

# KIMBERLY K. BUHMAN, PhD

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May 2023

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## Education

PhD	1999	Nutrition Science	Purdue University, West Lafayette, IN Mentor: Dr. Jon A. Story Dissertation Title: Understanding Molecular Mechanisms Involved in the Cholesterol Reducing Action of Dietary Psyllium in Rats
BS	1992	Agricultural Biochemistry	Iowa State University, Ames, IA Honors Mentor: Dr. Donald C. Beitz

## Professional Experience

2018 – Present	Full Professor (Tenured)	Purdue University, Department of Nutrition Science
2021 – 2022	Interim Associate Dean for Research	Purdue University, College of Health and Human Sciences
2019 – 2021	Associate Department Head	Purdue University, Department of Nutrition Science
2011 – 2018	Associate Professor (Tenured)	Purdue University, Department of Nutrition Science
2005 – 2011	Assistant Professor (Tenure-track)	Purdue University, Department of Food and Nutrition (department changed name to Nutrition Science in 2010)
2002 – 2005	Postdoctoral Research Fellow	Washington University School of Medicine, St. Louis, MO Mentors: Dr. Jean E. Schaffer and Dr. Nicholas O. Davidson
1999 – 2002	Postdoctoral Research Fellow	Gladstone Institute of Cardiovascular Disease, University of California-San Francisco, CA Cardiovascular Research Institute (CVRI) NIH T32 Molecular Basis of Cardiovascular Disease Fellow Mentor: Dr. Robert V. Farese Jr.
1994 – 1999	Research and Teaching Assistant	Purdue University, Department of Foods and Nutrition, Mentor: Dr. Jon A. Story (RA) and Dr. James Daniel (TA for Food Chemistry)
1993 – 1994	Research Assistant	Purdue University, Department of Pharmacology and Toxicology, Mentor: Dr. Jennifer Martin
1992 – 1993	Research Assistant	University of Wisconsin-Madison, Department of Biochemistry, Mentor: Dr. Alan Attie
1990 – 1992	Undergraduate Research Assistant	Iowa State University, Department of Animal Science Mentor: Dr. Donald C. Beitz
1988 – 1990	Undergraduate Research Assistant	Iowa State University, Meats Laboratory (Analytical Laboratories)
1990 & 1991	Undergraduate Summer Intern	Kraft General Foods, Department of Nutrition Toxicology and Health Mentor: Dr. Peter Huth
1987	High School Summer Intern	Women in Science and Engineering Program, Iowa State University, Mentor: Dr. Pamela J. White

## Leadership Experience

Diversity Equity and Inclusion Director, *Department of Nutrition Science, Purdue University (2022- present)*

As director, I serve as chair of the nutrition science diversity, equity, and inclusion committee (4 faculty, 1 staff, 1 graduate student, 1 undergraduate student members). I also serve as the representative from Nutrition Science to the College of Health and Human Sciences Diversity, Equity, and Inclusion Committee. My activities have included: advice and support of the development of a scholarship to promote diversity, equity and inclusion in dietetics for the new, Purdue

Masters in Dietetics Program, support for faculty search committees to identify mechanisms for recruiting diverse applicant pools, support for the graduate program in recruitment of diverse applicant pools, support for department social media sharing of content representing diversity, equity, and inclusion, support for recruitment and yield events for undergraduate students, review of diversity, equity, and inclusion awards and scholarships/fellowships, and work with an interdisciplinary team with a focus on mitigating food insecurity on campus.

Interim Associate Dean for Research, *College of Health and Human Sciences, Purdue University (2021 – 2022)*

The College of Health and Human Sciences is the third largest college at Purdue University and includes nine academic units: Health and Kinesiology; Health Sciences; Hospitality and Tourism Management; Human Development and Family Studies; Nursing; Nutrition Science; Psychological Sciences; Public Health; and Speech, Language and Hearing Sciences. In 2021, HHS received \$39 million in research and sponsored program awards from the Department of Health and Human Services, the National Science Foundation, the Department of Defense, the Institute for Education Sciences, the U.S. Department of Agriculture, private foundations, and non-profit and state organizations. As interim associate dean for research, I oversaw and promoted the research mission of the college. I worked with faculty to identify new individual and collaborative funding opportunities and work to facilitate new research partnerships. I served as liaison to the Office of the Executive Vice President for Research and Partnerships and other university offices, as a member of the college leadership team, and as lead of the college Research Advisory Council. My responsibilities included coordinating college-level research events, administering and coordinating competitions for research grants and awards, advising faculty on the preparation of external grant applications, leading the launch of three, college-wide signature areas for the promotion of college identity and community for research activity, coordinating opportunities for students and faculty in undergraduate research, and working with college communications to highlight research activity.

Graduate Program Director, *Interdepartmental Nutrition Program, Purdue University (2018 – 2021)*

The Interdepartmental Nutrition Program is an interdisciplinary training program, from 2018 -2021 the program included approximately 40 graduate students studying nutrition science at Purdue University and 40 faculty members from several departments. As director, I served as chair of the liaison committee, executive committee, education committee and admissions committee. I also served as the representative from Nutrition Science to the College of Health and Human Sciences Graduate Education, Policy, and Curriculum Committee and to the Office of Interdisciplinary Graduate Programs at Purdue University. My responsibilities included faculty membership, curriculum and policy development, faculty and student issues (mediate personnel issues, support students in advisor transitions, etc.), tracking student progress in program, administrative oversight for plan of study, prelim exams, and final exams, supporting diversity, equity and inclusion as it relates to graduate education, recruitment and admissions, awards and fellowships, graduate student offer letters, teaching assistant assignments, departmental scholarships, international student support, professional development, program communication, student internships, mentoring new graduate faculty, maintaining program handbook and website, and supporting the development of a new MS program in dietetics.

Associate Department Head, *Department of Nutrition Science, Purdue University (2019 – 2021)*

At this time, the Department of Nutrition Science at Purdue University had 16 tenure-track faculty, 3 clinical faculty, 4 lecturers, 20 staff members, 3 post-doctoral scientists, 40 graduate students, and approximately 275 undergraduate students. I served as associate head for two years during a leadership transition where the department had an external, interim department head and during a pandemic. Together with the interim head and departmental committees, we developed departmental policies that previously did not exist including a workload policy, access to space policy, courtesy/adjunct faculty policy, faculty mentoring policy and department bylaws. I represented the department at the Association for Nutrition Departments and Programs to learn about issues relevant to nutrition science departments across the country. I promoted the department to prospective students, current students and their families, and alums (served as faculty liaison for the department alumni group board of directors). I on-boarded and off-boarded faculty and departmental staff. I supported the interim head in teaching assignments, service assignments, space and equipment management, departmental budget, and personnel matters when they required field of nutrition content knowledge.

Chair of the Undergraduate Education, Policy, and Curriculum Committee, *Department of Nutrition Science, Purdue University (2014-2018)*

In this role, I was responsible for administrative oversight of nutrition courses and curriculums in Nutrition Science including development and assessment of learning outcomes for courses and undergraduate majors. I addressed undergraduate student issues by listening to student concerns and implementing change when appropriate. I worked with

academic advisors to ensure students received appropriate and relevant information. I enhanced “outside the classroom” opportunities for undergraduate students (study abroad, undergraduate research, honors program, learning communities, clubs, etc.) In addition, I developed tools and resources and participated in undergraduate student recruitment events. I coordinated awards for undergraduate students and outstanding teaching.

## Honors and Awards

2022	Provost’s Award for Outstanding Graduate Mentoring <i>University-wide award for sustained and significant contributions to graduate mentoring presented by the Purdue Graduate School.</i>
2022	College of Health and Human Sciences Outstanding Graduate Faculty Mentor Award <i>Awarded to faculty for sustained and significant contributions to the college’s graduate programs.</i>
2020 – 2021	Big Ten Academic Alliance Leadership Program <i>This intensive program aims to develop the leadership and managerial skills of faculty who have demonstrated exceptional ability and academic promise.</i>
2017	Purdue University Teaching Academy, Member <i>Membership in the Teaching Academy recognizes outstanding and scholarly teaching in the graduate, undergraduate, or engagement programs of Purdue University.</i>
2016	Outstanding Undergraduate Teaching Award, Department of Nutrition Science, Purdue University
2013	E.L.R. Stokstad Award, American Society for Nutrition <i>This award is given for outstanding fundamental research in nutrition, with preference to scientists at relatively early stages in their careers.</i>
2005	Dannon Nutrition Leadership Institute <i>Designed to equip outstanding early-career nutrition scientists with the leadership skills and broad perspective necessary to achieve their professional potential and lead others in both their place of employment and in the field of nutrition.</i>
2002 – 2003	Gastroenterology Postdoctoral Fellowship, Washington University St. Louis (NIH National Research Service Award Institutional Research Training Grant T32)
1999 – 2002	Cardiovascular Research Institute Postdoctoral Fellowship, University of California, San Francisco (NIH National Research Service Award Institutional Research Training Grant T32)
1999	Norma H. Compton Outstanding Doctoral Student Award, College of Consumer and Family Sciences, Purdue University
1998	Ada Decker Mallott Scholarship
1997	Kappa Omicron Nu Honor Society
1997 – 1998	Purdue Research Foundation Fellowship
1995 – 1996	Andrews Doctoral Fellowship, Purdue University
1990	Phi Kappa Phi Honor Society
1990	Dexter French Scholarship, Department of Biochemistry, Iowa State University
1990	Margaret Weatherspoon and the Program for Women in Science and Engineering Scholarship, Iowa State University
1988-1989	Women in Science and Engineering Scholarship, Iowa State University

## Scientific, Professional, and Academic Memberships

### National

1996 – Present	American Society for Nutrition
2001 – Present	American Heart Association
2009 – Present	American Society for Biochemistry and Molecular Biology
2012 – 2022	American Diabetes Association
2008 – 2013	Kappa Omicron Nu, <i>Faculty Advisor (2008-2013)</i>
2006 – 2013	Sigma Xi

### Purdue University

2005 – Present	Interdepartmental Nutrition Program (graduate program)
2005 – Present	Ingestive Behavior Research Center
2005 – 2015	Cancer Prevention, Chemoprevention & Control, Oncological Sciences Center
2006 – 2018	Purdue Universities Life Science (PULSe) (graduate program)

2013 – Present	Women’s Global Health Institute
2014 – Present	Indiana Diabetes Research Center at Indiana University School of Medicine
2016 – Present	Purdue Institute for Inflammation, Immunology and Infectious Disease
2018 – Present	Purdue Institute for Drug Discovery

## DISCOVERY

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Web of Science Researcher ID AAV-3111-2021

As of 05/03/2023 [Google Scholar](#): Buhman Citations: 6264, h-index: 36, i10-index: 54

[My NCBI Bibliography](#)

### 1. Published Work

#### a. Peer-Reviewed Primary Research Articles (\*graduate students and \*\*undergraduate students with Buhman as primary mentor)

1. Syed-Abdul, M.M., Stahel, P., Zembroski, A., Tian, L., Xiao, C., Nahmias, A., Bookman, I. **Buhman K.K.**, Lewis, G. F. (2023) Glucagon-like peptide-2 acutely enhances chylomicron secretion in humans without mobilizing cytoplasmic lipid droplets. *The Journal of Clinical Endocrinology & Metabolism*. PMID: [36458872](#)
2. Kim, SQ, Mohallen R., Franco, J., **Buhman, K.K.**, Kim, K-H, Aryal, U.K. (2022) Global landscape of protein complexes in postprandial-state livers from diet-induced obese and lean mice. *Biochemical and Biophysical Research Communications*. 629:40-46. PMID: [36099783](#)
3. Kim, SQ, Mohallen R., Franco, J., **Buhman, K.K.**, Aryal, U.K. (2022) Multi-omics approach reveals dysregulation of protein phosphorylation correlated with lipid metabolism in mouse fatty liver. *Cells*. 11(7):1172. PMID: [35406736](#)
4. Abdollahi, A., Dowden, B.N., **Buhman, K.K.**, Zembroski, A.S.\*, Henderson, G.C. (2022) Albumin knockout mice exhibit reduced plasma free fatty acid concentration and enhanced insulin sensitivity. *Physiological Reports*. 10(5) e15161. PMID: [35238481](#)
5. Zembroski, A.S.\*, Xiao, C., **Buhman, K.K.** (2021) The roles of cytosolic lipid droplets in modulating intestinal uptake of dietary fat. *Annual Review of Nutrition*. 41:79-104. PMID: [34283920](#)
6. Zembroski, A.S.\*, Andolino, C., **Buhman, K.K.**, Teegarden, D. (2021) Proteomic characterization of cytoplasmic lipid droplets in human metastatic breast cancer cells. *Frontiers in Oncology*. 11:1989. PMID: [34141606](#)
7. Zembroski, A.S.\*, D’Aquila, T.D.\*, **Buhman, K.K.** (2021) Characterization of cytoplasmic lipid droplets in each region of the small intestine of lean and diet-induced obese mice in the response to dietary fat. *American Journal of Physiology—Gastrointestinal and Liver Physiology*. 321(1) G75-G86. PMID: [34009042](#)
8. Zembroski, A.S.\*, **Buhman, K.K.**, Aryal, U.K. (2021) Proteome and phosphoproteome characterization of liver in the postprandial state from diet-induced obese and lean mice. *Journal of Proteomics*. 232:104072. PMID: [33309929](#)
9. Suarez-Trujillo, A., Huff, K. Ferreira, C.R., Sobreira, T.J.P., **Buhman, K.K.**, Casey, T. (2020) High Fat diet induced obesity increases proportion of linoleic acyl residues in dam serum and milk and in suckling neonate circulation. *Biology of Reproduction*. 103(4):736-749. PMID: [32542328](#)
10. Suarez- Trujillo, A., Chen, Y., Aduwari, C., Cummings, S., Kuang, S., **Buhman, K.K.**, Paschoal Sobreira, T.J., Aryal, U.K., Plaut, K., and Casey, T. (2019) Maternal high fat diet exposure during gestation, lactation, or gestation and lactation differentially affects intestinal morphology and proteome of neonatal mice. *Nutrition Research*. 66:48-60. PMID: [31051321](#)
11. D’Aquila, T.D.\*, Zembroski, A.\*, and **Buhman K.K.** (2019). Diet Induced Obesity Alters Intestinal Cytoplasmic Lipid Droplet Morphology and Proteome in the Postprandial Response to Dietary Fat. *Frontiers in Fatty Acid and Lipid Physiology*. 10:180. PMID: [30890954](#)
12. Xiao C., Stahel, P., Carreiro, A.L.\*, Hung, Y.H.\*, Dash, S., Bookman, I. **Buhman, K.K.** and Lewis, G.F. (2019) Oral glucose mobilizes triglyceride stores from human intestine. *Cellular and Molecular Gastroenterology and Hepatology*. 7(2):313-337. PMID: [30704982](#)
13. Hung, Y.H.\* and **Buhman, K.K.** (2019) Dgat1 deficiency disrupts lysosome function in enterocytes during dietary fat absorption. *Biochimica et Biophysica Acta (BBA) – Molecular and Cell Biology of Lipids*. 1864(4):587-595. PMID: [30342099](#)
14. Xiao C., Stahel, P., Carreiro, A.L.\*, **Buhman, K.K.** and Lewis, G.F. (2018) Recent advances in triacylglycerol mobilization by the gut. *Trends in Endocrinology and Metabolism*. 29(3):151-163. PMID: [29306629](#)

15. Hung, Y.H.\*, Carreiro, A.L.\*, and **Buhman, K.K.** (2017) Dgat1 and Dgat2 regulate enterocyte triacylglycerol distribution and alter proteins associated with cytoplasmic lipid droplets in response to dietary fat. *Biochimica et Biophysica Acta (BBA) – Molecular and Cell Biology of Lipids*. 1862(6):600-614. PMID: [28249764](#)
16. Wilmanski, T., **Buhman, K.**, Donkin, S., Burgess, J., and Teegarden, D. (2016) 1 $\alpha$ , 25-Dihydroxyvitamin D inhibits *de novo* fatty acid synthesis and lipid accumulation in metastatic breast cancer cells through downregulation of pyruvate carboxylase. *Journal of Nutritional Biochemistry*. 40:194-200. PMID: [27936456](#)
17. Vickman, R.E., Crist, S.A., Kerian, K., Eberlin, L., Cooks, R.G., Burcham, G.N., **Buhman, K.K.**, Hu, C.D., Mesecar, A.D., Cheng, L., and Ratliff, T.L. (2016) Cholesterol sulfonation enzyme, SULT2B1b, modulates AR and cell growth properties in prostate cancer. *Molecular Cancer Research*. 14(9):776-86. PMID: [27341831](#)
18. Redan, B.W., **Buhman, K.K.**, Novotny, J.A., Ferruzzi, M.G. (2016) Altered transport and metabolism of phenolic compounds in obesity and diabetes: Implications for functional food development and assessment. *Advances in Nutrition*. 7(6):1090-1104. PMID: [28140326](#)
19. D’Aquila, T.D.\*, Hung Y.\*, Carreiro, A.\*, and **Buhman, K.K.** (2016) Recent discoveries on absorption of dietary fat: Presence, synthesis, and metabolism of cytoplasmic lipid droplets within enterocytes. *Biochimica et Biophysica Acta (BBA) – Molecular and Cell Biology of Lipids*. 1861(8 PtA):730-47. PMID: [27108063](#)
20. Arentson-Lantz, E.J.\*, Zou, M., Teegarden, D., **Buhman, K.K.**, and Donkin, S.S. (2016) Maternal high fructose and low-protein consumption during pregnancy and lactation share some but not all effects on early-life growth and metabolic programming of rat offspring. *Nutrition Research*. 36(9):937-46. PMID: [27632913](#)
21. Wilmanski, T., Barnard, A. Parikh, M. R., Kirshner, J., **Buhman, K.**, Burgess, J., and Teegarden, D. (2016) 1 $\alpha$ , 25-Dihydroxyvitamin D inhibits the metastatic capability of MCF10CA1a and MDA-MB-231 cells in an in vitro model of breast to bone metastasis. *Nutrition and Cancer*. 68(7):1202-9. PMID: [27552186](#)
22. Bowman, T.A., O’Keeffe, K., D’Aquila, T.D.\*, Yan, Q. W., Griffin, J.D., Killion, E.A., Mashek, D.G., **Buhman, K. K.**, and Greenberg, A.S. (2016) Acyl CoA synthetase 5 (ACLS5) ablation in mice increases energy expenditure and insulin sensitivity and delays fat absorption. *Molecular Metabolism*. 5(3):210-20. PMID: [26977393](#)
23. D’Aquila, T.D.\*, Sirohi, D., Grabowski, J.M., Hedrick, V.E., Paul, L.N., Greenberg, A.S., Kuhn, R.J., and **Buhman, K.K.** (2015) Characterization of the proteome of cytoplasmic lipid droplets in mouse enterocytes after a dietary fat challenge. *PLOS ONE*. 10 (5):e0126823. PMID: [25992653](#)
24. Kim, C.Y., Zhu, Y., **Buhman, K.K.**, and Kim K.H. (2015) Dietary selenate attenuates adiposity and improves insulin sensitivity in high-fat diet-induced obese mice. *Journal of Functional Foods*. 17:33-42.
25. Lee, H.J., Zhang, W., Zhang, D., Yang, Y., Liu, B., Barker, E.L., **Buhman, K.K.**, Slipchenko, L.V., Dai, M., and Cheng, J.X. (2015) Assessing cholesterol storage in live cells and *C. elegans* by stimulated Raman scattering imaging of phenyl-diyne cholesterol. *Scientific Reports*. 5:7930. PMID: [25608867](#)
26. Hung Y.\*, Linden, M.A., Gordon, A.\*\*\*, Rector, R.S., and **Buhman, K.K.** (2015) Endurance exercise training programs intestinal lipid metabolism in a rat model of obesity and type 2 diabetes. *Physiological Reports*. 3:1. PMID: [25602012](#)
27. Arentson-Lantz, E.J.\*, **Buhman, K.K.**, Ajuwon K., Donkin, S.S. (2014) Excess pregnancy weight gain leads to early indications of metabolic syndrome in a swine model of fetal programming. *Nutrition Research*. 34(3):241-9. PMID: [24655491](#)
28. Uchida, A.\*, Slipchenko, M.N., Eustaquio, T., Leary, J.F., Cheng, J-X., and **Buhman, K.K.** (2013) Intestinal acyl-CoA:diacylglycerol acyltransferase 2 overexpression enhances postprandial triglyceridemic response and exacerbates high fat diet-induced hepatic triglyceride storage. *Biochimica et Biophysica Acta – Molecular and Cell Biology of Lipids*. 1831(8):1377-85. PMID: [23643496](#)
29. Wilfling, F., Wang, H., Haas, J.T., Krahrmer, N., Gould, T., Uchida, A.\*, Cheng, J-X., Graham, M., Christiano, R., Frohlich, F., Liu, X., **Buhman, K.K.**, Coleman, R.A., Bewersdorf, J., Farese, R.V. Jr., and Walther, T.C. (2013) Triacylglycerol synthesis enzymes mediate lipid droplet growth by relocating from the ER to lipid droplets. *Developmental Cell*. 24(4):384-99. PMID: [23415954](#)
30. Uchida, A.\*, Lee H.J., Cheng, J.X., and **Buhman, K.K.** (2013) Imaging cytoplasmic lipid droplets in enterocytes and assessing dietary fat absorption. *Methods in Cell Biology*. 116:151-166. PMID: [24099292](#)
31. Uchida, A.\*, Whitsitt, M.C.\*, Eustaquio, T., Slipchenko, M.N., Leary, J.F., Cheng, J.X., and **Buhman K.K.** (2012) Reduced triglyceride secretion in response to an acute dietary fat challenge in obese compared to lean mice. *Frontiers in Fatty Acid and Lipid Physiology*. 3:1-10. PMID: [22375122](#)

32. Antalis, C.J., Uchida, A.\*, **Buhman, K.K.**, and Siddiqui, R.A. (2011) Migration of MDA-MB-231 breast cancer cells depends on the availability of exogenous lipids and cholesterol esterification. *Clinical & Experimental Metastasis*. 28(8):733-41. PMID: [21744083](#)
33. Adapala, V., **Buhman, K.**, and Ajuwon, K. (2011) Novel anti-inflammatory role of SLPI in adipose tissue and its regulation by high fat diet. *Journal of Inflammation*. 8:5. PMID: [21356117](#)
34. Uchida, A.\*, Slipchenko, M.N., Cheng, J-X., and **Buhman, K.K.** (2011) Fenofibrate (FEN), a peroxisome proliferator activated receptor alpha (PPAR $\alpha$ ) agonist, decreases dietary fat absorption and alters triglyceride (TG) metabolism in enterocytes of mice. *Biochimica et Biophysica Acta (BBA) – Molecular and Cell Biology of Lipids*. 1811(3):170-6. PMID: [21215818](#)
35. McLamore, E.S., Shi, J., Jaroch, D., Claussen, J.C., Uchida, A.\*, Jiang, Y., Zhang, W., Donkin, S.S., Banks, K., **Buhman, K.K.**, Teegarden, D., Rickus, J.L., and Porterfield, D.M. (2011) A self-referencing platinum nanoparticle decorated enzyme-based microbiosensor for real time measurement of physiological glucose transport. *Biosensors and Bioelectronics*. 26(5):2237-45. PMID: [20965716](#)
36. Lee, B.\* , Zhu, J., Fast, A.\*\* , Cheng, J-X., and **Buhman K.K.** (2010) Intestine specific expression of acylCoA: diacylglycerol acyltransferase 1 (DGAT1) reverses the resistance to diet-induced hepatic steatosis and obesity in *Dgat1*<sup>-/-</sup> mice. *Journal of Lipid Research*. 51(7):1770-80. PMID: [20147738](#)
37. Antalis, C.J., Arnold, T., Rasool, T., Lee, B-G.\* , **Buhman, K.K.** and Siddiqui, R.A. (2009) High ACAT1 expression in estrogen receptor negative basal-like breast cancer cells is associated with LDL-induced proliferation. *Breast Cancer Research and Treatment* 122(3):661-70. PMID: [19851860](#)
38. Lee, B-G.\* , Zhu, J., Wolins, N., Cheng J-X., and **Buhman K.K.** (2009) Differential association of Adipophilin and TIP47 proteins with cytoplasmic lipid droplets in mouse enterocytes during dietary fat absorption. *Biochimica et Biophysica Acta – Molecular and Cell Biology of Lipids*. 1791(12):1173-80. PMID: [19698802](#)
39. Zhu, J., Lee, B-G.\* , **Buhman K.K.**, and Cheng J-X. (2009) Direct observation of a dynamic triglyceride pool in mouse enterocytes during dietary fat absorption by coherent anti-stokes Raman scattering imaging. *Journal of Lipid Research*. 50(6):1080-9. PMID: [19218555](#)
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42. Li, J., Byrne, M.E., Chang, E., Donkin, S.D., **Buhman, K.K.**, Burgess, J.R., and Teegarden, D. (2008) 1 $\alpha$ ,25-dihydroxyvitamin D hydroxylase in adipocytes. *The Journal of Steroid Biochemistry and Molecular Biology*. 112(1-3):122-6. PMID: [18840526](#)
43. Siddiqui, S.M.K., Chang, E., Li, J., Burlage, C., Zhou, M., **Buhman, K.K.**, Koser, S., Donkin, S.S., and Teegarden, D. (2008) Dietary intervention with vitamin D, calcium and whey protein reduced fat mass and increased lean mass in rats. *Nutrition Research*. 28(11):783-90. PMID: [19083488](#)
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45. Borradaile, N.M., **Buhman, K.K.**, Listenberger, L.L., Magee, C.J., Morimoto, E.T., Ory, D.S., and Schaffer, J.E. (2006) A critical role for eukaryotic elongation factor 1A-1 in lipotoxic cell death. *Molecular Biology of the Cell*. 17:770-778. PMID: [16319173](#)
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50. Willner, E.L., Tow, B., **Buhman, K.K.**\* Wilson, M., Sanan, D.A., Rudel, L.L., and Farese, R.V., Jr. (2003) Deficiency of acyl CoA:cholesterol acyltransferase 2 prevents atherosclerosis in apolipoprotein E-deficient mice. *Proceedings of the National Academy of Science USA*. 100:1262-1267. PMID: [12538880](#)
51. Chen, H.C., Stone, S.J., Zhou, P., **Buhman, K.K.**, and Farese, R.V., Jr. (2002) Dissociation of obesity and impaired glucose disposal in mice overexpressing acyl coenzyme A:diacylglycerol acyltransferase 1 in white adipose tissue. *Diabetes*. 51:3189-3195. PMID: [12401709](#)
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## b. Book Chapters

1. Zembroski, A.S.\* and **Buhman, K.K.** (2019) Regulation of Intracellular Lipid Storage and Utilization. *Lipid Signaling and Metabolism*. Elsevier Inc. 131-156. [ISBN 9780128194041](#)
2. Carreiro, A.L.\* and **Buhman, K.K.** (2019) Absorption of Dietary Fat and Its Metabolism in Enterocytes. *The Molecular Nutrition of Fats*. Elsevier Inc. 33-48. [ISBN 9780128112977](#).
3. **Buhman, K.K.** (2012) Visualization of dietary fat absorption by CARS. *Coherent Raman Scattering Microscopy*. CRC Press. ISBN 9781439867655.
4. Antalis, C. and **Buhman, K.K.** (2012) Lipoproteins and Cancer. *Lipoproteins - Role in Health and Disease*. InTech. [ISBN 9789535107736](#).

## c. Published Abstracts

1. Andolino, C., **Buhman, K.K.**, Teegarden, D. (2023) Differing cytoplasmic lipid droplet proteomes from vehicle-treated and fatty acid synthase-inhibited metastatic breast cancer cells generates novel, testable hypotheses. American Society for Mass Spectrometry Conference on Mass Spectrometry and Allied Topics.
2. Zhu, Y., Griffin, J., **Buhman, K.K.**, Greenberg, A. (2022) The interaction between intestinal ACSL5 expression and gut microbiota in mice fed a high fat diet. *Current Developments in Nutrition*. 6(Supplement\_1):1098-1098.

3. Andolino, C., **Buhman, K.K.**, Teegarden, D. (2022) Increased Fatty Acid Synthesis and Catabolism Supports Metastatic Breast Cancer Cell Migration. *The Federation of American Societies for Experimental Biology (FASEB) Journal*.
4. Abdollahi, A; Dowden B.N., Zembroski, A.S.\*, **Buhman, K.K.**, Henderson G.C. (2022) Lack of serum albumin improves insulin sensitivity in both male and female mice. *The Federation of American Societies for Experimental Biology (FASEB) Journal*. 36(S1)
5. Andolino, C., Asher, J., Zembroski, A.S.\*, **Buhman, K.K.**, Teegarden, D. (2020) Differences in lipid metabolism between non-metastatic and metastatic breast cancer cells. *Cancer Research*. 80 (16 Supplement): 3744-3744.
6. Zembroski, A.S.\*, Andolino, C., **Buhman, K.K.**, Teegarden, D. (2020) Proteomic characterization of cytoplasmic lipid droplets in human metastatic breast cancer cells. *Cancer Research*. 80 (16 Supplement): 5130-5130.
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#### d. Abstracts Presented at Conferences

1. Ghanem, M., Wang, R., Aryal, U.K., **Buhman K.K.**, Xiao, C. (2022) Regulation of cytoplasmic lipid droplet mobilization in intestinal enterocytes. Canadian Lipid and Vascular Summit. Whistler, British Columbia.
2. Andolino, C., **Buhman, K.K.** Teegarden, D. (2022) Lipid droplet proteome of metastatic and non-metastatic breast cancer cells. Federation of the American Societies of Experimental Biology Science Research Conference (FASEB SRC): Lipid Droplets in Health and Disease, Asheville, NC.
3. Andolino, C., Teegarden, D., **Buhman, K.K.** (2022) Increased Fatty Acid Synthesis and Catabolism Supports Metastatic Breast Cancer Cell Migration. Big Ten Academic Alliance for Lipids Conference, Champaign, IL
4. Zembroski, A.S.\*, Andolino, C., **Buhman, K.K.**, Teegarden, D. (2020) Proteomic characterization of cytoplasmic lipid droplets in human metastatic breast cancer cells. Federation of the American Societies of Experimental Biology Science Research Conference FASEB SRC on Lipid Droplets: Dynamic Organelles in Metabolism and Beyond, Virtual Conference.
5. Zembroski, A.S.\*, Hedrick, V., Aryal, U., and **Buhman, K.K.** (2019). Diet induced obesity influences proteome of liver and intestine in response to dietary fat. Bindley-Omics Conference, West Lafayette, IN.
6. Zembroski, A.S.\*, D'Aquila T.D.\*, and **Buhman, K.K.** (2019) Differential presence of proteins associated with cytoplasmic lipid droplets along the length of the intestine in lean and diet-induced obese mice after a fat challenge. Big Ten Academic Alliance – Lipids Conference, Minneapolis, MN.
7. Zembroski, A.S.\*, D'Aquila T.D.\*, and **Buhman, K.K.** (2018) Differential presence of proteins associated with cytoplasmic lipid droplets along the length of the intestine in lean and diet-induced obese mice after a fat challenge. Indiana Life Sciences Summit, Biocrossroads, Indianapolis, IN.
8. Zembroski, A.S.\*, D'Aquila T.D.\*, and **Buhman, K.K.** (2018) Differential presence of proteins associated with cytoplasmic lipid droplets along the length of the intestine in lean and diet-induced obese mice after a fat challenge. Big Ten Academic Alliance – Lipids Conference, West Lafayette, IN.
9. Carreiro, A.L.\*, Xiao, C., Dash, S., Hung, Y-H.\*, **Buhman, K.K.**, and Lewis, G.L. (2018) Oral Glucose Consumption Mobilizes Enterocyte Triglyceride (TG) Stores. Big Ten Academic Alliance – Lipids Conference, West Lafayette, IN.
10. Zembroski, A.S.\*, D'Aquila T.D.\*, and **Buhman, K.K.** (2017) Differential presence of proteins associated with cytoplasmic lipid droplets along the length of the intestine in lean and diet-induced obese mice after a fat challenge. Federation for the American Societies of Experimental Biology (FASEB) Scientific Research Conference (SRC) on Intestinal Lipid Metabolism and Transport, Snowmass CO.
11. Carreiro, A.L.\* and **Buhman, K.K.** (2017) Differences in the enterocyte cytoplasmic lipid droplet proteome in mice resistant versus susceptible to diet-induced obesity. FASEB SRC on Intestinal Lipid Metabolism and Transport, Snowmass CO.
12. Xiao, C., Dash, S., Carreiro, A.L.\*, Hung, Y-H.\*, **Buhman, K.K.**, and Lewis, G.L. (2017) Regulation of Lipid Metabolism from the Intestine: Lessons from Human Studies. FASEB SRC on Intestinal Lipid Metabolism and Transport, Snowmass CO.
13. Hung, Y-H.\*, Carreiro, A.L.\*, and **Buhman, K.** (2016) Deficiency in acyl CoA:diacylglycerol acyltransferase 1 (Dgat1) disrupts lipophagy in enterocytes during dietary fat absorption. FASEB SRC on Lipid Droplets: Dynamic Organelles in Metabolism and Beyond, Snowmass, CO.
14. Carreiro, A.L.\*, and **Buhman, K.K.** (2016) Acyl-CoA:diacylglycerol acyltransferase 1 (DGAT1) deficiency alters the enterocyte cytoplasmic lipid droplet proteome. FASEB SRC on Lipid Droplets: Dynamic Organelles in Metabolism and Beyond, Snowmass, CO.
15. D'Aquila, T.D.\* and **Buhman, K.K.** (2016) Diet induced obesity alters intestinal cytoplasmic lipid droplet morphology and associated proteins in response to a dietary fat challenge. FASEB SRC on Lipid Droplets: Dynamic Organelles in Metabolism and Beyond, Snowmass, CO.
16. D'Aquila, T.D.\*, Carreiro, A.L.\*, and **Buhman K.K.** (2015) Differential expression of enterocyte cytoplasmic lipid droplet proteins in response to a dietary fat challenge in lean and obese mice. Gordon Summer Research Conference on Molecular & Cellular Biology of Lipids, Waterville Valley, NH.

17. Hung, Y.\*, and **Buhman K.K.** (2015) The role of acyl CoA: diacylglycerol acyltransferase 1 and 2 in determining metabolic fates of dietary fat in enterocytes. Gordon Summer Research Conference on Molecular & Cellular Biology of Lipids, Waterville Valley, NH.
18. Vickman, R., Kerian, K. S., Burcham, G.N., Cooks, R. G., **Buhman K.K.**, Hu, C., Mesecar, A.D., Cheng, L., Crist, S.A., and Ratliff, T. (2015) Inhibition of Cholesterol Sulfotransferase (SULT) 2B1b Results in Impaired Prostate Cancer Cell Growth and Diminished Androgen Receptor Activity, Society for Basic Urologic Research Meeting, Fort Lauderdale, FL.
19. D'Aquila T.D.\* and **Buhman K.K.** (2014) Differential expression of enterocyte cytoplasmic lipid droplet proteins in response to a dietary fat challenge in lean and obese mice. FASEB SRC on Lipid Droplets in Saxton River, VT.
20. Hung, Y.\*, Linden, M.A., Gorden, A.\*\*\*, Rector, S.R., and **Buhman, K.K.** (2014) Endurance Exercise Training Programs Intestinal Lipid Metabolism in a Rat Model of Obesity and Type 2 Diabetes. FASEB SRC on Intestinal Lipid Metabolism, Snowmass, CO.
21. Bowman, T.A., Mansur, A., Uchida, A.\*, D'Aquila, T.D.\*, Cheng, J-X., Mashek D.G., **Buhman, K.K.**, and Greenberg, A.S. (2012) Acyl-CoA Synthase 5 (ACSL5) ablation attenuates diet-induced obesity and impairs enteric lipid transport. American Diabetes Association.
22. Uchida, A.\*, Whitsitt, M.C.\*, Eustaquio, T., Slipchenko, M.N., Leary, J.F., Cheng, J-X., and **Buhman K.K.** (2011) Reduced triglyceride secretion in response to an acute dietary fat challenge in obese compared to lean mice. Gordon Research Conference – Molecular and Cell Biology of Lipids, Waterville Valley Resort, New Hampshire.
23. Uchida, A.\*, Whitsitt, M.C.\*, Eustaquio, T., Leary, J.F., and **Buhman K.K.** (2011) Increased intestinal acyl-CoA:diacylglycerol acyltransferase 2 exacerbates diet-induced hepatic steatosis. Steenbock Symposium, University of Wisconsin-Madison.
24. **Buhman K.K.** (2010) Intestine specific expression of DGAT1 reverses the resistance to diet-induced obesity phenotype of DGAT1-deficient mice. Ascona – Workshop, The intestinal wall - "the" regulatory interface in energy homeostasis. Ascona, Switzerland.
25. Chen, H., Wang, H., Zhu, J., **Buhman, K.**, Cheng, J-X. (2009) Coupling CARS with multiphoton fluorescence and harmonic generation on the same platform. Photonics West 2009.
26. Antalis, C.J., Lee, B-G.\*, **Buhman, K.K.** and Siddiqui, R.A. (2008) Differential effects of lipoprotein cholesterol on proliferation of ER+ and ER- breast cancer cells and the role of ACAT1. Purdue Oncological Sciences Center Cancer Prevention Retreat.
27. Zhu J., **Buhman K.K.**, and Cheng J.X. (2007) Vibrational Imaging of Dietary Fat Absorption by Coherent Anti-Stokes Raman Scattering Microscopy, Biomedical Engineering Society Annual Fall Meeting.
28. Antalis C.J., **Buhman K.K.**, and Siddiqui R. (2007) Differential expression of ACAT1 and ACAT2 in mammary epithelial cells at various stages of transformation, Second Annual Symposium on “The Role of Dietary Fatty Acids in the Prevention and Treatment of Disease,” The Center for Botanical Lipids at Wake Forest University School of Medicine.

#### e. US Patents Awarded

1. US Patent # 5,972,685. Oral administration of coprostanol producing microorganisms to humans to decrease plasma cholesterol concentration. Inventors: D.C. Beitz, J.W. Young, L. Li, and **K.K. Buhman**. October 1999.

#### f. Invited Lectures and Presentations

1. February 2023 “Dietary Fat Absorption in Health and Disease.” Rutgers Center for Lipid Research, Rutgers University, New Brunswick, NJ
2. November 2022 “Dietary Fat Absorption in Health and Disease.” University of Minnesota, LaVell Henderson Lectureship Series, Biology, Biochemistry and Food Science and Human Nutrition, Minneapolis, MN
3. February 2022 “Dietary Fat Absorption in Health and Disease.” The Ohio State University, Nutrition Science, Columbus, OH (virtual presentation due to COVID-19)
4. October 2020 “Dietary Fat Absorption in Health and Disease.” Western University, Department of Physiology and Pharmacology, London, Ontario (virtual presentation due to COVID-19).
5. September 2020 “Dietary Fat Absorption in Health and Disease.” Department of Nutrition Science, Purdue University, West Lafayette, IN. (virtual presentation due to COVID-19)

6. July 2020 “Dietary Fat Absorption in Health and Disease.” FASEB Science Research Conference on Intestinal Lipid Metabolism, Snowmass, CO, Postponed due to COVID-19.
7. April 2020 “Dietary Fat Absorption in Health and Disease.” University of Wisconsin, Department of Nutrition Science, Madison, WI Postponed due to COVID-19.
8. February 2020 “Dietary Fat Absorption in Health and Disease.” Iowa State University, Department of Food Science and Human Nutrition, Ames, IA.
9. January 2020 “Dietary Fat Absorption in Health and Disease.” Indiana Nutrition Council, Indianapolis, IN.
10. May 2019 “Dietary Fat Absorption in Health and Disease.” Columbia University, New York, NY.
11. March 2019 “Dietary Fat Absorption in Health and Diseases.” Albert Einstein College of Medicine, Bronx, NY.
12. March 2019 “Dietary Fat Absorption in Health and Diseases.” Saint Louis University, St. Louis, MO.
13. March 2019 “Intestinal Triglyceride Metabolism: Storage and Secretion.” Department of Nutrition Science, Purdue University, West Lafayette, IN.
14. June 2018 “Presence and Metabolism of Lipid Droplets in Enterocytes During Dietary Fat Absorption.” FASEB Science Research Conference on Lipid Droplets on the Move from Health to Disease, Steamboat, CO.
15. October 2018 “Dietary Fat Absorption: Players and Regulators.” Indiana Life Science Summit, Biocrossroads, Indianapolis, IN.
16. October 2017 “Physiology of Nutrient Digestion and Absorption.” United European Gastroenterology Week, Barcelona, Spain.
17. March 2017 “Intestinal Triglyceride Metabolism: Storage and Secretion.” University of Graz, Department of Biochemistry and Molecular Biology, Graz, Austria.
18. May 2017 “Intestinal Triglyceride Metabolism: Storage and Secretion.” Indiana University Northwest, Gary, IN.
19. November 2016 “Intestinal Triglyceride Metabolism: Storage and Secretion.” Inaugural Symposium of the Big Ten Lipid Consortium, Rutgers University, New Brunswick, NJ.
20. January 2016 “Careers in Nutrition Science.” Klondike Middle School Career Day, West Lafayette, IN.
21. May 2015 “Intestinal Triglyceride Metabolism: Storage and Secretion.” Digestive Disease Week, American Gastroenterology Association, Washington D.C.
22. January 2015 “Intestinal Triglyceride Metabolism: Storage and Secretion.” Archer Daniels Midland, EVPRP, Purdue University West Lafayette, IN.
23. December 2014 “Intestinal Lipid Metabolism and Fat Taste.” Ingestive Behavior Research Center Seminar, Purdue University, West Lafayette, IN.
24. September 2014 “Intestinal Triglyceride Metabolism: Storage and Secretion.” Department of Cellular and Integrative Physiology, Indiana University School of Medicine, Indianapolis, IN.
25. July 2014 “Cytoplasmic Lipid Droplet Synthesis and Catabolism in Enterocytes During Dietary Fat Absorption.” FASEB Science Research Conference on Intestinal Lipid Metabolism, Snowmass, CO.
26. February 2014 “Triglyceride Stores: Forming, Growing and Shrinking in the Gut.” Hillshire Brands Meeting, Purdue University, West Lafayette, IN.
27. October 2013 “Lipid Droplet Metabolism in Intestinal Fat Absorption and Metabolism.” Purdue Center for Cancer Research, Cancer Metabolism Meeting, Purdue University, West Lafayette, IN.
28. October 2013 “Triglyceride Stores: Forming, Growing and Shrinking in the Gut.” Department of Nutrition Science Corporate Affiliates Meeting, Purdue University, West Lafayette, IN.
29. February 2013 “Lipids and Cardiovascular Disease.” Women for Purdue, fundraising event in Naples, FL.
30. February 2013 “Lipids and Cardiovascular Disease.” American Heart Association, fundraising event in Lafayette, IN.
31. October 2012 “Following Dietary Fat Absorption with an Eye on Obesity and Heart Disease.” Department of Nutrition Science Corporate Affiliates Meeting, Purdue University, West Lafayette, IN.
32. July 2012 “Lipid Droplet Metabolism in Intestinal Fat Absorption and Metabolism.” FASEB Science Research Conference on Lipid Droplet Biology, Snowmass, CO.
33. March 2012 “Intestinal Triglyceride Trafficking and Metabolism: Storage and Secretion.” Department of Biochemistry and Redox Biology Center, University of Nebraska-Lincoln, Lincoln, NE.
34. March 2012 “Intestinal Triglyceride Trafficking and Metabolism: Storage and Secretion.” Department of Basic Medical Sciences, Purdue University, West Lafayette, IN.
35. February 2012 “Intestinal Triacylglycerol Metabolism: A Target for the Treatment of Obesity and Related Disorders,” Boston University School of Medicine, Adipocyte and Metabolic Tissue Study Group, Boston Nutrition and Obesity Research Center, Boston, MA.

36. February 2012 “Intestinal Triglyceride Metabolism: Storage and Secretion” NIFA Review for the Department of Nutrition Science, Purdue University, West Lafayette, IN.
37. July 2011 “Intestinal Triglyceride Trafficking and Metabolism: Storage and Secretion,” Gordon Conference on the Molecular and Cellular Biology of Lipids, Waterville Valley Resort, NH.
38. March 2011 “Intestinal Triglyceride Metabolism: A Target for Managing Obesity and Related Disorders,” GlaxoSmithKline, King of Prussia, PA.
39. March 2011 “Chasing Dietary Fat ...” Tate and Lyle, Lafayette, IN.
40. October 2010 “Intestinal Triglyceride Metabolism: A Target for Managing Obesity and Related Disorders,” Obesity Department, Merck Research Laboratories, Rahway, NJ.
41. August 2010 “Intestinal Triglyceride Metabolism: A Target for Managing Obesity and Related Disorders,” Lilly Research Laboratories, Indianapolis, IN.
42. February 2010 “The Small Intestine: A Target for Managing Obesity and Related Disorders.” Novartis Biomedical Research Institute, Boston, MA.
43. October 2010 “Intestinal Triglyceride Metabolism: A Target for Managing Obesity and Related Disorders,” Center for Diabetes Research, Indiana School of Medicine, Indianapolis, IN.
44. June 2009 “The Small Intestine: A Role in Fat Storage?” University of Texas Southwestern Medical Center – Obesity Alliance Seminar Series, Dallas, TX.
45. April 2009 “The Small Intestine: A Role in Fat Storage?” University of Illinois, Department of Food Science and Human Nutrition Seminar Series, Champaign-Urbana, IL.
46. March 2009 “Fatty Acids and Heart Health.” Western Indiana Dietetics Association, Lafayette, IN
47. February 2009 “Trans Fatty Acids and Cardiovascular Disease.” IP Lunch and Learn, Purdue University, West Lafayette, IN.
48. January 2009 “CTSI project Development Team: Benefits for a Young Investigator.” Indiana Clinical Translational Sciences Institute First Annual Meeting, Indianapolis, IN
49. September 2008 “Triglyceride Metabolism in the Intestine” Ingestive Behavior Research Center, Purdue University, West Lafayette, IN.
50. February 2008 “The Small Intestine: A Role in Fat Storage?” Department of Foods & Nutrition Corporate Affiliates Meeting, Purdue University, West Lafayette, IN.
51. May 2007 “Trans Fatty Acids and Cardiovascular Disease.” May Conference, Purdue University, West Lafayette, IN.
52. March 2006 “The Role of ACAT Enzymes in Intestinal Lipid Metabolism.” Center for Diabetes Research, Indiana School of Medicine, Indianapolis, IN.
53. October 2006 “The Role of ACAT Enzymes in Intestinal Lipid Metabolism.” Basic Medical Sciences Seminar Series, Purdue University. West Lafayette, IN.
54. February 2005. “The Role of ACAT Enzymes in Intestinal Lipid Absorption.” Department of Foods and Nutrition, Purdue University, West Lafayette, IN.
55. February 2003. “The Role of ACAT Enzymes in Intestinal Lipid Absorption.” Department of Foods and Nutrition, Purdue University, West Lafayette, IN.
56. May 2002. “DGAT1 is not essential for intestinal triacylglycerol absorption or chylomicron synthesis.” Digestive Disease Week, San Francisco, CA.
57. November 2000. “Resistance to Diet-induced Hypercholesterolemia and Gallstone Formation in ACAT2 Deficient Mice.” Endocrine-Metabolism Section at Veterans Affairs Medical Center, San Francisco, CA.
58. July 2000. “Resistance to diet-induced hypercholesterolemia and gallstone formation in ACAT2-deficient mice.” FASEB Summer Research Conference, Saxton River, VT.

## **2. Research Grants and Awards Received**

### **a. Pending Research Support**

1. National Institutes of Health/National Institute of Diabetes and Digestive and Kidney Disease  
 RO1  
 Intestinal HSP70 protects against diet-induced obesity through modulating fat and glucose metabolism  
 07/01/2023 – 06/30/2028  
 Total amount of Award (requested): \$3,757,846  
 Co-I (Martinez-Guryn, PI)

2. National Institutes of Health/National Institute of Diabetes and Digestive and Kidney Disease  
R01  
Plasma free fatty acids and albumin in metabolic disease  
07/01/2023 – 06/30/2028  
Total amount of Award (requested): \$1,250,000  
Co-I (Henderson, PI)

**b. Current Research Support**

1. National Institutes of Health/National Cancer Institute  
R01  
Impact of hypoxia on lipid metabolism in obesity-driven breast cancer progression  
12/28/2022 – 11/30/2027  
Total amount of Award: \$3,276,920  
Co-I (Hursting, Teegarden, Wendt MPI)
2. National Institutes of Health/National Institute of Environmental and Health Sciences  
R01  
Compromised Resolution of Inflammation following Nanoparticle Exposure in Metabolic Syndrome  
04/01/2022 – 03/31/2027  
Total amount of Award: \$1,876,238  
Co-I (Shannahan, PI)
3. United States Department of Agriculture/National Institute Food and Agriculture  
Agriculture and Food Research Initiative  
Colostrum Induction of Peroxisomes: Making the Link between Perinatal Nutrition and Fertility in Swine  
01/01/2022 – 12/31/2025  
Total amount of Award: \$650,000  
Co-PI (Casey, PD/PI)
4. The McKinley Foundation  
Verification of a Gut Instinct for Type 2 Diabetes Therapy  
02/01/2019 – 12/31/2075  
Total amount of award: \$250,000  
PI

**c. Completed Research Support**

1. Canadian Institutes of Health Research  
Subcontract from the University of Toronto  
GLP-2 and Intestinal Lipid Metabolism  
5/01/2019 – 04/30/2023  
Total amount of award: \$13,500  
PI
2. National Institutes of Health/National Institute of Diabetes, Digestive and Kidney Disease  
R56  
Plasma free fatty acids and albumin in metabolic disease  
09/01/2021 – 08/31/2022  
Total amount of Award: \$193,750  
Co-I (Henderson, PI)
3. Ralph W. and Grace M. Showalter Research Trust

- Proteomic Analysis of Endogenous Protein Complexes and Phosphorylation in the Liver of Diet-induced Obese Mice  
07/01/2020 – 07/31/2022  
Total amount of award: \$75,000  
Co-PI (Aryal, PI)
4. Purdue Center for Cancer Research  
Uncovering the cytoplasmic lipid droplet proteome in breast cancer progression  
12/1/2021 – 11/30/2022  
Total amount of award: \$5,500  
Co-PI (Teegarden PI)
  4. National Institutes of Health  
Award Number UL1TR002529 National Center for Advancing Translational Sciences, Clinical and Translational Sciences Award Project Development Team Award  
Regulation of Bile Acid Transport and Signaling in Metabolic Disease  
12/01/2018 – 07/31/2022  
Total amount of award: \$10,000  
PI
  5. National Institutes of Health  
Award Number UL1TR002529 National Center for Advancing Translational Sciences, Clinical and Translational Sciences Award Core Facility Award  
Electron Microscopy Analysis of Organelle Interactions and Morphology Contributing to Altered Dietary Fat Absorption in Mice Resistant to Diet-induced Obesity  
5/01/2018 – 7/31/2022  
Total amount of award: \$9,364  
PI
  6. Purdue University Office of Executive Vice President for Research and Partnerships  
Obesity, Lipid Metabolism, and Metastasis  
03/01/2020 – 09/31/2021  
Total amount of award: \$30,000  
Co-I (Teegarden PI)
  7. Purdue University Office of Executive Vice President for Research and Partnerships and the Provost and Executive Vice President for Academic Affairs and Diversity/2019-2020 Laboratory and University Core Facility Research Equipment Grant Program  
Ultracentrifuge  
03/01/2020 – 05/31/2020  
Total amount of award: \$81,716  
Co-PI, (Teegarden, PI)
  8. USDA National Institute of Food and Agriculture  
Hatch Award  
Molecular Mechanisms of Intestinal Lipid Metabolism  
2006 – 2020  
Total amount of award: Provided salary support  
PI
  9. Purdue Center for Cancer Research  
Shared Resources Grant  
Breast Cancer Metastasis and Cytoplasmic Lipid Droplets  
12/01/2018 – 05/31/2019  
Total amount of award: \$2,000

Co-I (Teegarden, PI)

10. American Heart Association  
Career Development Award  
Photoacoustic Imaging of Abdominal Aortic Aneurysms  
01/01/2014 – 12/31/2017  
Total amount of award: \$308,000  
Co-I (Goergen, PI)
11. California Walnut Commission  
Research Grant  
The Effects of Mastication and Digestion on the Bioaccessibility of Energy from Walnuts  
06/01/2015 – 12/31/2017  
Total amount of award: \$150,920  
Co-I (Mattes, PI)
12. United States Department of Agriculture (USDA)  
Transdisciplinary Obesity Prevention Program-Undergraduate (TOPP-U)  
09/01/2013 – 08/31/2017  
Total amount of award: \$190,000  
Co-I
13. National Institutes of Health (NIH)  
RO1 Subcontract from Tufts University  
Role of Long Chain AcylCoA Synthetase 5 (ACSL5) in Liver and Intestinal Triacylglycerol Metabolism  
06/01/2014 – 05/31/2017  
Total amount of award: \$969,318  
Co-I (Greenberg, PI)
14. Department of Defense Army Medical Research Acquisition Activity (DOD AMRAA)  
Targeting Sulfotransferase (SULT) 2B1b as a Regulator of Cholesterol Metabolism in Prostate Cancer  
06/01/2014 – 05/31/2017  
Total amount of award: \$560,879  
Co-I (Ratliff, PI)
15. Purdue Research Foundation  
Research Grant  
Identification of Novel proteins that Mediate Dietary Fat Absorption  
08/01/2014 – 07/31/2015  
Total amount of award: \$16,795  
PI
16. Purdue Research Foundation  
Research Grant  
Proteomics of Lipid Droplets  
08/01/2013 – 07/31/2014  
Total amount of award: \$16,795  
PI
17. American Diabetes Association  
Innovation Award  
Enterocyte Lipid Droplet Proteomics  
07/01/2013 – 06/30/2016  
Total amount of award: \$90,000



PI

18. Purdue Center for Cancer Research  
Pilot Research Grant  
Novel Mechanisms of Cholesterol Regulation in Prostate Cancer by Cholesterol Sulfotransferase (SULT) 2B1  
04/01/2013 – 03/31/2014  
Total amount of award: \$10,000  
Co-PI (Crist, PI)
19. National Institutes of Health  
Award Number UL1TR002529 National Center for Advancing Translational Sciences, Clinical and Translational Sciences Award Core Facility Award  
Revealing the Distinct Functions of DGAT1 and DGAT2 in Dietary Fat Absorption  
01/01/2012 – 12/31/2013  
Total amount of award: \$10,000  
PI
20. National Institutes of Health  
Award Number UL1TR002529 National Center for Advancing Translational Sciences, Clinical and Translational Sciences Award Project Development Team Award  
Proteomics Analysis of Lipid Droplets in Intestine during Dietary Fat Absorption  
11/12/2012 – 11/11/2013  
Total amount of award: \$10,000  
PI
21. Purdue Research Foundation  
Research Grant  
Revealing the Distinct Functions of DGAT1 and DGAT2 in Dietary Fat Absorption  
08/01/2012 – 07/31/2013  
Total amount of award: \$16,795  
PI
22. Egg Nutrition Center  
Research Grant  
Relative Effects of Chronic Consumption of Egg Protein at Breakfast With and Without Fiber on Brain Neural Activation, Appetite, Glycemic and Lipemic Control and Self-selected Energy Intake  
08/15/2012 – 02/12/2014  
Total amount of award: \$215,231  
Co-I
23. Purdue University Office of Executive Vice President for Research and Partnerships and the Provost and Executive Vice President for Academic Affairs and Diversity/2012-2013 Laboratory and University Core Facility Research Equipment Grant Program  
EchoMRI  
01/01/2012 – 12/31/2012  
Total amount of award: \$98,390  
PI
24. American Heart Association  
Career Development Award, National Affiliate  
Regulation of Intestinal Triglyceride Metabolism: Molecular Mechanisms  
07/01/2008 – 06/30/2013  
Total amount of award: \$308,000  
PI

25. American Heart Association  
Predoctoral Fellowship, Midwest Affiliate  
Regulation of Intestinal Triglyceride Metabolism by Adipocyte Stores  
01/01/2011 – 12/31/2013  
Total amount of award: \$104,000  
Mentor for Graduate Student Fellowship
26. Purdue Research Foundation  
Research Grant  
*In Utero* Environment Predetermines Intestine Function and Health of Offspring  
06/01/2010 – 05/31/2011  
Total amount of award: \$16,795  
PI
27. National Institutes of Health  
Award Number UL1TR002529 National Center for Advancing Translational Sciences, Clinical and Translational Sciences Award Project Development Team Award  
Effects of a High-Satiety Meal in Combination with Alli on Appetite, Metabolism and Gut Hormones  
05/01/2009 – 04/30/2010  
Total amount of award: \$10,000  
Co-PI with McCrory
28. Glaxo Smith Kline  
Research Grant  
Effects of a High-Satiety Meal in Combination with Alli® on Appetite, Metabolism and Obesity.  
12/01/2008 – no end  
Total amount of award: \$38,553  
Co-PI with McCrory
29. Clarian Health Partners Values Fund for Research  
Research Grant  
The Role of Acyl CoA:Cholesterol Acyl Transferase (ACAT) in Breast Cancer Progression  
06/01/2008 – 05/31/2010  
Total amount of award: \$80,000  
Co-I
30. Agriculture Research Program  
The Role of Dietary Triglyceride Absorption in Energy Balance  
08/01/2008 – 07/31/2010  
Total amount of award: \$35,000  
PI
31. Sigma Xi  
Equipment Grant  
Intestinal Triglyceride Metabolism  
01/01/2009 – no end  
\$1,000  
PI
32. Purdue Research Foundation  
Summer Faculty Award  
Role of Intestinal Fatty Acid Metabolism in Whole Animal Energy Balance  
05/22/2008 – 07/14/2008

Total amount of award: \$8,000

PI

33. Purdue Research Foundation Research Grant

Triglyceride Metabolism in Absorptive Cells of the Intestine and Systemic Delivery of Dietary Triglyceride

08/01/2007 – 07/31/2008

Total amount of award: \$14,627

PI

34. Purdue Research Foundation

Summer Faculty Award

Role of Intestinal Fatty Acid Metabolism in Whole Animal Energy Balance

05/22/2006 – 07/12/2006

Total amount of award: \$7,000

PI

35. Board of Human Sciences

Intestinal Lipid Metabolism

11/29/2005 – 05/31/2006

Total amount of award: \$1,500

PI

### 3. Student Training in Research

#### a. Serving as major professor for student theses and dissertations

PAST				
Student	Program/Theses Title	Start	Finish	Position After Purdue
1. Bonggi Lee	Nutrition Science, PhD “Identification of Novel Factors in enterocytes Involved in Dietary Fat Absorption and Energy Balance”	F2006	S2010	First: Postdoctoral Fellow, Pediatric and Diabetic Research Center, University of California, San Diego  Current: Professor of Food Science and Nutrition at Pukyong National University, Busan South Korea
2. Aki Uchida	Purdue University Life Sciences Program, PhD “Regulation of Intestinal Triglyceride Metabolism and Molecular Mechanism”	F2007	F2011	First: Postdoctoral Fellow, University of Texas Southwestern Medical School  Current: Associate Director, Strategy and Business Planning - Global Patient Safety Evaluation at Takeda
3. Mary Whitsitt Rosen	Nutrition Science, MS “Chronic and Acute Regulation of Intestinal Triglyceride Metabolism Genes by Dietary Fat”	F2010	F2011	First and Current: Adjunct Professor, Depts. of Biology and Anatomy and Physiology, Green River Community College
4. Emily Arentson Lantz	Nutrition Science, PhD “Maternal Programming of Offspring Intestine Metabolism” Co-mentored with Shawn Donkin	F2007	S2012	First: Postdoctoral Fellow, University of Texas Medical Branch, Galveston  Current: Assistant Professor, University of Texas Medical

5.	Theresa D'Aquila	Nutrition Science, PhD "Intestinal Cytoplasmic Lipid Droplets, Associated Proteins, and the Regulation of Dietary Fat Absorption"	F2011	S2016	First: Postdoctoral Fellow at University of North Carolina-Chapel Hill  Current: Feasibility and Clinical Trial Strategy – Rare Disease, Takeda
6.	Yu-Han (Amy) Hung	Nutrition Science, PhD "Molecular Mechanisms Determining the Fate of Intestinal Triacylglycerol"	F2012	S2017	First: Postdoctoral Fellow at Cornell University  Current: Principal Scientist, Bristol Myers Squibb
7.	Alicia Carreiro	Nutrition Science, PhD "Regulation of Intestinal Lipid Storage and Mobilization"	F2013	S2018	First: Medical Content Strategist at MicroMass Communications  Current: Clinical Research Scientist II at Impact Pharmaceutical Services
8.	Ryan Calvert	Nutrition Science, PhD "Myeloid Derived Suppressor Cells in Physiology and Pathophysiology"	F2014	S2019	First: Postdoctoral Fellow at Purdue University  Current: Assistant Professor of Biology at Tabor College
9.	Alyssa Zembroski	Nutrition Science, PhD "Cytoplasmic Lipid Droplets in Metabolic Disease"	F2016	S2021	First and Current: Medical Affairs Scientist, ClinChoice

**CURRENT**

Student	Program	Start	Proposed Finish
1.			

**b. Serving as graduate student advisory committee member:**

**PAST**

Student	Program	Start Date	Completion Date	Advisor
1. Anna Klopot	Nutrition Science, PhD	Fall 2002	Spring 2007	J. Fleet
2. Shamim M.K. Siddiqui	Nutrition Science, MS	Fall 2004	Sum 2008	D. Teegarden
3. Eugene Chang	Nutrition Science, PhD	Fall 2003	Spring 2008	D. Teegarden
4. Jiabin Zhu	Biomedical Engineering, MS	Fall 2006	Fall 2008	J.X. Cheng
5. John Apolzan	Nutrition Science, PhD	Fall 2004	Spring 2009	W. Campbell
6. Catherine Burlage Pinkston	Nutrition Science, MS	Fall 2007	Spring 2009	D. Teegarden
7. Mi Zou	Nutrition Science, MS	Fall 2006	Spring 2010	S. Donkin
8. Julie Wiacek	Food Science, MS	Fall 2008	Sum 2010	K.H. Kim
9. Heather Hutchins	Nutrition Science, PhD	Fall 2007	Sum 2010	B. Watkins
10. Yan (Janie) Jiang	Nutrition Science, PhD	Fall 2006	Sum 2010	D. Teegarden
11. Angela Myracle	Nutrition Science, PhD	Fall 2005	Fall 2010	J. Burgess
12. Adrienne Hatch	Nutrition Science, MS	Fall 2008	Fall 2010	M. McCrory
13. Yan Jiang	Nutrition Science, PhD	Fall 2005	Fall 2010	J. Fleet

14. Xiayu Rao	Nutrition Science, MS	Fall 2008	Fall 2010	Q. Jiang
15. Venkata Adapala	Animal Science, MS	Fall 2008	Fall 2010	K. Ajuwon
16. Ryan Schoch	Nutrition Science, PhD	Fall 2008	Did not complete	J. Fleet
17. Choon Young Kim	Food Science, PhD	Fall 2007	Fall 2011	K.H. Kim
18. Bhushan Kulkarni	Nutrition Science, PhD	Fall 2008	Fall 2011	R. Mattes
19. Rachel Wright	Purdue University Life Sciences Program, MS	Fall 2008	Spring 2012	E. Barker
20. Shellen Goltz	Food Science, PhD	Fall 2008	Spring 2012	M. Ferruzzi
21. Chia-Li (Michelle) Shih	Animal Science, MS	Fall 2010	Fall 2012	K. Ajuwon
22. Yan Li	Nutrition Science, PhD	Fall 2007	Spring 2012	J. Fleet
23. Alyssa Phillips	Nutrition Science, MS	Fall 2011	Fall 2013	C. Weaver
24. Wei (Winnie) Zheng	Nutrition Science, PhD	Fall 2009	Spring 2014	D. Teegarden
25. Robin Tucker-Falconer	Nutrition Science, PhD	Fall 2010	Spring 2014	R. Mattes
26. Mikaela Easter	Food Science, MS	Fall 2012	Spring 2014	K. Kim
27. Alle Barnard	Nutrition Science, PhD	Fall 2014	Sum 2014	D. Teegarden
28. Fa Wang	Nutrition Science, PhD	Fall 2011	Spring 2016	J. Fleet
29. Brienna Larrick	Nutrition Science, PhD	Fall 2011	Spring 2016	D. Teegarden
30. Yuyan Zhu	Food Science, PhD	Fall 2012	Sum 2016	K. Kim
31. Xuanxhu (Claire) Zhou	Nutrition Science, PhD	Fall 2011	Spring 2017	D. Teegarden
32. Na Young Park	Nutrition Science, PhD	Fall 2011	Spring 2017	Q. Jiang
33. Tom Wilmanski	Nutrition Science, PhD	Fall 2012	Spring 2017	D. Teegarden
34. Lucinda Kursava	Nutrition Science, MS	Fall 2015	Spring 2017	B. Stefanska
35. Tien-Jui Lee	Nutrition Science, PhD	Fall 2011	Sum 2017	K. Kinzig
36. Renee Wenig Vickman	Purdue University Life Sciences Program, PhD	Fall 2011	Sum 2017	T. Ratliff
37. Shaminie Athinarayanan	Purdue University Life Sciences Program, PhD	Fall 2012	Sum 2017	Wanqing Liu
38. Prasad Devarshi	Nutrition Science, PhD	Fall 2014	Fall 2017	T. Henagan
39. Hannah Serlin	Psychological Sciences, MS		Fall 2017	E. Fox
40. Sean McNabney	Nutrition Science, MS	Fall 2016	Spring 2018	T. Henagan
41. Huan Qu	Animal Science, PhD	Fall 2012	Spring 2018	K. Ajuwon
42. Breanna McArthur	Food Science, PhD	Fall 2014	Sum 2018	R. Mattes
43. Sunhye (Sonia) Shin	Nutrition Science, PhD	Fall 2013	Sum 2018	K. Ajuwon
44. Regina Fernandez	Nutrition Science, PhD	Fall 2015	Transfer	J. Ellis
45. Colby Vorland	Nutrition Science, PhD	Fall 2013	Spring 2019	K. Hill Gallant
46. Gretchen Wiese, RD	Nutrition Science, MS	Fall 2017	Spring 2019	K. Hill Gallant
47. Kilia Liu	Nutrition Science, PhD	Fall 2013	Spring 2019	Q. Jiang
48. Kouassi Kpodo	Animal Science, PhD	Fall 2016	Fall 2019	J. Johnson
49. Mike Stone	Nutrition Science, PhD	Fall 2013	Fall 2019	K. Hill Gallant
50. Hannah Serlin	Psychological Sciences, PhD	Fall 2016	Sum 2020	E. Fox
51. Chae Hyun Yum	Nutrition Science, PhD	Fall 2015	Fall 2020	D. Teegarden
52. Carrie Terwilliger	Nutrition Science, MS	Fall 2017	Fall 2020	J. Burgess
53. Violet Kiesel	Nutrition Science, PhD	Fall 2016	Fall 2020	D. Teegarden
54. Stephanie Hunter	Nutrition Science, PhD	Fall 2016	Fall 2020	R. Mattes
55. Li Chu (Jasmine) Huang	Nutrition Science, MS	Fall 2019	Sum 2021	C. Running
56. Evan Reister	Nutrition Science, PhD	Fall 2015	Fall 2021	R. Mattes
57. Elizabeth Sahagun	Psychological Sciences, Neurosciences, PhD		Spring 2022	K. Kinzig
58. Audrey Goldbaum	Nutrition Science, PhD	Fall 2016	Spring 2022	L. Bowers

59. Yiying Zhao	Nutrition Science, PhD	Fall 2017	Sum 2022	Q. Jiang
60. Chaylen Andolino	Nutrition Science, PhD	Fall 2016	Fall 2022	D. Teegarden
61. Suji Im	Nutrition Science, PhD	Fall 2016	Fall 2022	Q. Jiang
62. Sora Kim	Nutrition Science, PhD	Fall 2017	Spring 2023	K. Kim
<b>CURRENT</b>				
<b>Student</b>	<b>Program</b>	<b>Start Date</b>	<b>Advisor</b>	
1. Carrie Terwilliger	Nutrition Science, PhD	Fall 2017	J. Burgess	
2. Tobi Ogunribido	Animal Science, PhD		K. Ajuwon	
3. Afsoun Abdollahi	Nutrition Science, PhD	Spring 2019	G. Henderson	
4. Marjorie Layosa	Nutrition Science, PhD	Fall 2021	D. Teegarden	
5. Li Chu (Jasmine) Huang	Nutrition Science, PhD	Fall 2021	R. Mattes	
6. Zoey Zhang	Nutrition Science, PhD	Fall 2021	G. Henderson	
7. Qianyue Wang	Nutrition Science, PhD	Fall 2022	Q. Jiang	

**c. Member of Purdue Universities Life Science Ph.D. (PULSe) program preliminary examination committees:**

1. Amanda Morrison, 2009
2. Sudip Khadka, 2009
3. Renee Wenig Vickman, 2013, chair
4. Hyeon Jeong Lee, 2015

**d. Member of Psychological Sciences program preliminary examination committees:**

1. Gabrielle Bonanno, 2022

**e. International Thesis Examiner**

1. Amber Milan, PhD in Health Sciences, Supervisor: Professor David Cameron-Smith, University of Auckland, New Zealand 2015

**f. Visiting Scholar Advisor**

1. Rachel Wilson, PhD candidate in Pharmacology at the University of Western in London, Ontario. She spent the summer of 2019 working in the Buhman Lab at Purdue as a Mitacs Globalink Research Abroad Award recipient.
2. Marisol Leon Cabrera, PhD candidate at the Universidad de Sao Paulo in Brazil. She planned to visit the Buhman Lab in 2021 as a Promoting Research Opportunities for Latin American Biochemists (PROLAB) program sponsored by the American Society for Biochemistry and Molecular Biology, the Pan-American Society for Biochemistry and Molecular Biology, and the International Union for Biochemistry and Molecular Biology but was unable to come.

**g. Training/Mentoring Program Participation**

1. Purdue Postbaccalaureate Research Education Program (PREP) for Translational Biomedical Sciences (NIH R25, PI Mendrysa and Hogenesch) 2021- present
2. Interdisciplinary Training in Signals Controlling Ingestion and Obesity (NIH T32, PI Mattes) 07/01/2014-06/30/2019
3. Food Science Approach to Enhancing Gut Health (USDA NIFA National Needs Graduate and Postgraduate Fellowship (NNF) Grants Program, PI Kim) 2021- present

**h. Evidence of Involvement in Undergraduate Student Research**

**NUTRITION SCIENCE HONORS PROGRAM**

<b>Student</b>	<b>Role</b>	<b>Year</b>	<b>Major</b>	<b>Project</b>
Angela Fast	mentor	2008	Nutrition Science	DGAT1 Transgenic
Bethany Landis	mentor	2006	Nutrition Science	Lipid Droplet Proteins
Monica Poplawski	reader	2009	Dietetics	Chlorophyll and Cancer
Kerry Clifford	reader	2012	Dietetics	Maternal Diet and CVD

Kristen Clark	reader	2013	Dietetics	Whey and Muscle
Aidan Hannon	reader	2020	Nutrition Science	Grape Juice & Diabetes
Allison Drook	reader	2020	Nutrition and Dietetics	Bariatric Surgery
Caitlin Truffers	reader	2023	Nutrition Science	Breast Cancer Metabolism
Jacqueline Schmok	reader	2023	Nutrition Science	Mushrooms and Postprandial Responses

#### NUTRITION SCIENCE EXCHANGE PROGRAM WITH IRELAND

Student	Year	Major	Project
Alicia Gordon	2012	Dietetics	Exercise and Intestine Lipid Metabolism

#### NUTRITION SCIENCE UNDERGRADUATE RESEARCH

Student	Year	Major	Project
Kathryn Eifrid	2017-2018	Nutrition Science	Enterocyte CLD Proteomics
Victoria Brown	2015-2016	Dietetics/NFHL	Mouse Colony Management
Lauren Murrell	2012-2013	Dietetics	Mouse Colony Management
Lenna Peterson	2011- 2012	Biology	Mouse Colony Management
Diana Aldred	2009-2011	Dietetics	DGAT1-deficient mice
Jon Ashton	2008-2011	Business	Mouse Colony Management
Parag Sharma	2010	Nutrition Science	Mouse Colony Management
Jenny Shin	2008-2010	Nutrition Science	Dgat1-deficient mice
Yeonhwa Ha	2007-2009	Public Health	Mouse Colony Management
Amanda Haan	2006-2008	Nutrition Science	Mouse Colony Management
Shelly Davis	2006-2007	Dietetics	Gene Expression

#### BIOCHEMISTRY UNDERGRADUATE RESEARCH

Student	Year	Major	Project
Beth Donnelly	2019	Biochemistry	Lipid Droplet Proteins
Adetoro Koleosho	2014	Biochemistry	Lipid Droplets and Lysosomes

## LEARNING

### Undergraduate Courses

#### Significant Role (Primary Instructor, Co-Instructor, Course Coordinator)

NUTR 20200 *Principles of Food Preparation and Nutrition* (4 credits) Spring 2016

NUTR 20500 *Introduction to Food Science* (4 credits) Fall 2017, Spring 2018

NUTR 29700 *Honors Seminar* (1 credit) Fall 2007 - 2013

NUTR 31500 *Fundamentals of Nutrition* (3 credits) Spring 2006, Spring 2023

NUTR 43700 *Macronutrient Metabolism in Health and Disease* (3 credits) Spring 2007 – 2020, Summers 2013 - 2020

NUTR 49500 *Undergraduate Seminar in Foods and Nutrition* (1 credit) Spring 2008, 2013

#### Supporting Role (Guest Lecturer, etc)

NUTR 10500 *Nutrition and the 21<sup>st</sup> Century* (1 credit) Fall 2014, 2019, 2020

NUTR 10700 *Introduction to Nutrition Science* (1 credit) Fall 2017, 2018

NUTR 29700 *Honors Seminar* (1 credit) Fall 2020

NUTR 40000 *Executive in the Classroom* (1 credit) Fall 2005, 2006

NUTR 43600 *Nutritional Assessment* (2 credits) Spring 2013 – 2019

### Graduate Courses

#### Significant Role (Primary Instructor, Co-Instructor, Course Coordinator)

NUTR 59000 *Lipids and Cell Function* (2 credits) Fall 2006, 2008, 2012, 2014, 2016, 2018 Spring 2022

NUTR 59000 *A Journey Through the Digestive Tract* (2 credits) Spring 2016, 2018

NUTR 61200 *Obesity, Behavior, Physiology and Policy* (2 credits) Fall 2011, 2013

NUTR 62700 *Scientific Writing* (1 credit) only Fall 2013 – 2017, 2020 – Present

NUTR 69400 *Introductory Foods and Nutrition Seminar* (1 credit) Spring 2008, 2013, 2023

NUTR 69500 *Interdepartmental Nutrition Graduate Program Seminar* (1 credit) Spring 2010, 2011 and Fall 2010, 2011

### **Supporting Role (Taught specific topics within team taught courses)**

NUTR 59000 *Food Lipids* (2 credits) Fall 2011, 2013

NUTR 59000 *A Journey Through the Digestive Tract* (2 credits) Spring 2020

NUTR 60500 *Nutrition, Biochemistry and Physiology I* (4 credits) only Fall 2007 – Present

NUTR 60700 *Nutrition, Biochemistry and Physiology III* (2 credits) only Spring 2007 – Present

NUTR 62600 *Advanced Presentation* (1 credit) Spring 2019

### **Professional Development to Support Learning**

2020 ImpactX+ Instruction Matters: Purdue Academic Course Transformation

2014 New to Online: The Essentials, The Sloan Consortium

2006 Solving the Mystery of Writing Good Multiple Choice Questions, Center for Instructional Excellence, Purdue University

2006 University Policies and Procedures Related to Teaching, Center for Instructional Excellence, Purdue University

2006 Designing Instruction, Center for Instructional Excellence, Purdue University

2006 Advanced eInstruction: Using CPS Software, ITaP, Purdue University

2006 Purdue Faculty Teaching Mentoring Program, Mentor: Jim Lehman, Curriculum & Instruction

2005 Technology Tools for Teaching and Learning, ITaP, Purdue University

2005 WebCT Instruction, ITaP, Purdue University

## **ENGAGEMENT**

### **Service to Government or Professional Organizations**

1. Textbook Section Editor for the 5<sup>th</sup> edition of Biochemical, Physiological, and Molecular Aspects of Human Nutrition. Elsevier. 2022 – 2023
2. Guest Editor for a Special Issue of *Biochimica et Biophysica Acta – Molecular and Cell Biology of Lipids on Intestinal Lipid Metabolism in Health and Disease* 2021 – 2022.
3. *Editorial Board Member*: Associate Editor *Frontiers in Physiology, Cell and Developmental Biology and Nutrition* (2021- present), Review Editor, *Frontiers in Physiology - Lipid and Fatty Acid Research* (2012 – 2021).
4. *Reviewer of grant proposals*: American Heart Association, Lipids and Lipoproteins Study Section 2007 – 2010, 2013 – 2018, Kentucky Science & Engineering Foundation Programs and Events 2006, National Science Foundation Chemistry of Life Processes Program in the Division of Chemistry Electronic Proposal Review 2010, Medical Research Council, National Funding Agency for the United Kingdom 2011, Austrian Science Fund 2013, 2014, 2018, 2020, 2022 (Chair of Special Research Program Review), American Diabetes Association 2015 – 2018, National Institute of Health, Integrative Nutrition and Metabolic Processes (INMP) Study Section (Ad Hoc member) 2013, 2015, External Reviewer for Hatch Award – Tufts University 2013, University of Minnesota, 2014, BioTechMed-Graz project evaluation for Young Researcher Group projects for 2022-2024, FWF Austrian Science Fund Emerging Fields international jury 2022-2024, NWO Dutch Research Council 2023.
5. *Reviewer of manuscript submissions*: *American Journal of Physiology: Gastrointestinal and Liver Physiology*; *American Journal of Physiology: Regulatory, Integrative and Comparative Physiology*; *Biochimica et Biophysica Acta – Molecular and Cell Biology of Lipids*; *Biochimica et Biophysica Acta – Molecular Basis of Disease*; *International Journal of Obesity*; *Journal of Nutrition*; *Nutrition Research*; *Obesity*; *British Journal of Nutrition*; *Physiology and Behavior*; *The FASEB Journal*; *Lipids*; *Gastroenterology*; *Transgenic Research*; *Lipids*; *Physiological Reviews*; *PLOS One*; *Journal of Lipid Research*; *Journal of Biological Chemistry*; *Physiological Reports*; *Cell Reports*; *iScience*; *Nature Communications*; *Nature Medicine*; *Clinical Genetics*; *Arteriosclerosis, Thrombosis, and Vascular Biology*
6. *Reviewer of textbook chapters on research expertise*: Reviewed chapters (2-4) in Biochemical, Physiological & Molecular Aspects of Human Nutrition edited by Dr. Martha H. Stipanuk 2011 and 2016
7. *Letter for support for promotion and tenure external to Purdue*: 16
8. *Conference Organizer for Professional Societies/Organizations*:
  - a. Session Chair, 2022 Big Ten Academic Alliance Lipids Conference at the University of Illinois, February 2022.
  - b. Session Chair, 2019 Big Ten Academic Alliance Lipids Conference at University of Minnesota, September 2019.



- c. Chair, 2018 Big Ten Academic Alliance Lipids Conference at Purdue University, February 2018. The goal of this meeting is to establish research and teaching collaborations across the Big Ten in lipids. Responsibilities include inviting speakers, fundraising, and hosting the meeting.
- d. Co-Chair, 2017 FASEB Summer Research Conference on Intestinal Lipid Metabolism. This focused, international meeting happens every three years. Responsibilities included inviting speakers, fundraising, and hosting the meeting.
- e. Chair Elect, Chair, and Past Chair of the Energy and Macronutrient Metabolism Research Interest Section (EMM-RIS) 2009 – 2011
- f. Chair, 2010 American Society for Nutrition (ASN), Minisymposium on Energy and Macronutrient Metabolism at Experimental Biology 2010.
- g. Chair, 2007 and 2008 American Society for Nutrition, (ASN), Minisymposium for Lipids and Lipid Transport at Experimental Biology 2007 and 2008.

## **Service to University, College, and Department**

### **1. University**

- a. Member, Faculty Advisory Committee on Diversity and Inclusion to the Provost 2022 – present
- b. Member, Leadership Team for the Purdue Institute of Inflammation, Immunology and Infectious Disease, 2020 – present
- c. Member, Panel A, the University Promotions Committee, 2019 – 2021
- d. Member, Panel B, the Clinical-Professional Promotions Committee, 2019 – 2021
- e. Poster Judge for Graduate and Undergraduate Research: various years
- f. Reviewer for internal HATCH projects: various years
- g. Reviewer for internal Graduate Student Fellowship Awards: various years
- h. Reviewer for Indiana Center for Translational Sciences Institute (CTSI) Training Awards in Translational Research (TL1), 2022
- i. Member, Animal Facility Master Planning Committee, 2018 – 2019
- j. Director, Interdepartmental Nutrition Program (INP), 2018 – 2021
- k. Member, Beerling and Stamps Foundation Scholarship Selection Committee, 2013 – 2015
- l. Speaker, Women for Purdue, Naples, Florida Feb 2013
- m. Member, Undergraduate Research Committee, 2012 – 2013
- n. Panelist, Golden Honors Day, Purdue Honors College, 2013
- o. Member, Executive Committee for the Obesity and Cancer Discovery Group, 2012 – 2016
- p. Member, Purdue Honors College Task Force, 2011 – 2012
- q. Mentor, HORIZONS Program 2008-2010
- r. Member, Purdue University Life Sciences (PULSe) Graduate Program Executive Committee, representing Membranes Biology training group, 2008
- s. Member, Bindley Bioscience Center, Proteomic Steering Committee, 2007 – 2009
- t. Member, Pre-Professional Health Advisor Search Committee, 2006 – 2007

### **2. College**

- a. Alternate Member representing Nutrition Science, HHS Area Committee for Promotion and Tenure 2023 – 2026
- b. Member, HHS Committee to Advance Diversity, Equity and Inclusion 2022 –
- c. College Marshall, Spring Commencement, May 2022
- d. Member, HHS Dean's Leadership Team 2021 – 2022
- e. Chair, HHS Administrative Review Committee 2022
- f. Member, Faculty Search Committee for Nursing 2021
- g. Chair, Christine M. Ladisch Leadership Award Selection Committee, 2021
- h. Member, Associate Dean for Research Search Committee, 2019
- i. Member, HHS Faculty Mentoring Committees (outside Nutrition Science): Bruno Roseguini (HK)
- j. Member, Signature Area Committee, 2019
- k. Member, HHS Graduate Program Education and Curriculum Committee, 2018 - 2021
- l. Member, HHS Grade Appeals Committee, 2016 – 2018
- m. Member, HHS Career Advisory Council, 2016 – 2018
- n. Member, HHS Grievance Committee, 2016 – 2018
- o. Member, HHS Search Committee to Hire Two Academic Advisors Serving Nutrition Science, 2016

- p. Member, HHS Undergraduate Educational Policy and Curriculum, 2014 - 2018
- q. Member, HHS Teaching Awards Committee, 2014 – 2018
- r. Member, HHS Honors Programs Coordinating Committee, 2012 – 2015
- s. Member, Health and Human Sciences (HHS) Honors Task Force, 2011 – 2012
- t. Member, HHS Strategic Planning Work Group, LEARNING, 2011
- u. Member, Consumer and Family Sciences Honors Council, 2006 – 2011
- v. Member, College Grievance Committee, 2005 – 2010

### 3. Department

- a. Chair, Committee to Advance Diversity, Equity, and Inclusion 2022 –
- b. Lead for Climate and Diversity section for the NUTR Self-Study 2023
- c. Member, Space Utilization/Safety Committee 2022 –
- d. Member, Faculty Search Committees: 11  
Chair, Faculty Search Committees: 1
- e. Mentor, Faculty Mentoring Committees: 9
- f. Member, Diversity, Equity, and Inclusion Committee, 2020 - 2021
- g. Faculty Representative, Purdue University Nutrition Society Alumni Association (PUNSAN), 2018 – 2021
- h. Member, Nutrition Clinical Research Center Committee, 2019 – 2020
- i. Member, Workload Policy Committee, 2019
- j. Chair, Space Committee, 2019 – 2020
- k. Member, Didactic and Coordinated Programs in Dietetics Advisory Committee, 2016 - 2017
- l. Member, Advisory Committee to the Head, 2015 – 2021
- m. Member, 110<sup>th</sup> Anniversary Event Planning Committee 2015-2016
- n. Chair, Nutrition Science Recruitment Committee 2015-2017
- o. Faculty Mentor, Nutrition Science Learning Community 2015-2017, 2019-2020
- p. Member, Primary Committee (Department of Nutrition Science Promotion and Tenure Committee), 2011- present
- q. Leader, International Life Science Institute (ILSI) North America Nutrition Graduate Student Summit, 2013
- r. Member, Graduate Education Committee (Nutrition Science and Interdepartmental Graduate Program in Nutrition), 2007 – 2021
- s. Member, Nutrition Science Undergraduate Teaching Committee, 2007 – 2018  
Chair, Nutrition Science Undergraduate Teaching Committee, 2014 – 2018
- t. Member, Department of Nutrition Science Faculty Affairs Committee, 2007 – 2008, 2010 – 2011
- u. Member, Graduate Admissions Committee (Nutrition Science and Interdepartmental Graduate Program in Nutrition), 2005 – 2021  
Chair, Graduate Admissions Committee, 2018 – 2021
- v. Representative, Pre-Professional Health Meetings, IUSM, 2006 – 2015
- w. Director, Undergraduate Major in Nutrition Science, 2006 – 2016
- x. Director, Nutrition Science Honors Program, 2006 – 2015, 2017
- y. Academic Advisor for 9 – 20 undergraduate students per year, 2005-2011

### Certifications/Special Training

Mental Health First Aid USA	2019
Boiler Down (De-escalating Tense Situations) Purdue Police Department	2020
Purdue University Mediation Training	2022

### Professional Development to Support Diversity, Equity, and Inclusion

2023	Green Zone Training, Purdue Veterans Success Center
2021	Gender Bias Workshop, Susan Bulkeley Butler Center for Leadership Excellence
2019	Enabling Conversations about Inclusion, Susan Bulkeley Butler Center for Leadership Excellence
2019	Faculty Retention Roundtable, Susan Bulkeley Butler Center for Leadership Excellence
2019	University of New Hampshire Powerplay & Inclusion Works: Bias Awareness and Intervention
2017	Faculty Hiring & Diversity. ADVANCE Purdue Center for Faculty Success Faculty Hiring Workshop
2005	Diversity Forum, Purdue University (3-day workshop)