

CURRICULUM VITAE

John R. Burgess, Ph.D.
Department of Foods and Nutrition
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Education

Ph.D. (awarded May 1988), Nutrition, The Pennsylvania State University, University Park, PA 16802

M.S. (awarded August 1985), Nutrition, The Pennsylvania State University, University Park, PA 16802

B.S. (awarded May 1980), Biology, The Pennsylvania State University, University Park, PA 16802

Employment and Honors

Academic appointments

Associate Professor, (1997 – present) Department of Foods and Nutrition, Purdue University, West Lafayette, IN 47907

Assistant Professor, (1990-1997) Department of Foods and Nutrition, Purdue University, West Lafayette, IN 47907

Postdoctoral Research Associate, (1988-1990) Pharmacology Section, Department of Biological Sciences, University of California, Santa Barbara, CA 93106

Research Technologist, (1980-1984) Center for Air Environment Studies, Pennsylvania State University, University Park, PA 16802

Memberships in academic, professional, and scholarly societies.

American Association for the Advancement of Science
American Society of Nutrition
American Chemical Society
Society for Experimental Biology and Medicine
Society for Free Radical Biology and Medicine

Honors

Gamma Sigma Delta, Faculty Award of Merit, 2008
College of Health and Humans Sciences Graduate Mentor Award, 2019

CREATIVE ENDEAVOR, RESEARCH, SCHOLARSHIP

Published work: Graduate Students **Bolded**

<u>Google Scholar Citation Statistics</u>	<u>All</u>	<u>Since 2017</u>
Citations	5922	1468
h-index	37	22
i10-index	60	33

Book chapters:

Burgess, J. R. and **J. E. Andrade** (2006). Antioxidant Effects of Citrus Flavonoid Consumption. Potential Health Benefits of Citrus. B. S. Patil, E. G. Miller, N. D. Turner and J. S. Brodbelt. Washington, DC, An American Chemical Society Publication.

Burgess, J. R. and **F. Gao** (2002). The antioxidant effects of inositol phosphates. Food Phytates. N. R. Reddy and S. K. Sathe. Boca Raton, CRC Press: 189-197.

Burgess, J. R. and **L. J. Stevens** (2003). Essential fatty acids in relation to attention deficit hyperactivity disorder: an update. Phospholipid Spectrum Disorder in Psychiatry and Neurology. M. Peet, I. Glen and D. Horrobin. Carnforth, Marius Press.

Stevens, L. and J. R. Burgess (1999). Essential Fatty Acids in Children with Attention-Deficit/Hyperactivity Disorder. Phospholipid spectrum disorder in psychiatry. M. Peet, I. Glen and D. F. Horrobin. Carnforth, UK, Marius Press: xii, 339 p.

Burgess, J. (1991). Arachidonic acid metabolism in calcifying red algae: A model for studying the role of eicosanoids in the biomineralization process in mammals. In: Marine Pharmacology: prospects for the 1990s. (R.S. Jacobs and M. de Carvalho, eds) pp.54-55. California Sea Grant College, University of California, La Jolla, CA.

Burgess*, J. R., H. Yang, M. Chang, G. Hildenbrandt, and C. C. Reddy. (1990). Involvement of glutathione peroxidases in prostaglandin biosynthesis. In: Biological Oxidation Systems. (C. C. Reddy, G. A. Hamilton, and K. M. Madyaftha, ed), pp. 667-682, vol. 2, Academic Press, New York.

Educational publications:

Burgess, J. R. (2007) CASPiE Module Lab Manual "Phytochemical Antioxidants with Potential Health Benefits in Foods" Hayden McNeil Publishing, 44 pages.

Refereed articles:

Stochelski, M. A., T. Wilmanski, M. Walters and J. R. Burgess (2019). "D3T acts as a pro-oxidant in a cell culture model of diabetes-induced peripheral neuropathy." Redox Biol 21: 101078.

Wilmanski, T., X. Zhou, W. Zheng, A. Shinde, S. S. Donkin, M. Wendt, J. R. Burgess and D. Teegarden (2017). "Inhibition of pyruvate carboxylase by 1alpha,25-dihydroxyvitamin D promotes oxidative stress in early breast cancer progression." Cancer Lett 411: 171-181.

Wilmanski, T., K. Buhman, S. S. Donkin, J. R. Burgess and D. Teegarden (2017). "1alpha,25-dihydroxyvitamin D inhibits de novo fatty acid synthesis and lipid accumulation in metastatic breast cancer cells through down-regulation of pyruvate carboxylase." J Nutr Biochem 40: 194-200.

Forbes, R., D. Gasevic, E. M. Watson, T. R. Ziegler, E. Lin, J. R. Burgess and N. Gletsu-Miller (2016). "Essential Fatty Acid Plasma Profiles Following Gastric Bypass and Adjusted Gastric Banding Bariatric Surgeries." Obes Surg 26(6): 1237-1246.

Wilmanski, T., A. Barnard, M. R. Parikh, J. Kirshner, K. Buhman, J. Burgess and D. Teegarden (2016). "1 α ,25-Dihydroxyvitamin D Inhibits the Metastatic Capability of MCF10CA1a and MDA-MB-231 Cells in an In Vitro Model of Breast to Bone Metastasis." *Nutr Cancer* 68(7): 1202-1209.

Nogradi, N., L. L. Couetil, J. Messick, **M. A. Stochelski** and J. R. Burgess (2015). "Omega-3 Fatty Acid supplementation provides an additional benefit to a low-dust diet in the management of horses with chronic lower airway inflammatory disease." *J Vet Intern Med* 29(1): 299-306.

Stevens, L. J., J. R. Burgess, **M. A. Stochelski** and T. Kuczek (2015). "Amounts of artificial food dyes and added sugars in foods and sweets commonly consumed by children." *Clin Pediatr (Phila)* 54(4): 309-321.

Stevens, L. J., J. R. Burgess, **M. A. Stochelski** and T. Kuczek (2014). "Amounts of artificial food colors in commonly consumed beverages and potential behavioral implications for consumption in children." *Clin Pediatr (Phila)* 53(2): 133-140.

Zhou, Y., D. E. Harrison, K. Love-Myers, Y. Chen, A. Grider, K. Wickwire, J. R. Burgess, **M. A. Stochelski** and **R. Pazdro** (2014). "Genetic analysis of tissue glutathione concentrations and redox balance." *Free Radic Biol Med* 71: 157-164.

Andrade, J. and J. R. Burgess (2013). "Effect of Dietary EGCG on Normal and Vitamin E and Selenium Deficient Rats." *Food Nutr Sci* 4: 163-173.

Stevens, L. J., T. Kuczek, J. R. Burgess, **M. A. Stochelski**, L. E. Arnold and L. Galland (2013). "Mechanisms of behavioral, atopic, and other reactions to artificial food colors in children." *Nutr Rev* 71(5): 268-281.

Houchins, J. A., J. R. Burgess, W. W. Campbell, J. R. Daniel, M. G. Ferruzzi, G. P. McCabe and R. D. Mattes (2012). "Beverage vs. solid fruits and vegetables: effects on energy intake and body weight." *Obesity (Silver Spring)* 20(9): 1844-1850.

Pazdro, R. and J. R. Burgess (2012). "The antioxidant 3H-1,2-dithiole-3-thione potentiates advanced glycation end-product-induced oxidative stress in SH-SY5Y cells." *Exp Diabetes Res* 2012: 137607.

Pazdro, R. and J. R. Burgess (2012). "Differential effects of alpha-tocopherol and N-acetyl-cysteine on advanced glycation end product-induced oxidative damage and neurite degeneration in SH-SY5Y cells." *Biochim Biophys Acta* 1822(4): 550-556.

Cho, K. W., Y. O. Kim, **J. E. Andrade**, J. R. Burgess and Y. C. Kim (2011). "Dietary naringenin increases hepatic peroxisome proliferators-activated receptor alpha protein expression and decreases plasma triglyceride and adiposity in rats." *Eur J Nutr* 50(2): 81-88.

Stevens, L. J., T. Kuczek, J. R. Burgess, E. Hurt and L. E. Arnold (2011). "Dietary sensitivities and ADHD symptoms: thirty-five years of research." *Clin Pediatr (Phila)* 50(4): 279-293.

Ganesan, S., A. N. Faris, A. T. Comstock, S. S. Chatteraj, A. Chatteraj, J. R. Burgess, J. L. Curtis, F. J. Martinez, S. Zick, M. B. Hershenson and U. S. Sajjan (2010). "Quercetin prevents progression of disease in elastase/LPS-exposed mice by negatively regulating MMP expression." *Respir Res* 11: 131.

Horn, M., P. Gunn, M. Van Emon, R. Lemenager, J. Burgess, N. A. Pyatt and S. L. Lake (2010). "Effects of natural (RRR alpha-tocopherol acetate) or synthetic (all-rac alpha-tocopherol acetate) vitamin E supplementation on reproductive efficiency in beef cows." *J Anim Sci* 88(9): 3121-3127.

Horn, M. J., M. L. Van Emon, P. J. Gunn, S. D. Eicher, R. P. Lemenager, J. Burgess, N. Pyatt and S. L. Lake (2010). "Effects of maternal natural (RRR alpha-tocopherol acetate) or synthetic (all-rac alpha-tocopherol acetate) vitamin E supplementation on suckling calf performance, colostrum immunoglobulin G, and immune function." *J Anim Sci* 88(9): 3128-3135.

Pazdro, R. and J. R. Burgess (2010). "The role of vitamin E and oxidative stress in diabetes complications." *Mech Ageing Dev* 131(4): 276-286.

Hoch, M. A., C. B. Russell, D. M. Steffen, G. C. Weaver and J. R. Burgess (2009). "Assessment of Antioxidant Capacities in Foods: A Research Experience for General Chemistry Students." *Journal of Chemical Education* 86(5): 595-597.

Li, J., Byrne, M. E., Chang, E., Jiang, Y., Donkin, S. S., Buhman, K. K., Burgess, J. R., & Teegarden, D. (2008). 1alpha,25-Dihydroxyvitamin D hydroxylase in adipocytes. *J Steroid Biochem Mol Biol*, 112(1-3), 122-126.

Tepper, B. J., Williams, T. Z., Burgess, J. R., **Antalis, C. J.**, & Mattes, R. D. (2008). Genetic variation in bitter taste and plasma markers of anti-oxidant status in college women. *Int J Food Sci Nutr*, 1-11.

White, H. M., Richert, B. T., Radcliffe, J. S., Schinckel, A. P., Burgess, J. R., Koser, S. L., et al. (2008). Feeding CLA partially recovers carcass quality in pigs fed dried corn distillers grains with solubles. *J Anim Sci*.

White, H. M., Richert, B. T., Schinckel, A. P., Burgess, J. R., Donkin, S. S., & Latour, M. A. (2008). Effects of temperature stress on growth performance and bacon quality in grow-finish pigs housed at two densities. *J Anim Sci*, 86(8), 1789-1798.

Andrade, J. E., & Burgess, J. R. (2007). Effect of the citrus flavanone naringenin on oxidative stress in rats. *J Agric Food Chem*, 55(6), 2142-2148.

Chale-Rush, A., Burgess, J. R., & Mattes, R. D. (2007). Evidence for human orosensory (taste?) sensitivity to free fatty acids. *Chem Senses*, 32(5), 423-431.

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DeCabo, R., Burgess, J. R., & Navas, P. (2006). Adaptations to oxidative stress induced by vitamin E deficiency in rat liver. *J Bioenerg Biomembr*, 38(5-6), 309-317.

Guo, Q., Richert, B. T., Burgess, J. R., Webel, D. M., Orr, D. E., Blair, M., et al. (2006). Effects of dietary vitamin E and fat supplementation on pork quality. *J Anim Sci*, 84(11), 3089-3099.

Guo, Q., Richert, B. T., Burgess, J. R., Webel, D. M., Orr, D. E., Blair, M., et al. (2006). Effect of dietary vitamin E supplementation and feeding period on pork quality. *J Anim Sci*, 84(11), 3071-3078.

Antalis, C. J., Stevens, L. J., Campbell, M., Pazdro, R., Ericson, K., & Burgess, J. R. (2006). Omega-3 fatty acid status in attention-deficit/hyperactivity disorder. *Prostaglandins Leukot Essent Fatty Acids*, 75(4-5), 299-308.

Begum, R., Belury, M. A., Burgess, J. R., & Peck, L. W. (2004). Supplementation with n-3 and n-6 polyunsaturated fatty acids: effects on lipoxygenase activity and clinical symptoms of pruritus in hemodialysis patients. *J Ren Nutr*, 14(4), 233-241.

Stedman, L., Nickel, K. P., Castillo, S. S., **Andrade, J.**, Burgess, J. R., & Teegarden, D. (2003). 1,25-dihydroxyvitamin D inhibits vitamin E succinate-induced apoptosis in C3H10T1/2 cells but not Harvey ras-transfected cells. *Nutr Cancer*, 45(1), 93-100.

Stevens, L., Zhang, W., Peck, L., Kuczek, T., Grevstad, N., **Mahon, A.**, et al. (2003). EFA supplementation in children with inattention, hyperactivity, and other disruptive behaviors. *Lipids*, 38(10), 1007-1021.

Braun, C. M., Burgess, J. R., & Latour, M. A. (2001). Liver lipid accumulation in duck embryos and hatchlings change with parental age. *Biol Neonate*, 80(3), 228-234.

Arroyo, A., Kagan, V. E., Tyurin, V. A., Burgess, J. R., **de Cabo, R.**, Navas, P., et al. (2000). NADH and NADPH-dependent reduction of coenzyme Q at the plasma membrane. *Antioxid Redox Signal*, 2(2), 251-262.

Navarro, F., Arroyo, A., Martin, S. F., Bello, R. I., **de Cabo, R.**, Burgess, J. R., et al. (1999). Protective role of ubiquinone in vitamin E and selenium-deficient plasma membranes. *Biofactors*, 9(2-4), 163-170.

del Castillo-Olivares, A., Yantiri, F., Chueh, P. J., Wang, S., Sweeting, M., Sedlak, D., et al. (1998). A drug-responsive and protease-resistant peripheral NADH oxidase complex from the surface of HeLa S cells. *Arch Biochem Biophys*, 358(1), 125-140.

Navarro, F., Navas, P., Burgess, J. R., Bello, R. I., **De Cabo, R.**, Arroyo, A., et al. (1998). Vitamin E and selenium deficiency induces expression of the ubiquinone-dependent antioxidant system at the plasma membrane. *Faseb J*, 12(15), 1665-1673.

Burgess, J. R., & Reddy, C. C. (1997). Isolation and characterization of an enzyme from sheep seminal vesicles that catalyzes the glutathione-dependent reduction of prostaglandin H₂ to prostaglandin F₂ alpha. *Biochem Mol Biol Int*, 41(2), 217-226.

Burgess, J. R., & **Kuo, C.-F.** (1996). Increased calcium-independent phospholipase A₂ activity in vitamin E and selenium-deficient rat lung, liver, and spleen cytosol is time-dependent and reversible. *J. Nutr. Biochem.*, 7, 366-374.

Stevens, L. J., Zentall, S. S., Abate, M. L., Kuczek, T., & Burgess, J. R. (1996). Omega-3 fatty acids in boys with behavior, learning, and health problems. *Physiol Behav*, 59(4-5), 915-920.

Teegarden, D., **Xu, X.**, & Burgess, J. R. (1996). Transfection of C3H10T1/2 cells with the Harvey-ras oncogene reduces cytosolic phospholipase A₂ function. *Cancer Lett*, 107(1), 59-64.

Kuo, C. F., Cheng, S., & Burgess, J. R. (1995). Deficiency of vitamin E and selenium enhances calcium-independent phospholipase A2 activity in rat lung and liver. *J Nutr*, 125(6), 1419-1429.

Stevens, L. J., Zentall, S. S., Deck, J. L., Abate, M. L., Watkins, B. A., Lipp, S. R., et al. (1995). Essential fatty acid metabolism in boys with attention-deficit hyperactivity disorder. *Am J Clin Nutr*, 62(4), 761-768.

Burgess, J. R., R. I. Delarosa, R. S. Jacobs and A. Butler (1991). "A new eicosapentaenoic acid formed from arachidonic acid in the coralline red algae *Bossiella orbigniana*." *Lipids* 26(2): 162-165.

Chang, M., Burgess, J. R., Scholz, R. W., & Reddy, C. C. (1990). The induction of specific rat liver glutathione S-transferase subunits under inadequate selenium nutrition causes an increase in prostaglandin F2 alpha formation. *J Biol Chem*, 265(10), 5418-5423.

Burgess, J. R., Chow, N. W., Reddy, C. C., & Tu, C. P. (1989). Amino acid substitutions in the human glutathione S-transferases confer different specificities in the prostaglandin endoperoxide conversion pathway. *Biochem Biophys Res Commun*, 158(2), 497-502.

Eskew, M. L., Zarkower, A., Scheuchenzuber, W. J., Burgess, J. R., Scholz, R. W., Hildenbrandt, G., et al. (1989). Effects of inadequate vitamin E and/or selenium nutrition on the release of arachidonic acid metabolites in rat alveolar macrophages. *Prostaglandins*, 38(1), 79-89.

Hong, Y., Li, C. H., Burgess, J. R., Chang, M., Salem, A., Srikumar, K., et al. (1989). The role of selenium-dependent and selenium-independent glutathione peroxidases in the formation of prostaglandin F2 alpha. *J Biol Chem*, 264(23), 13793-13800.

Reddanna, P., Whelan, J., Burgess, J. R., Eskew, M. L., Hildenbrandt, G., Zarkower, A., et al. (1989). The role of vitamin E and selenium on arachidonic acid oxidation by way of the 5-lipoxygenase pathway. *Ann N Y Acad Sci*, 570, 136-145.

Burgess, J. R., Yang, H., Chang, M., Rao, M. K., Tu, C. P., & Reddy, C. C. (1987). Enzymatic transformation of PGH2 to PGF2 alpha catalyzed by glutathione S-transferases. *Biochem Biophys Res Commun*, 142(2), 441-447.

Chang, M., Hong, Y., Burgess, J. R., Tu, C. P., & Reddy, C. C. (1987). Isozyme specificity of rat liver glutathione S-transferases in the formation of PGF2 alpha and PGE2 from PGH2. *Arch Biochem Biophys*, 259(2), 548-557.

Reddy, C. C., Scholz, R. W., Ho, C. Y., Burgess, J. R., Massaro, E. J., & Hecklen, J. (1985). Effects of diethylhydroxylamine on hepatic microsomal lipid peroxidation and glutathione S-transferases. *J Toxicol Environ Health*, 15(3-4), 467-475.

Reddy, C. C., Burgess, J. R., Gong, Z. Z., Massaro, E. J., & Tu, C. P. (1983). Purification and characterization of the individual glutathione S-transferases from sheep liver. *Arch Biochem Biophys*, 224(1), 87-101.

Reddy, C. C., Burgess, J. R., & Tu, C. P. (1983). Isolation and characterization of an anionic glutathione S-transferase from rat liver cytosol. *Biochem Biophys Res Commun*, 111(3), 840-846.

Reddy, C. C., Tu, C. P., Burgess, J. R., Ho, C. Y., Scholz, R. W., & Massaro, E. J. (1981). Evidence for the occurrence of selenium-independent glutathione peroxidase activity in rat liver microsomes. *Biochem Biophys Res Commun*, 101(3), 970-978.

Citation frequency for peer-reviewed papers:

Number	First Author	Year	Journal	Google Scholar
1	Stochelski, M.	2019	Redox Biol	5
2	Wilmanski, T.	2017	Cancer Lett	55
3	Wilmanski, T.	2017	J Nutr Biochem	30
4	Wilmanski, T.	2017	Nutr Cancer	15
5	Forbes, R.	2016	Obes Surg	22
6	Stevens, L.	2015	Clin Pediatr (Phila)	50
7	Nogradi, N.	2015	J Vet Intern Med	38
8	Zhou, Y.	2014	Free Radic Biol Med	23
9	Stevens, L.	2014	Clin Pediatr (Phila)	82
10	Stevens, L.	2013	Nut Rev	119
11	Pazdro, R.	2012	Biochim Biophys Acta	35
12	Pazdro, R.	2012	Exp Diabetes Res	28
13	Houchins, J.A.	2012	Obesity (Silver Spring)	64
14	Stevens, L.	2011	Clin Pediatr (Phila)	151
15	Cho, K.W.	2011	Eur J Nutr	142
16	Pazdro, R.	2010	Mech Ageing Dev	259
17	Horn, M.J.	2010	J Anim Sci	20
18	Horn, M.J.	2010	J Anim Sci	18
19	Ganesan, S.	2010	Respir Res	127
20	White, H. M.	2009	J Anim Sci	53
21	Tepper, B.J.	2009	Int J Food Sci Nutr	32
22	Hoch, M. A.	2009	J Chemical Education	16
23	White, H. M.	2008	J Anim Sci	68
24	Li, J.	2008	J Steroid Biochem Mol Biol	196
25	Chale-Rush, A.	2007	Am J Physiol Gastrointest Live Physiol	135
26	Chale-Rush, A.	2007	Chem Senses	249
27	Andrade, J.E.	2007	J Agric Food Chem	27
28	Nanua, S.	2006	Am J Respir Cell Mol Biol	39
29	Guo, Q.	2006	J Anim Sci	98
30	Guo, Q.	2006	J Anim Sci	60
31	DeCabo, R.	2006	J Bioenerg Biomembr	27
32	Antalis, C. J.	2006	Prostaglandin Leukot Essent Fatty Acids	280
33	Begum, R.	2004	J Ren Nutr	37
34	Shim, S. M.	2003	J Food Science	28

35	Stevens, L.	2003	Lipids	432
36	Stedman, L.	2003	Nutr Cancer	16
37	Burgess, J.R.	2002	Food Phytates	15
38	Braun, C. M.	2001	Biol Neonate	7
39	Burgess, J. R.	2000	Am J Clin Nutr	396
40	Arroyo, A.	2000	Antioxid Redox Signal	40
41	Navarro, F.	1999	Biofactors	70
42	del-Castillo-Olivares, A.	1998	Arch Biochem Biophys	57
43	Navarro, F.	1998	FASEB J	146
44	Xu, X.	1997	Cancer Lett	2
45	Burgess, J. R.	1997	Biochem Mol Biol Int	20
46	Teegarden, D.	1996	Cancer Lett	3
47	Burgess, J. R.	1996	J Nutr Biochem	21
48	Stevens, L.	1996	Physiol Behav	372
49	Stevens, L.	1995	Am J Clin Nutr	700
50	Kuo, C. F.	1995	J Nutr	59
51	Burgess, J. R.	1991	Lipids	62
52	Chang, M.	1990	J Biol Chem	65
53	Reddanna, P.	1989	Ann N Y Acad Sci	96
54	Hong, Y.	1989	J Biol Chem	75
55	Eskew, M. L.	1989	Prostaglandins	30
56	Burgess, J. R.	1989	Biochem Biophys Res Commun	32
57	Chang, M.	1987	Arch Biochem Biophys	72
58	Burgess, J. R.	1987	Biochem Biophys Res Commun	51
59	Reddy, C. C.	1985	J Toxicol Environ Health	7
60	Reddy, C. C.	1983	Biochem Biophys Res Commun	20
61	Reddy, C. C.	1983	Arch Biochem Biophys	67
62	Reddy, C. C.	1981	Biochem Biophys Res Commun	149

Manuscripts in Preparation:

Hammoud, M., Terwilliger, C., Wilmanski, T.M. Stochelski, M.A., Burgess, J.R. (2021) Impact of supplementation of omega-3 fatty acids on behavioral outcomes in the juvenile Spontaneously Hypertensive Rat as an animal model for attention-deficit/hyperactivity disorder. (To be submitted to *Nutrients*)

Stochelski, M.A., Wilmanski, T.M., Burgess, D., Burgess, J.R. (2021) Impact of disrupting the thiol redox state on neurite degeneration in SH-SY5Y Cells. (To be submitted to *Redox Biology*)

Published abstracts and conference reports:

Stochelski, M.A., Burgess, J.R. (2018) The Role of Glutathione Maintenance in Protection Against Advanced Glycation Induced Neurite Degeneration in SH-SY5Y Cells. *FASEB J* 32(1_suppl), 538.14-538.14

Stochelski, M.A., Wilmanski, T.M., Burgess, J.R. (2017) The Role of N-Acetylcysteine and 3H-1,2-Dithiole-3-Thione in Maintaining Glutathione Status and Protection against Advanced Glycation End Product Induced Neurite Degeneration in SH-SY5Y Cells. *Free Radic Biol Med*, 112, (1 Supplement) 77-78, Nov. 2017.

Stochelski, M.A., Burgess, J. R. (2017) The Role of N-Acetylcysteine and 3H-1,2-Dithiole-3-Thione in Maintaining Glutathione Status and Protection Against Advanced Glycation End Product Induced Neurite Degeneration in SH-SY5Y Cells. *The FASEB Journal*, 31 (1 Supplement), 636.11

Wilmanski, T., Shinde, A., Donkin, S., Burgess, J., Wendt, M., Teegarden, T. (2017) Pyruvate Carboxylase is Essential for Breast Cancer Metastasis in Vivo. *The FASEB Journal*, 31 (1 Supplement), 942.12

Wilmanski, T., K. Buhman, S. Donkin, J. Burgess and D. Teegarden (2017) 1 α ,25-Dihydroxyvitamin D3 Inhibits De Novo Fatty Acid Synthesis and Neutral Lipid Accumulation in Metastatic Breast Cancer Cells Through Downregulation of Pyruvate Carboxylase. *The FASEB Journal* 31(1 Supplement), 790.14

Wilmanski, T., A. Barnard, S. Donkin, M. Parikh, K. Buhman, J. Kirshner, J. Burgess and D. Teegarden (2016). 1 α ,25-Dihydroxyvitamin D3 Inhibits De Novo Fatty Acid Synthesis and Metastatic Capability of Breast Cancer Cells. *The FASEB Journal* 30(1 Supplement), 688.684.

Wilmanski, T., Zheng, W., Donkin, S., Raftery, D. Bequette, B., Burgess, J. and D. Teegarden (2014) 1,25-dihydroxyvitamin D alters the pentose phosphate pathway in Harvey-ras oncogene transfected MCF10A epithelial cells (644.3) *The FASEB Journal* 28 (1 Supplement) 644.3

Huss, L., McCabe, S., Dobbs-Oats, J., Burgess, J., Behnke, C., Santerre, C., and S. Kranz (2014) Development of child-friendly fish dishes to increase young children's acceptance and consumption of fish. *The FASEB Journal* 28 (1 Supplement) 1019.24

Myracle, A.D., Madian, A., Burgess, J.R., Ferruzzi, M., Regnier, F.E., and E.M. Janle (2011) Evaluating Antioxidant Efficacy via Changes in the Oxidized Protein Profile in the Zucker Diabetic Fatty Rat. *The FASEB Journal* 25 (1 Supplement) 95.4

Pazdro, R. and J.R. Burgess (2010) Vitamin E effects on oxidative damage and cell morphology in AGE-treated SH-SY5Y cells. *The FASEB Journal* 24 (1 Supplement) 1001.7

Koelliker, Y., Tepper, B.J., Simon, J.E. and J.R. Burgess (2009) PROP Sensitivity and Dietary Intake of Antioxidant-Rich Foods. *Chemical Senses* 34(7), A39

Weaver, G.C., Ferruzzi, M. and J.R. Burgess (2009) CHED 148-Antioxidant capacity studies of black tea and common foods before and after digestion. *Amer Chemical Soc.* 238

Huang, J., Peacock, M., Adamec, J., Fleet, J., Burgess, J., Teegarden, D., Ferruzzi, M. and C.M. Weaver (2009) Development and validation of a new LC-MS/MS method for simultaneous detection and quantification of Vitamin D related metabolites. *The FASEB Journal* 23 (1 Supplement) 731.1

Myracle, A.D., Madian, A., Burgess, J.R., Ferruzzi, M., Regnier, F. and E. Janle (2009) Effect of different green tea formulations on diabetes in the Zucker Diabetic Rat. The FASEB Journal 23 (1 Supplement) 729.2

Antalis, C. J., Davidson, T., & Burgess, J. R. (2006). High dietary alpha tocopherol improves attention deficit/hyperactivity (ADHD)-like behavior in juvenile spontaneously hypertensive rats (SHR). FASEB J., 20(5), A1002-e-1003.

Cho, K.W., Kim, K.O., Burgess, J.R. and Kim Y.-C. (2006) Daidzein stimulates glucose uptake through activation of PPAR {gamma} in 3T3-L1 adipocytes. The FASEB Journal 20 (4) A597

Cho, K.W., Andrade, J.E., Kim, R., Burgess, J.R. and Y.-C. Kim (2005) Dietary naringenin upregulates hepatic peroxisome proliferator activated receptor alpha (PPAR alpha) expression in rats. The FASEB Journal 19 (5) A1028.

Williams, T., Tepper, B., Burgess, J.R. and R.D. Mattes (2005) PROP-taster and antioxidant status in young adult females. The FASEB Journal 19 (5) A1496.

Antalis, C.J., Davidson, T. and J.R. Burgess (2005) Characterization of an animal model for nutritional intervention in attention deficit/hyperactivity disorder (AD/HD). The FASEB Journal 19 (5) A1028.

Andrade, J. E. and Burgess, J. R. (2005). Effect of citrus flavanone naringenin on vitamin E and selenium deficiency in rats. The FASEB Journal 19 (5) A453.

Gandolph, J.G., Burgess, J.R., Perchonok, M.H., Watkins, B.A. and Mauer, L.J. (2005) Effects of gamma-radiation on lipid oxidation and fatty acid composition. 2005 IFT Annual Meeting. July 15-20 New Orleans, LA.

Gandolph, J.G., Burgess, J.R., Perchonok, M.H., Watkins, B.A. and Mauer, L.J. (2005) Effects of gamma-radiation on reducing power of antioxidants. 2005 IFT Annual Meeting. July 15-20 New Orleans, LA.

Burgess, J.R. (2004) Antioxidant and lipid oxidation effects of citrus flavonoid consumption. Abstracts of papers of the American Chemical Society 228, U71.

Shim, S.M., Santerre, C.R., Burgess, J.R. and Deardorff, D. (2003) Omega-3 fatty acids and PCB in fish oil supplements. 2003 IFT Annual Meeting-Chicago.

Andrade, J. E., & Burgess, J. R. (2002). Effect of dietary flavonoid antioxidants on vitamin E and selenium deficiency in rats. FASEB J, 16(5), A1009.

Andrade, J. E., & Burgess, J. R. (2002). Effect of dietary flavonoid antioxidants on vitamin E and selenium deficiency in rats. FASEB J, 16(5), A1009.

Burgess, J. R., **Stevens, L., Zhang, W.**, & Peck, L. (2000). Long-chain polyunsaturated fatty acids in children with attention-deficit hyperactivity disorder. Am J Clin Nutr, 71(1 Suppl), 327S-330S.

Burgess, W.D., Stesin, B., Wood, O., Burgess, J.R. and Boushey, C. (2000) A methods for estimating nutrient intake from food pantries. FASEB J, 14(4), A730.

- Mahon, A.K.**, Burgess, J., Stevens, L. and Peck, L. (1999) Dietary intake in relation to children with attention-deficit hyperactivity disorder. *Journal of the American Dietetic Association* 99(9), A014.
- R. DeCabo, R.** Navarro, J.M. Villalba, P. Navas, C. Bauer and J.R. Burgess. (1999). Adaptive responses to oxidative stress induced by vitamin E and selenium deficiency. *FASEB J.* 13(4):A563.
- L. Stedman, K.P. Nickel, S.S. Castillo, J. R. Burgess and D. Teegarden. (1999). Calcitriol inhibits vitamin E succinate - induced apoptosis preferentially in untransformed C3H10T1/2 cells. *FASEB J.* 13(5):A918.
- Shi, L.** and Burgess, J.R. (1998). Role of calcium-independent phospholipase A2 in cellular defense against oxidative stress. *FASEB J.* 12(4):A254.
- Begun, R., Peck, L. and Burgess, J.R. (1998). Effect of supplementation with long chain fatty acids in hemodialysis patients. *FASEB J.* 12(4):A562
- Gao, F.**, Weaver, C. M., & Burgess, J. R. (1997). Increased calcium-independent phospholipase A2 activity in vitamin E and selenium deficient rat intestine is prevented by tertbutylhydroquinone. *Faseb J*, 11(3), A583.
- Burgess, J.R. and **C.-F. Kuo**. (1996). Antioxidant nutrient deficiency increases two distinct calcium-independent phospholipase A2 activities in rat lung and spleen. *FASEB J.* 10(3):A478.
- Cheng, S.**, **C.-F. Kuo** and J.R. Burgess. (1996). Characterization of a rat lung calcium-independent phospholipase A2 activity enhanced by vitamin E and selenium deficiency. *FASEB J.* 10(3):A479
- Stevens, L.J.**, S.S. Zentall and J.R. Burgess. (1996). Omega-3 and Omega-6 fatty acid status in boys with Attention-Deficit/Hyperactivity Disorder. *FASEB J.* 10(3):A735
- Teegarden, D., **X. Xu** and J.R. Burgess. (1996). Increased prostaglandin H synthase activity in H-ras-transfected cells. *FASEB J.* 10(3):A755
- Burgess, J. R., **Kuo, C.-F.** and **S. Cheng**. (1995). Deficiency of vitamin E and selenium enhances calcium-independent phospholipase A2 activity differentially in rat tissues. *FASEB J.* 9:A892.
- Xu, X.**, Teegarden, D. and J. R. Burgess. 1995. Phospholipase A2 activity in stably H-ras transformed C3H10T½ cells. *FASEB J.* 9:A536.
- Kuo, C.-F.**, and J. R. Burgess. 1994. Deficiency of vitamin E and selenium induces a low molecular weight, calcium-independent form of phospholipase A2 in rat lung. *FASEB J.* 8(5):A925.
- Xu, H., B. A. Watkins, M.F. Seifert, and J. R. Burgess. 1994. Dietary vitamin E and lipid alter bone histomorphometry. *FASEB J.* 8(4): A273.
- Watkins, B.A., Shen, C.-L., Lim, S.S., Burgess, J., Xu, H. and McMurty, J. 1993. Dietary n-3 PUFA elevated 20:5n3 in bone polar lipids and plasma IGF-1 levels in chicks. *FASEB J.* 7(3):A150.

Huang, Y. and J. R. Burgess. 1992. Nutrient status of vitamin E affects phospholipase A2 in the rat. FASEB J. 6:A1908.

Burgess, J. R., Jacobs, R. S. and C. C. Reddy. 1991. Effect of oxidant stress on phospholipase A2 activity in mammalian tissues. XIth Washington International Spring Symposium, entitled "Prostaglandins, Leukotrienes and Lipoxins '91" May 1991.

Burgess, J. R., G. Hildenbrandt, and C. C. Reddy. 1988. Effects of altered vitamin E and selenium nutritional status on prostaglandin biosynthesis in rat tissues. FASEB J. 2:A1049.

Chang, M., J. R. Burgess, and C. C. Reddy. 1988. Specificity of induction of rat liver glutathione S-transferases under inadequate selenium nutrition and effect on PGF₂α formation. FASEB J. 2:A1049.

Eskew, M. L., W. J. Scheuchenzuber, A. Zarkower, J. R. Burgess, and C. C. Reddy. 1988. Effects of vitamin E and selenium deficiencies on rat alveolar macrophage release of arachidonic acid metabolites. FASEB J. 2:A411.

Invited lectures presented at regional, national, and international society meetings and/or other educational institutions.

February, 2005 – Botanicals Center for Age-Related Diseases Annual Symposium, Purdue University, West Lafayette, IN, title: "Antioxidant Effects of Naringenin and EGCg in vivo"

October, 2004 – Horticulture Department, Purdue University, West Lafayette, IN, title: "Antioxidant Health Benefits of Phytochemicals?"

August, 2004 – American Chemical Society Annual Meeting, Philadelphia, PA, title: "Antioxidant and Lipid Oxidation Effects of Citrus Flavonoid Consumption"

April, 2004 – The 7th International Conference on Plasma Membrane Redox Systems and their Role in Biological Stress and Disease, Asilomar, CA, title: "Effects of Citrus Flavanone Consumption on the Endogenous Antioxidant Defense System and Oxidative Stress"

February, 2003 – Teleconference/course from TAMU Phytochemicals in fruits and vegetables to improve human health entitled, title: "Antioxidant Health Benefits of Phytochemicals in Fruits and Vegetables: the in vitro and in vivo evidence"

May, 2003 - May Conference presented by Foods & Nutrition Department, Purdue University, West Lafayette, IN. title: "Fruits and Vegetables: the Antioxidant Story"

September, 2003 – Botanicals Center Workshop at Purdue In Vivo Techniques For Botanicals Research, title: "Methods to Evaluate Antioxidant Activity in vitro and in vivo"

May 25, 2001- The International Symposium on Attention-Deficit Hyperactivity Disorder in Taipei, Taiwan, title: "EFAs and the ADHD Condition"

May, 2001 - Academia Sinica, Taipei, Taiwan, title: "Characterization of the Adaptive Response in Rat Liver Induced by Antioxidant Nutrient Deficiency"

March 31-April 4, 2001, Experimental Biology, Minisymposium Chair- Antioxidants and free radical defenses

June 20-24, 1998, IFT Annual Meeting, Atlanta, Georgia. Title: "Antioxidant role of inositol phosphates"

Monsanto Company, August 2-3, 1998, St. Louis, Missouri. "Highly unsaturated fatty acids in children with attention-deficit/hyperactivity disorders"

NIH Workshop on "Omega-3 Essential Fatty Acids in Psychiatric Disorders," September 2-3, 1998. "Attention-Deficit/Hyperactivity Disorder, Observational and Interventional Studies"

Experimental Biology '97, April 6-9, 1997, New Orleans, LA. Chairman of the vitamin E minisymposium. "Expanding role of vitamin E in health and disease prevention"

University of Cordoba, Cordoba, Spain, November 8-9, 1996, Cordoba, Spain. "Role of calcium-independent phospholipase A2 in cellular defense against oxidative stress"

International Conference on Polyunsaturated Fatty Acids in Health and Disease, November 4-6, 1996, Barcelona, Spain. "Highly unsaturated fatty acids in children with attention-deficit/hyperactivity disorders"

Department of Foods & Nutrition, University of Delaware, February 23, 1995. "Oxidative stress activation of phospholipase A2: Acknowledging the clean-up crew"

Institute for Environmental Medicine, University of Pennsylvania School of Medicine, October 26-27, 1995. "Antioxidant nutrient status effects on phospholipase A2"

Department of Nutrition, Harvard School of Public Health, January 9, 1990.

Title: "The effect of altered antioxidant defense function on prostaglandin biosynthetic enzymes"

International Symposium on Biological Oxidation Systems. October 23-26, 1989, Bangalore, India. Title: "Role of glutathione peroxidases in prostaglandin biosynthesis"

Research Grants & Awards Received.

Principal investigator

Purdue Integrative Data Science Education Ecosystem Grant. Development of a Model for Incorporation of Data Science Learning into a non-Majors course to Promote Data Science Ecosystem. Total award: \$41,077. Inclusive years: 2018-2019.

Purdue Research Foundation:XR Grant. The Role of Oxidative Stress and n-3 Essential Fatty Acids in an Animal Model of AD/HD. Total award: \$29, 430. Inclusive years: 2004-2006.

National Fisheries Institute. Nutritional Factors in AD/HD. Total award: \$12,000 . Inclusive years: 2005 – 2006.

The Greater Cincinnati Foundation. Nutritional Factors in Attention Deficit/Hyperactivity Disorder. Total award: \$12,000. Inclusive years: 2004 - 2005.

Indiana Soybean Board. Preparation and Comparative Analysis of Polyphenol-Rich Soybean Extracts. Total award: \$11,000 . Inclusive Years: 2004 - 2005.

NIH, Botanicals Center for Age Related Research Pilot Grant . Effect of flavonoids on coenzyme Q metabolism and function. Total award: \$25,000. Inclusive years: 2002 – 2004.

Florida Department of Citrus. Co-Investigators: Rick Mattes, Jon Story and Connie Weaver. Protective Effect of Grapefruit Juice Consumption on Disease Risk. Total award: \$256,000. Inclusive years: 2002 – 2003.

Ross Products Division of Abbott Laboratories, Columbus, OH. Nutritional Management of children with eosinophilic gastroenteritis fed food allergen elimination diets: nutritional analysis of food records. Total amount: \$1,850. Inclusive year: 1997-1999.

PRF Research Assistantship. Essential fatty acid status in children with attention-deficit/hyperactivity disorder. Total award: \$22,132. Inclusive years: 1998-1999.

NIH, Institute of Mental Health. Essential fatty acid status in children with Attention-Deficit/Hyperactivity Disorder. Total award: \$37,000. Inclusive years: 1997-1998.

Scotia Pharmaceuticals Limited, Stirling, Scotland. Effect of Efalex supplementation on blood fatty acid profiles and behavioral measures in children with attention-deficit/hyperactivity disorder. Total award: \$64,000. Inclusive years: 1996-1997.

U.S. Department of Agriculture. Antioxidant Inositol Phosphates. Total award: \$11,000. Inclusive years: 1996-1997.

U.S. Department of Agriculture Hatch Grant. The effect of oxidant stress and nutrient status on fatty acid metabolism. Award: \$1,500/year. Inclusive years: 1991-1996.

ARP Research Assistantship. The role of oxidative stress-mediated activation of phospholipase A2 in cell membrane protection and prostaglandin formation. Award: \$12,000/year. Inclusive years: 1995-1997.

Showalter Trust. Mechanistic analysis of the effect of oxidant stress on PLA2 regulation, cellular expression and secretion. Total award: \$50,000. Inclusive years: 1993-1994.

Purdue Research Foundation. The effect of lipid peroxidation on phospholipase A2 function in the rat. Award: \$9,900/year. Inclusive years: 1992-1994.

AES Assistantship. The effects of increased oxidant stress on phospholipase regulation and eicosanoid biosynthesis in mammalian cells. Award: \$12,000/year. Inclusive years: 1991-1993.

American Cancer Society Institutional Grant. The effects of increased oxidant stress on phospholipase regulation and eicosanoid biosynthesis in mammalian cells. Award: \$10,000/year. Inclusive years: 1991-1992.

School of Consumer and Family Sciences. Essential fatty acid metabolism in children with ADHD. Award: \$7,500/year. Inclusive years: 1991-1992.

Co-investigator

Grayson-Jockey Club Research Foundation, Inc. – PS: Laurent Couetil, Co-Investigator: J.R. Burgess – The effect of omega-3 fatty acid supplementation in thoroughbred racehorses with equine asthma. Budgeted \$21,002. Inclusive years: 2020-2022

Animal HealthQuest Solutions – PI: Wendy Townsend, Co-Investigator: J. R. Burgess - Effect of Ocu-GLO Rx(TM) on the progression of Golden Retriever Pigmentary Uveitis. Budgeted \$2,800. Inclusive years: 2014-2018

Novus International – PI: Laurent Couetil, Co-Investigator: J. R. Burgess - Evaluation of Oral Aleira™ Supplementation in Horses with Chronic Lower Airway Inflammation Disease. Budgeted: \$12,000, Total Award: \$25,000. Inclusive years: 2011-2013.

NIH, NCCAM, R01 – PI: U. S. Sajjan, University of Michigan, Co-Investigators: Marc Hershenson, J. R. Burgess, and others - *Quercetin and innate immune modulation in COPD*. Budgeted: \$20,000, Total Award: \$385,000. Inclusive years: 2008-2011

National Science Foundation. G. Weaver, PI, J. R. Burgess, co-investigator. Undergraduate Research Center – Center for Authentic Science Practice in Education. Budgeted: \$11,047, Total Award: \$2,300,000. Inclusive years: 2004 – 2009.

Appalachian Center for Translational Research Disparities. A. Clark, Eastern Tennessee University, PI, J.R. Burgess, co-investigator. Use of Omega-3 Fatty Acids to Reduce the Risk of Cardiovascular Disease in Hispanic Type 2 Diabetics in Northeast Tennessee. Budgeted: \$2000. Inclusive years: 2006 - 2007.

NeurogensX, Inc. R. Mattes, PI, J. R. Burgess, co-investigator. Capsaicin Diet Study. Budgeted: \$11,400. Inclusive years: 2004 - 2005.

BASF Corporation. M. Latour, PI, J. R. Burgess, co-investigator. Fatty acids in poultry research. Budgeted: \$2,000. Inclusive years: 2003 - 2004.

Johnsonville Foods, Inc. M. Latour, PI, J. R. Burgess, co-investigator. Evaluation of Dietary Fat Source on Fatty Acid Composition of Pork & Sausages. Budgeted: \$10,700. Inclusive Years : 2002 - 2003.

Illinois-Indiana Sea Grant. A comprehensive research and MAS approach to aquacultural development in the Great Lakes. Budgeted: \$75,000/year. Inclusive years: 1995-1997

Project Participants; D. LaDon Swann, Paul Brown, Bruce Watkins, Jay Burgess, Jeffrey Malison, James Held, Ron Rosati, Marshall Martin, Jean Riepe.

INSTRUCTION AND GRADUATE TRAINING

Graduate Student Mentorship:

Yan Huang, M.S., 1992

Laura Stevens, M.S., 1995

Yonghong Hu, M.S., 1995

Xianghong Xu, M.S., 1995

Chia-Feng Kuo, Ph.D., 1996

Shun Cheng, Ph.D., 1997
Feng Gao, M.S., 1997
Lingling Shi, M.S., 1998
Wen Zhang, M.S., 1998
Rafael DeCabo, Ph.D., 2000
Juan E. Andrade, Ph.D., 2005
Caryl Antalis, Ph.D., 2006
Kae Won Cho, Ph.D., 2006
Ran Kim, M.S., 2006
Robert Pazdro, Ph.D., 2010
Angela Myracle, Ph.D., 2010
Nadine Hammoud, M.S., 2014
Tom Wilmanski, Ph.D. 2017
Matt Stochelski, Ph.D. 2018
Carrie Terwilliger, M.S., 2020, Ph.D., 2023 (expected)
James Foster, M.S., 2021 (expected)

Courses taught:

Nutrition Science/Foods & Nutrition 303, Essentials of Nutrition for non-majors, 3 credit hours, inclusive years 2000 – present (F, S, Su), flipped and online versions. I oversee all sections. Enrollment now averages 480+ for the flipped, 200+ students online for Fall and Spring semesters, and 160-200 online students in the summer. Participated in IMPACT in 2013 to facilitate flipping the course from lecture to active learning.

Nutrition Science/Foods & Nutrition 436, Nutrition Assessment for majors, 1 lecture and 3 lab hours per week, undergraduate. 2000-2012

Nutrition Science/Foods & Nutrition 590F, Phytochemical Biochemistry and Physiology, 3 lecture hours per week, graduate. Offered every other year, 2002-present.

Nutrition Science/Foods & Nutrition 590L, Lipid Signaling and Cell Function, 1-2 lecture hours per week, graduate. Offered every other year, 2003-2015.

ADMINISTRATIVE

Committee, Leader

College of Consumer and Family Sciences Curriculum Committee, 2003, Chair

Department of Nutrition Science Undergraduate Policy and Curriculum Committee, 2006 – 2014, 2018-present, Chair

Purdue Animal Care and Use Committee, 2016-present, Associate Chair

Committees served

Purdue Animal Care and Use Committee, 1996 – present.

College of Consumer and Family Sciences Curriculum Committee, 2000 – 2006.

Department of Nutrition Science/Foods & Nutrition Teaching Committee, 2006 – 2014.

Statewide Indiana Core Transfer Library Review Committee, 2015-2016.

College of Health and Human Sciences Awards Committee, 2012-2015, 2017.

College of Health and Human Sciences Curriculum Committee, 2018-present.

Department of Nutrition Science Internal Awards Committee, 2014- present

Digital Education Awards and Recognition Implementation Team, 2016.