A-I as an acceptor in ATP-binding cassette A1 (ABCA1)-mediated efflux of cellular lipids.
- Department of Biology, Creighton University, Omaha, Nebraska, October 2001.
Title: Independent regulation of dietary fatty acids in cholesterol metabolism.

Service to the profession

- Grant reviewer, University of Nebraska-Lincoln, April 2019.
- Grant reviewer, Diabetes Research Center at the University of Washington, May 2018.
- 2016 UNESCO Creative Cities Jeonju Forum, October 2016, Jeonju, South Korea
Discussion panel, “The Essence of Jeonju Food-the Science behind its International Application”
- University of Massachusetts-Amherst USDA Hatch review, June 2016.
- Chair for “Dietary bioactive components of medicinal, functional and whole foods” minisymposium, American Society for Nutrition, Experimental Biology, March 2015.
- Member, Science Committee, Korean Nutrition Society, January 2013-present.
- Chair for “Dietary bioactive components of medicinal, functional and whole foods (including probiotics and fermented foods)” minisymposium, American Society for Nutrition, Experimental Biology, April 2013.
- Judge for poster competition at Bioactive components RIS, American Society for Nutrition, Experimental Biology, April 2013.
- Co-chair for “Cardiovascular Effects of Dietary Bioactive Components” minisymposium, American Society for Nutrition, Experimental Biology, April 2012.
- Judge for poster competition at Bioactive components RIS, American Society for Nutrition, Experimental Biology, April 2012.
- Co-chair for Gene-Nutrient Interaction mini-symposium, American Society for Nutrition, Experimental Biology, April 2009.
- Judge for poster competition at Gene-Nutrient Interaction RIS, American Society for Nutrition, Experimental Biology, April 2009.
- Ad hoc reviewer for Journal of Nutrition, British Journal of Nutrition, European Journal of Nutrition, Nutrients, Nutrition Research, Nutrition Review, American Journal of Physiology, Hormone and Metabolic Research, Food and Toxicology, Lipids, Genes and Nutrition, Food and Function, Marine Drugs, Scientific Reports.

ACADEMIC SERVICE

University level

- Reviewer, IDEA grant competition, University of Connecticut, Spring 2020.
- Member, Radiation Safety Committee, University of Connecticut, April 2015 – Present.
- Member, Animal Care Advisory Council, University of Connecticut, August 2019 – Present.
- Reviewer, IDEA grant competition, University of Connecticut, Spring 2019.
- Established the Service Agreement between Kyung Hee University and the UConn for the summer program (20 students from KHU to UConn starting from Summer 2018).
- Faculty Search Committee for Boehringer Ingelheim Endowed Chair, Department of Pharmaceutical Sciences, University of Connecticut, Spring 2018.
- Co-chair, UConn Research Excellence Program grant review, Spring 2017.
- Faculty Search Committee for Boehringer Ingelheim Endowed Chair, Department of Pharmaceutical Sciences, University of Connecticut, Fall 2015 – May 2016.
- Reviewer, Internal selection of the 2018 Johnson & Johnson WiSTEM2D, October 2017.
- Alternate member, The Graduate Faculty Council, University of Connecticut, August 2015 – December 2018.
- Member, University Research Advisory Committee, University of Connecticut, October 2013 – May 2017.
- Member, Institutional Biosafety Committee, University of Connecticut, October 2012 – December 2016.
- Co-chair, UConn Research Excellence Program grant review, Spring 2016.
- Reviewer, The Fall 2013 UConn faculty large grant competition, Fall 2013.
- Alternate member, IACUC, University of Nebraska-Lincoln, January 2009 – June 2010.

College level

- Reviewer, USDA Hatch/Multistate Hatch Capacity grant, Spring 2020.
- Member, Strategic Communications Committee, August 2019 – Present.
- Reviewer, USDA Hatch/Multistate Hatch Capacity grant, Spring 2019.
- Reviewer, USDA Hatch/Multistate Hatch Capacity grant, Spring 2018.
- Judge, CAHNR Graduate Student Research Forum, March 2018.
- Faculty Advisory Council, College of Agriculture and Natural Resources, University of Connecticut, January 2015 Fall – Present.
- Research Advisory Council, College of Agriculture and Natural Resources, University of Connecticut, January 2011 – December 2018.
- Participated in NIH Research Grant Workshop, Spring 2016.
- Hatch Reviewer, Spring 2015.
- Academic Planning Committee, College of Agriculture and Natural Resources, University of Connecticut, April 2013 – Fall 2014.
- Sustainability Sciences Working Group, College of Agriculture and Natural Resources, University of Connecticut, January 2014 – May 2015.
- USDA Hatch proposal review, Spring 2014.
- Ad hoc review committee on grant writing workshop proposals, Spring 2013.
- Poster presentation judge, College of Agriculture and Natural Resources Graduate Research Forum, University of Connecticut, April 6, 2013.
- Oral presentation judge, College of Agriculture and Natural Resources Graduate Research Forum, University of Connecticut, March 24, 2012.
- Hatch Reviewer, Spring 2011.

- Excellence Committee, College of Agriculture and Natural Resources, University of Connecticut, January 2011 – May 2011.
- Technology committee member, College of Education and Human Sciences, University of Nebraska-Lincoln, September 2007 – June 2010.
- Coordinator for scholarly relationship between College of Education and Human Sciences at University of Nebraska-Lincoln and College of Ecology at Pusan National University, South Korea, August 2006-August 2008.

Department level

- PTR Committee, Department of Nutritional Sciences, University of Connecticut, AY 2017-2018.
- Merit Advisory Committee, Department of Nutritional Sciences, University of Connecticut, AY 2017-2018.
- Chair, Faculty Development Committee, Department of Nutritional Sciences, University of Connecticut, Jan 2011 – present.
- Merit Advisory Committee, Department of Nutritional Sciences, University of Connecticut, AY 2016-2017.
- PTR Committee, Department of Nutritional Sciences, University of Connecticut, AY 2015-2016.
- Merit Advisory Committee, Department of Nutritional Sciences, University of Connecticut, AY 2014-2015.
- Chair, PTR Committee, Department of Nutritional Sciences, University of Connecticut, AY 2014-2015.
- Merit Advisory Committee, Department of Nutritional Sciences, University of Connecticut, AY 2013-2014.
- PTR Committee, Department of Nutritional Sciences, University of Connecticut, AY 2013-2014.
- Merit Advisory Committee, Department of Nutritional Sciences, University of Connecticut, AY 2012-2013.
- PTR Committee, Department of Nutritional Sciences, University of Connecticut, AY 2012-2013.
- Chair, Faculty Search Committee for 2 positions, Department of Nutritional Sciences, University of Connecticut, Fall 2012 – May 2013.
- Coordinator, Department Seminar, Department of Nutritional Sciences, University of Connecticut, Aug 2011 – Fall 2013.
- Member, Graduate Program Committee, Department of Nutritional Sciences, University of Connecticut, Aug 2010 – present.
- Merit Advisory Committee, Department of Nutritional Sciences, University of Connecticut, AY 2011-2012.
- PTR Committee, Department of Nutritional Sciences, University of Connecticut, AY 2011-2012.
- PTR Committee, Department of Nutritional Sciences, University of Connecticut, AY 2010-2011.
- Merit Advisory Committee, Department of Nutritional Sciences, University of Connecticut, AY 2010-2011.
- CANR Orientation, Department of Nutritional Sciences, University of Connecticut, 2 meetings for each summer from 2011.
- Graduate Admission Committee, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, July 2009 – June 2010.
- Editor for Department Newsletter, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, January 2008 – May 2010.

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- Undergraduate Curriculum committee member, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, October 2008 – June 2010.
 - Chair's advisory council member, Department of Nutrition and Health Sciences, University of Nebraska-Lincoln, September 2007 – July 2009.
 - Search committee member, Horticultural molecular geneticist faculty position, Department of Agronomy and Horticulture, University of Nebraska-Lincoln, March 2008.