CURRICULUM VITÆ

Ryan John Elias
Professor & Associate Head of Food Science
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Citizenship United States of America (USA)
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Education

Ph.D., Food Science, University of Massachusetts–Amherst, USA (2006)
B.A., Chemistry, Hamilton College, USA (2000)

Appointments & Sabbaticals

2021–present	Associate Head of Food Science The Pennsylvania State University, Department of Food Science
2019–present	Professor of Food Science (*with tenure*) The Pennsylvania State University, Department of Food Science
2019–present	Graduate Faculty Member The Pennsylvania State University, International Agriculture and Development Graduate Program
2014–present	Courtesy Faculty Appointment in Plant Science The Pennsylvania State University, Department of Plant Science
2014–2019	Associate Professor of Food Science (*with tenure*) The Pennsylvania State University, Department of Food Science
2016	Sabbatical Leave University of Copenhagen (Denmark), Department of Food Science Hosted by Mogens Larsen Andersen
2010–2016	Frederik and Faith Rasmussen Development Professor of Food Science The Pennsylvania State University, Department of Food Science
2008–2014	Assistant Professor of Food Science The Pennsylvania State University, Department of Food Science
2006–2008	Postdoctoral Scholar, Enology University of California–Davis, Department of Viticulture and Enology Advised by Andrew L. Waterhouse
2002–2006	Ph.D. Candidate and Research Assistant, Lipid Chemistry University of Massachusetts–Amherst, Department of Food Science Advised by Eric A. Decker

Teaching Responsibilities

2009–present	FDSC 413: The Science & Technology of Plant Foods (Fall, Annually) The Pennsylvania State University, Department of Food Science
2010–present	FDSC / INTAG 460: International Food Production (Spring, Alternate Years) The Pennsylvania State University, Department of Food Science

Honors and Awards

2018	Outstanding Collaborative Research Award The Pennsylvania State University, College of Medicine
2018	Community of Teaching Award The Pennsylvania State University, College of Agricultural Sciences
2015	Anna and Guy Bixler Memorial Teaching Award in Food Science The Pennsylvania State University, College of Agricultural Sciences
2012	Young Scientist Award American Chemical Society, Agricultural and Food Chemistry Division
2011	Arthur W. Nesbitt Faculty Program Development Award The Pennsylvania State University, College of Agricultural Sciences
2011	Horace T. Woodward Faculty Development Award The Pennsylvania State University, College of Agricultural Sciences
2005	Honored Student Award American Oil Chemists' Society

Articles Published in Refereed Journals

H-index = 37; i10-index = 87; total citations = 6147 (as of February 2022)
Most up-to-date listing here: https://scholar.google.com/citations?hl=en&user=GklDy9IAAAAJ

1. Ledley, A. J., **Elias, R. J.**, Hopfer, H., & Cockburn, D. W. (**2021**). A modified brewing procedure informed by the enzymatic profiles of gluten-free malts significantly improves fermentable sugar generation in gluten-free brewing. *Beverages 7*(53).

2. Elder, A. S., Coupland, J. N., & **Elias, R. J.** (**2021**). Effect of alkyl chain length on the antioxidant activity of alkylresorcinol homologues in bulk oils and oil-in-water emulsions. *Food Chemistry, 346*, 128885.

3. Chrisfield, B. J., Gugino, B. K., Hopfer, H., & **Elias, R. J.** (**2021**). Effect of copper-based fungicide treatments on the quality of hop produced in the northeastern United States. *Journal of the American Society of Brewing Chemists*.

4. Chrisfield, B. J., Hopfer, H., & **Elias, R. J.** (**2021**). Impact of copper-based fungicides on the antioxidant quality of ethanolic hop extracts. *Food Chemistry, 355*, 129551.

5. Keller, S. T., Harner, A. D., Centinari, M., **Elias, R. J.**, & Hopfer, H. (**2021**). Influence of region on sensory and chemical profiles of Pennsylvania Grüner Veltliner wines. *Foods, 10*(4).

6. Hobkirk, A. L., Houser, K. R., Hoglen, B., Bitzer, Z. T., Fendrich, A., Bordner, C., Foulds, J., Mukherjee, D., Yingst, J., Karunanayakac, P., Goel, R., Wang, J., Richie, J. P., **Elias, R. J.**, & Yang, Q. C. (**2021**). Evidence from an fMRI study that dessert-flavored e-cigarettes engage taste-related, but not smoking-related, brain circuitry for daily smokers. *Experimental and Clinical Psychopharmacology*.

7. Vivarelli, F., Canistro, D., Cirillo, S., **Elias, R. J.**, Granata, S., Mussoni, M., Burattini, S., Falcieri, E., Turrini, E., Fimognari, C., Buschini, A., Lazzaretti, M., Beghi, S., Girotti, S., Sangiorgi, S., Bolelli, L., Ghini, S., Ferri, E. N., Fagiolino, I., Franchi, P., Lucarini, M., Mercatante, D., Rodriguez-Estrada, M., Lorenzini, A., Marchionni, S., Gabriele, M., Longo, V., & Paolini, M. (**2021**). Unburned tobacco cigarette smoke alters rat ultrastructural lung airways and DNA. *Nicotine & Tobacco Research*.

8. Van Buiten, C. B., & **Elias, R. J.** (**2021**). Protein sequestration as a novel therapy for celiac disease: A prospective application for polyphenols. *International Journal of Molecular Sciences, 595,* 33435615.

9. Hobkirk, A., Bitzer, Z. T., Goel, R., Sica, C., Livelsberger, C., Yingst, J., Houser, K. R., Rupprecht, S., Trushin, N. M., Karunanayaka, P. R., Foulds, J. A., Richie, J. P., Spreen, L., Hoglen, B., Wang, J.-L., **Elias, R. J.**, & Yang, Q. (**2020**). An electronic aerosol delivery system for functional magnetic resonance imaging. *Substance Abuse: Research and Treatment, 14, 1-10.*

10. Urena, J., Ebersol, L., Silakov, A., **Elias, R. J.**, & Lambert, J. D. (**2020**). Impact of atomizer age and flavor on in vitro toxicity of aerosols from a third-generation electronic cigarette against human oral cells. *Chemical Research in Toxicology, 33*(10), 2527–2537.

11. Chrisfield, B. J., Hopfer, H., & **Elias, R. J.** (**2020**). Impact of copper fungicide use in hop production on the total metal content and stability of wort and dry-hopped beer *MDPI Beverages, 6*(3).

12. Ouattara, H., **Elias, R. J.**, & Dudley, E. (**2020**). Interactions between *Pichia kudriazevii* YS201 and *Bacillus subtilis* BS38 impact microbial growth, pulp degradation and aroma production during fermentation in cocoa pulp simulation medium. *Heliyon, 6* (e03269).

13. Cirillo, S., Urena, J., Lambert, J. D., Vivarelli, F., Canistro, D., Moreno, P., Cardenia, V., Rodriguez-Estrada, M., Richie, J. P., & **Elias, R. J**. (**2019**). Impact of electronic cigarette heating coil resistance on the production of reactive carbonyls, reactive oxygen species and induction of cytotoxicity in human lung cancer cells in vitro. *Regulatory Toxicology and Pharmacology, 109,* 104500.

14. Centinari, M., Harner, A. D., Vanden Heuvel, J. E., Marini, R., & **Elias, R. J.** (**2019**). Modeling the impacts of weather and cultural factors on rotundone concentration in cool-climate Noiret wine grapes. *Frontiers in Plant Science, 10*(1255).

15. Van Buiten, C. B., Yennawar, N. H., Pacheco, C., Hatzakis, E., & **Elias, R. J.** (**2019**). Physicochemical interactions with (-)-epigallocatechin-3-gallate drives structural modification of celiac-associated immunostimulatory peptide a2-gliadin (57-89) at physiological conditions. *Food & Function, 10*, 2997-3007.

16. Reilly, S. M., Goel, R., Trushin, N. M., Bitzer, Z. T., Elias, R. J., Muscat, J. E., & Richie, J. P. (**2019**). Effects of charcoal on carbonyl delivery from commercial, research, and make-your-own cigarettes. *Chemical Research in Toxicology, 31*(12), 1339-1347.

17. Durand, E., Zhao, Y., Ruesgas-Ramón, M., Figueroa-Espinoza, M. C., Lamy, S., Coupland, J. N., **Elias, R. J.**, & Villeneuve, P. (**2019**). Evaluation of antioxidant activity and interaction with radical species using the Vesicle Conjugated Autoxidizable Triene (VesiCAT) assay. *European Journal of Lipid Science and Technology, 1800419.*

18. Dabas, D., **Elias, R. J.**, Ziegler, G. R., & Lambert, J. D. (**2019**). In vitro antioxidant and cancer inhibitory activity of a colored avocado seed extract. *International Journal of Food Science,* 6509421.

19. Wang, Q., Leong, W., **Elias, R. J.**, & Tikekar, R. (**2019**). UV-C irradiated gallic acid exhibits enhanced antimicrobial activity via generation of reactive oxidative species and quinone. *Food Chemistry*, *287*, 303-312.

20. Kreitman, G. Y., **Elias, R. J.**, Jeffery, J. W., & Sacks, G. L. (**2019**). Loss and formation of malodorous volatile sulfhydryl compounds during wine storage. *Critical Reviews in Food Science and Nutrition*, *59*(11), 1728-1752.

21. Van Buiten, C. B., Lambert, J. D., & **Elias, R. J.** (**2018**). Green tea polyphenols mitigate gliadin-mediated inflammation and permeability. *Molecular Nutrition & Food Research*, *62*, 1-8.

22. Bitzer, Z. T., Goel, R., Reilly, S. M., **Elias, R. J.**, Silakov, A., Foulds, J. A., Muscat, J. E., & Richie, J. P. (**2018**). Effect of flavoring chemicals on free radical formation in electronic cigarette aerosols. *Free Radical Biology and Medicine, 120*(20), 72-79.

23. Goel, R., Bitzer, Z. T., Reilly, S. M., Foulds, J. A., Muscat, J. E., **Elias, R. J.**, & Richie, J. P. (**2018**). Influence of smoking puff parameters and tobacco varieties on free radicals yields in cigarette mainstream smoke. *Chemical Research in Toxicology*, *31*(5), 325-331.

24. Kong, L., Yucel, U., Yoksan, R., **Elias, R. J.**, & Ziegler, G. R. (**2018**). Characterization of amylose inclusion complexes using electron paramagnetic resonance spectroscopy. *Food Hydrocolloids, 82*, 82-88.

25. Stanley, T. H., Van Buiten, C. B., Baker, S. A., **Elias, R. J.**, Anantheswaran, R. C., & Lambert, J. D. (**2018**). Impact of roasting on the flavan-3-ol composition, sensory-related chemistry, and in vitro pancreatic lipase inhibitory activity of cocoa beans. *Food Chemistry, 255*(30), 414-420.

26. Günenç, A., Kong, L., **Elias, R. J.**, & Ziegler, G. R. (**2018**). Inclusion complex formation between high amylose corn starch and alkylresorcinols from rye bran. *Food Chemistry, 259*, 1-6.

27. Goel, R., Bitzer, Z. T., Reilly, S. M., Bhangu, G., Trushin, N. M., **Elias, R. J.**, Foulds, J. A., Muscat, J. E., & Richie, J. P. (2018). The effect of charcoal in cigarette filters on free radicals in mainstream smoke. *Chemical Research in Toxicology*, *31*(8), 745-751.

28. Reilly, S. M., Goel, R., Bitzer, Z. T., **Elias, R. J.**, Foulds, J. A., Muscat, J. E., & Richie, J. P. (2018). Little cigars, filtered cigars, and their carbonyl delivery relative to cigarettes. *Nicotine & Tobacco Research, 20*(suppl_1), S99-S106.

29. Kreitman, G. Y., Danilewicz, J. C., Jeffery, D. W., & **Elias, R. J.** (**2017**). Copper(II) mediated hydrogen sulfide and thiol oxidation to disulfides and organic polysulfanes, and their reductive cleavage in wine: Mechanistic elucidation and potential applications. *Journal of Agricultural and Food Chemistry, 65*(12), 2564-2571.

30. Bitzer, Z. T., Goel, R., Foulds, J. A., Muscat, J. E., **Elias, R. J.**, & Richie, J. P. (**2017**). Effects of solvent and temperature on free radical formation in electronic cigarette aerosols. *Chemical Research in Toxicology, 31*(1), 4-12.

31. Reilly, S. M., Goel, R., Trushin, N. M., **Elias, R. J.**, Foulds, J. A., Muscat, J. E., Liao, J., & Richie, J. P. (**2017**). Brand variation in oxidant production in mainstream cigarette smoke: Carbonyls and free radicals *Food and Chemical Toxicology, 106*, 147-154.

32. Qu, Y., Harte, F., **Elias, R. J.**, & Coupland, J. N. (**2017**). Effect of ethanol on the solubilization of hydrophobic molecules by sodium caseinate. *Food Hydrocolloids, 77*, 454-459.

33. Reilly, S. M., Goel, R., Bitzer, Z. T., **Elias, R. J.**, Foulds, J. A., Muscat, J. E., & Richie, J. P. (**2017**). Effects of topography-related puff parameters on carbonyl delivery in mainstream cigarette smoke. *Chemical Research in Toxicology, 30*(7), 1463-1469.

34. **Elias, R. J.**, Hopfer, H., Hofstaedter, A. N., & Hayes, J. E. (**2017**). Man vs. machine: A junior level laboratory exercise comparing human and instrumental detection limits. *Journal of Food Science Education, 16*(3), 72-76.

35. Tenney, K., Hayes, J. E., Euston, S. R., **Elias, R. J.**, & Coupland, J. N. (**2017**). Binding of caffeine and quinine by whey protein and the effect on bitterness. *Journal of Food Science, 82*(2), 509-516.

36. Homich, L. J., **Elias, R. J.**, Vanden Heuvel, J. E., & Centinari, M. (**2017**). Impact of fruit-zone leaf removal on rotundone concentration in Noiret. *American Journal of Enology and Viticulture, 68*(4).

37. Carrasco-Sánchez, V., Kreitman, G. Y., Folch-Cano, C., **Elias, R. J.**, & Laurie, V. F. (**2017**). Removal of fumonisin B1 and B2 from model solutions and red wine using polymeric substances. *Food Chemistry, 224*, 207-211.

38. Bitzer, Z. T., Wopperer, A. L., Chrisfield, B. J., Tao, L., Cooper, T., Vanamala, J., Hayes, J. E., **Elias, R. J.**, & Lambert, J. D. (**2017**). Soy protein concentrate mitigates markers of colonic inflammation and loss of gut barrier function in vitro and in vivo. *The Journal of Nutritional Biochemistry, 40*, 201-208.

39. Goel, R., Bitzer, Z. T., Reilly, S. M., Trushin, N. M., Foulds, J. A., Muscat, J. E., Liao, J., **Elias, R. J.**, & Richie, J. P. (**2017**). Variation in free radical yields from U.S. marketed cigarettes. *Chemical Research in Toxicology, 30*(4), 1038-1045.

40. Bitzer, Z. T., **Elias, R. J.**, Kumar, M. V., & Lambert, J. D. (**2016**). (-)-Epigallocatechin-3-gallate decreases colonic inflammation and permeability in a mouse model of colitis, but reduces macronutrient digestion and exacerbates weight loss. *Molecular Nutrition & Food Research, 00*, 1-8.

41. Homich, L. J., Scheinberg, J. A., Gardner, D. M., & **Elias, R. J.** (**2016**). Effects of co-inoculation on wine quality attributes of the high-acid, red hybrid variety chambourcin. *American Journal of Enology and Viticulture, 67*.

42. Reddivari, L., Charepalli, V., Radhakrishnan, S., Vadde, R., **Elias, R. J.**, Lambert, J. D., & Vanamala, J. (**2016**). Grape compounds suppress human colon cancer stem cells in vitro and in a rodent model of colon carcinogenesis. *BMC Complementary and Alternative Medicine, 16*(278).

43. Kreitman, G. Y., Danilewicz, J. C., Jeffery, D. W., & **Elias, R. J.** (**2016**). Reaction mechanisms of metals with hydrogen sulfide and thiols in model wine. Part 1: Copper catalyzed oxidation. *Journal of Agricultural and Food Chemistry, 64*(20), 4095-4104.

44. Kreitman, G. Y., Danilewicz, J. C., Jeffery, D. W., & **Elias, R. J.** (**2016**). Reaction mechanisms of metals with hydrogen sulfide and thiols in model wine. Part 2: Iron and copper catalyzed oxidation. *Journal of Agricultural and Food Chemistry, 64*(20), 4105-4113.

45. Sheridan, M. K., & **Elias, R. J.** (**2016**). Reaction of acetaldehyde with wine flavonoids in the presence of sulfur dioxide. *Journal of Agricultural and Food Chemistry, 64*(45), 8615-8624.

46. Durand, E., Zhao, Y., Coupland, J. N., & **Elias, R. J.** (**2015**). Assessing interactions between lipophilic and hydrophilic antioxidants in food emulsions. *Journal of Agricultural and Food Chemistry, 63*(49), 10655-61.

47. Zhao, Y., **Elias, R. J.**, & Coupland, J. N. (**2015**). Effect of food structure on the distribution and reactivity of small molecules. *Current Opinion in Food Science, 4*, 19–24.

48. Leong, W., Berton-Carabin, C. C., **Elias, R. J.**, Lecomte, J., Villeneuve, P., Zhao, Y., & Coupland, J. N. (**2015**). Effect of lipophilization on the distribution and reactivity of ingredients in emulsions. *Journal of Colloid and Interface Science, 459*, 36-43.

49. Oh, J., Giallongo, F., Frederick, T., Pate, J. L., Walusimbi, S., **Elias, R. J.**, Wall, E. H., Bravo, D., & Hristov, A. N. (**2015**). Effects of dietary Capsicum oleoresin on productivity and immune responses in lactating dairy cows. *Journal of Dairy Science, 98*(9), 6327-39.

50. Coban, H. B., Demirci, A., Patterson, P. H., & **Elias, R. J.** (**2015**). Enhanced phenylpyruvic acid production with Proteus vulgaris in fed-batch and continuous fermentation. *Preparative Biochemistry and Biotechnology, 46*(2), 157-60.

51. Sheridan, M. K., & **Elias, R. J.** (**2015**). Exogenous acetaldehyde as a tool for modulating wine color and astringency during fermentation. *Food Chemistry, 177*, 17-22.

52. Wang, Q., Durand, E., **Elias, R. J.**, & Tikekar, R. V. (**2015**). Generation of reactive oxidative species from thermal treatment of sugar solutions. *Food Chemistry, 196*, 301-8.

53. Goel, R. P., Durand, E., Trushin, N. M., Prokopczyk, B., Foulds, J. A., **Elias, R. J.**, & Richie, Jr, J. P. (**2015**). Highly reactive free radicals in electronic cigarette aerosols. *Chemical Research in Toxicology, 28*(9), 1675-7.

54. Chaprenet, J., Berton-Carabin, C. C., **Elias, R. J.**, & Coupland, J. N. (**2014**). Effect of interfacial properties on the reactivity of a lipophilic ingredient in multilayered emulsions. *Food Hydrocolloids, 42*, 56-65.

55. Coban, H. B., Demirci, A., Patterson, P. H., & **Elias, R. J.** (**2014**). Enhanced phenylpyruvic acid production with Proteus vulgaris by optimization of fermentation medium. *Acta Alimentaria, 45*(1), 1-10.

56. Zhou, L., & **Elias, R. J.** (**2014**). Influence of cysteine and methionine availability on protein peroxide scavenging activity and phenolic stability in emulsions. *Food Chemistry, 146*, 521-530.

57. Coban, H. B., Demirci, A. & **Elias, R. J.** (**2014**). Screening of phenylpyruvic acid producers and optimization of culture conditions in bench scale bioreactors. *Bioprocess and Biosystems Engineering, 37*, 2343-52.

58. Kreitman, G. Y., Laurie, V. F., & **Elias, R. J.** (**2013**). An investigation of ethyl radical quenching by phenolics and thiols in model wine. *Journal of Agricultural and Food Chemistry, 61*(3), 685-92.

59. Zhou, L., & **Elias, R. J.** (**2013**). Antioxidant and pro-oxidant activity of (-)-epigallocatechin-3-gallate in food emulsions: Influence of pH and phenolic concentration. *Food Chemistry, 138*(2-3), 1503–1509.

60. Berton-Carabin, C. C., Coupland, J. N., & **Elias, R. J.** (**2013**). Effect of lipophilicity of model ingredients on their location and reactivity in emulsions and solid lipid nanoparticles. *Colloids and Surfaces A, 431*, 9–17.

61. Yucel, U., **Elias, R. J.**, & Coupland, J. N. (**2013**). Effect of liquid oil on the distribution and reactivity of a hydrophobic solute in solid lipid nanoparticles. *Journal of the American Oil Chemists' Society, 60*(6), 819-824.

62. Wong, R. C., **Elias, R. J.**, Lambert, J. D., Relkin, P., & Coupland, J. N. (**2013**). Enzyme triggered release of aroma molecules from oil-in-water emulsions. *Colloids and Surfaces A, 422*, 19-23.

63. Oh, J., Hristov, A. N., Lee, C., Cassidy, T., Heyler, K., Varga, G. A., Pate, J. L., Walusimbi, S., Brzezicka, E., Toyokawa, K., Werner, J., Donkin, S. S., **Elias, R. J.**, Dowd, S., & Bravo, D. (**2013**). Immune and production responses of dairy cows to postruminal supplementation with phytonutrients. *Journal of Dairy Science, 96*, 7830–7843.

64. Yucel, U., **Elias, R. J.**, & Coupland, J. N. (**2013**). Localization and reactivity of a hydrophobic solute in lecithin and caseinate stabilized solid lipid nanoparticles and nanoemulsions. *Journal of Colloid and Interface Science, 394*, 20–25.

65. Berton-Carabin, C. C., **Elias, R. J.**, & Coupland, J. N. (**2013**). Reactivity of a model lipophilic ingredient in surfactant-stabilized emulsions: Effect of droplet surface charge and ingredient location. *Colloids and Surfaces A, 418*, 68–75.

66. Kreitman, G. Y., Cantù, A., Waterhouse, A. L., & **Elias, R. J.** (**2013**). The effect of metal chelators on the oxidative stability of model wine. *Journal of Agricultural and Food Chemistry, 61*(39), 9480-7.

67. Kalaras, M. D., Beelman, R. B., & **Elias, R. J.** (**2012**). Effects of postharvest pulsed UV light treatment of white button mushrooms (Agaricus bisporus) on vitamin D2 content and quality attributes. *Journal of Agricultural and Food Chemistry, 60*(1), 220-225.

68. Zhou, L., & **Elias, R. J.** (**2012**). Factors influencing the antioxidant and pro-oxidant activity of polyphenols in oil-in-water emulsions. *Journal of Agricultural and Food Chemistry, 60*(11), 2906-2915.

69. Kalaras, M. D., Beelman, R. B., Holick, M. F., & **Elias, R. J.** (**2012**). Generation of potentially bioactive ergosterol-derived products following pulsed ultraviolet light exposure of mushrooms (Agaricus bisporus). *Food Chemistry, 135*, 396-401.

70. Moskowitz, M. M., Bin, Q., **Elias, R. J.**, & Peterson, D. G. (**2012**). Influence of endogenous ferulic acid in whole wheat flour on bread crust aroma. *Journal of Agricultural and Food Chemistry, 60*(45), 11245-11252.

71. Bin, Q., Peterson, D. G., & **Elias, R. J.** (**2012**). Influence of phenolic compounds on the mechanisms of pyrazinium radical generation in the Maillard reaction. *Journal of Agricultural and Food Chemistry, 60*(21), 5482-5490.

72. Lambert, J. D., Yennawar, N., Gu, Y., & **Elias, R. J.** (**2012**). Inhibition of secreted phospholipase A2 by proanthocyanidins: A comparative enzymological and in silico modeling study. *Journal of Agricultural and Food Chemistry, 60*(30), 7417-7420.

73. Unnadkat, N. R., & **Elias, R. J.** (**2012**). Oxidative stability of (-)-epigallocatechin gallate in the presence of thiols. *Journal of Agricultural and Food Chemistry, 60*(43), 10815-10821.

74. Berton-Carabin, C. C., Coupland, J. N., Cheng, Q., McClements, D. J., & **Elias, R. J.** (**2012**). Reactivity of a lipophilic ingredient solubilized in anionic or cationic surfactant micelles. *Colloids and Surfaces A, 413*, 135-142.

75. Yucel, U., **Elias, R. J.**, & Coupland, J. N. (**2012**). Solute distribution and stability in emulsion-based delivery systems: An EPR study. *Journal of Colloid and Interface Science, 377*, 105-113.

76. Dabas, D., **Elias, R. J.**, Lambert, J. D., & Ziegler, G. R. (**2011**). A colored avocado seed extract as a potential natural colorant. *Journal of Food Science, 76*(9), C1335-C1341.

77. Zhou, L., & **Elias, R. J.** (**2011**). Investigating the hydrogen peroxide quenching capacity of proteins in polyphenol-rich foods. *Journal of Agricultural and Food Chemistry, 59*(16), 8915-8922.

78. Tikekar, R. V., Anantheswaran, R. C., **Elias, R. J.**, & LaBorde, L. F. (**2011**). UV-induced oxidation of ascorbic acid in a model juice system: Identification of degradation products. *Journal of Agricultural and Food Chemistry, 59*(15), 8244-8248.

79. **Elias, R. J.**, & Waterhouse, A. L. (**2010**). Controlling the Fenton reaction in wine. *Journal of Agricultural and Food Chemistry, 58*(3), 1699-1707

80. Lambert, J. D., & **Elias, R. J.** (**2010**). The antioxidant and pro-oxidant activities of green tea polyphenols: A role in cancer prevention. *Archives of Biochemistry and Biophysics, 501*, 65-72.

81. **Elias, R. J.**, Andersen, M. L., Skibsted, L. H., & Waterhouse, A. L. (**2009**). Identification of free radical intermediates in oxidized wine using electron paramagnetic resonance spin trapping. *Journal of Agricultural and Food Chemistry, 57*(10), 4359-4365.

82. **Elias, R. J.**, Andersen, M. L., Skibsted, L. H., & Waterhouse, A. L. (**2009**). Key factors affecting radical formation in wine studied by electron paramagnetic resonance. *American Journal of Enology and Viticulture, 60*(4), 471-476.

83. **Elias, R. J.**, Laurie, V. F., Ebeler, S. E., Wong, J. W., & Waterhouse, A. L. (**2008**). Analysis of selected carbonyl oxidation products in wine by HPLC-DAD. *Analytica Chimica Acta, 626*, 104-110.

84. **Elias, R. J.**, Kellerby, S. S., & Decker, E. A. (**2008**). Antioxidant activity of proteins and peptides. *Critical Reviews in Food Science and Nutrition, 48*(5), 430–441.

85. Bou, R., Guardiola, F., Codony, R., Faustman, L. C., **Elias, R. J.**, & Decker, E. A. (**2008**). Effect of heating oxymyoglobin and metmyoglobin on the oxidation of muscle microsomes. *Journal of Agricultural and Food Chemistry, 56*(20), 9612-9620.

86. **Elias, R. J.**, McClements, D. J., & Decker, E. A. (**2007**). Impact of thermal processing on the antioxidant mechanisms of continuous phase ß-lactoglobulin in oil-in-water emulsions. *Food Chemistry, 104*, 1402–1409.

87. Chaiyasit, W., **Elias, R. J.**, & Decker, E. A. (**2007**). Role of physical structures in bulk oils on lipid oxidation. *Critical Reviews in Food Science and Nutrition*, *47*(3), 299–317

88. **Elias, R. J.**, Bridgewater, J. D., McClements, D. J., Vachet, R. W., & Decker, E. A. (**2006**). Antioxidant mechanisms of enzymatic hydrolysates of ß-lactoglobulin in food lipid dispersions. *Journal of Agricultural and Food Chemistry, 54*(25), 9565–9572.

89. **Elias, R. J.**, McClements, D. J., & Decker, E. A. (**2005**). Antioxidant activity of cysteine, tryptophan, and methionine residues in continuous phase β-lactoglobulin in oil-in-water emulsions. *Journal of Agricultural and Food Chemistry, 53*(26), 10248–10253.

Books

1. Oxidation in foods and beverages and antioxidant applications. Volume 1: Understanding mechanisms of oxidation and antioxidant activity. (**2010**). Decker E. A., **Elias R. J**., McClements D.J., Editors. Woodhead Publishing Ltd., Cambridge, UK.

2. Oxidation in foods and beverages and antioxidant applications. Volume 2: Management in different industry sectors. (**2010**). Decker E. A., **Elias R. J**., McClements D.J., Editors. Woodhead Publishing Ltd., Cambridge, UK.

Parts of Books

1. **Elias, R. J.** & Decker, E. A. (**2017**). Antioxidants and their mechanisms of action. In: Food lipids: Chemistry, nutrition, and biotechnology (4th ed). Akoh C.C., Editor. CRC Press, Francis & Taylor LLC, Oxford, UK, pp. 543–566.

2. Zhou L. & **Elias R. J.** (**2013**). Understanding antioxidant and pro-oxidant mechanisms of phenolics in food lipids. In: Lipid oxidation: Challenges in food systems. Logan A.S., Nienaber U., Pan X., Editors. American Oil Chemists' Society Press, Urbana, IL, pp. 297–321.

3. Yucel U., **Elias R. J.** & Coupland J. N. (**2011**). Emulsions, nanoemulsions and solid lipid nanoparticles as delivery systems in foods. In: Food and industrial bioproducts and bioprocessing. Dunford N.T., Editor. Wiley Blackwell, Hoboken, NJ., pp. 167–181.

4. **Elias R. J.** & Floros J. D. (**2011**). Manufacturing functional foods: Effects on quality and bioavailability. In: Nutritional genomics: The impact of dietary regulation of gene function on human disease. Bidlack W.R., Rodriguez R.L., Editors. CRC Press, Francis & Taylor LLC, Oxford, UK, pp. 365–383.

5. **Elias R. J.** & Waterhouse A. L. (**2010**). Chemical and physical deterioration of wine. In: Chemical Deterioration and Physical Instability of Food and Beverages. Skibsted L.H. *et al.*, Editors. Woodhead Publishing Ltd., Cambridge, UK, pp. 466–482.

6. **Elias R. J.** & Decker E. A. (**2010**). Endogenous antioxidants in foods. In: Oxidation in foods and beverages and antioxidant applications. Volume 1: Understanding mechanisms of oxidation and antioxidant activity. Decker E.A., Elias R.J., McClements D.J., Editors. Woodhead Publishing Ltd., Cambridge, UK, pp. 249–271.

7. Decker E. A., Chen B., Panya A. & **Elias R. J.** (**2010**). General antioxidant mechanisms in foods. In: Oxidation in foods and beverages and antioxidant applications. Volume 1: Understanding mechanisms of oxidation and antioxidant activity. Decker E.A., Elias R.J., McClements D.J., Editors. Woodhead Publishing Ltd., Cambridge, UK, pp. 225–248.

Service to the Department of Food Science (Penn State)

Dates	Committee	Entity	Role
2016–2021	Promotion and Tenure Committee	Department of Food Science	Chair (2020–2021) and elected member
2013–present	Strategic Planning Committee	Department of Food Science	Chair (2018–present) and member
2009–present	Undergraduate Program Committee	Department of Food Science	Past chair (2012–2018) and member
2014–present	Pilot Plant Committee	Department of Food Science	Member
2009–2017	Ph.D. Candidacy Committee	Department of Food Science	Member and chemistry examiner
2013–2014	Tenure-Track Dairy Scientist Search Committee	Department of Food Science	Member
2011–2014	Undergraduate Scholarship Committee	Department of Food Science	Member
2011–2013	Food Science Club	Department of Food Science	Faculty advisor
2012	Tenure-Track Food Chemist Search Committee	Department of Food Science	Member
	Lecturer in Food Science Search Committee	Department of Food Science	Member
	Laboratory Supervisor Search Committee	Department of Food Science	Member
2008–2009	Nutrition and Food Science Research Initiative Committee	Department of Food Science	Member

Service to the College of Agricultural Sciences & the University (Penn State)

Dates	Committee	Unit	Role
2013–present	International Programs Advisory Council	College of Agricultural Sciences	Member
2018–2021	Academic Standards Committee	College of Agricultural Sciences	Elected member
2018–2021	Faculty Advisory Committee to the Dean	College of Agricultural Sciences	Past chair (2019–2020) and member
2015–2020	University Faculty Senate	Penn State University	Elected senator
2012–2017	Extension Enology Advisory Committee	College of Agricultural Sciences	Member
2017	Extension Enologist Search Committee	College of Agricultural Sciences	Chair
2014–2017	Academic Standards Committee	College of Agricultural Sciences	Past chair (2016–2017) and elected member
2014–2016	Penn State Brewing Club	Penn State University	Faculty advisor
2013–2014	Tenure-Track Viticulturist Search Committee	Department of Plant Science	Member
2014	Global Engagement Cross-Cutting Research Committee	College of Agricultural Sciences	Dean's appointed member

Dates	Committee	Unit	Role
2013	Black Award Selection Committee	College of Agricultural Sciences	Member
2011	Extension Enologist Search Committee	College of Agricultural Sciences	Member
2009–2010	General Clinical Research Center Nutrition Studies Group	Department of Nutritional Sciences	Member

Service to the Profession

Dates	Committee or Group	Organization	Role
2018–present	Journal of the Science of Food and Agriculture	Wiley	Executive Editor
2014–2018	Journal of the Science of Food and Agriculture	Wiley	Associate Editor
2014–2018	Flavor Subdivision, Agricultural and Food Chemistry Division	American Chemical Society	Past Chair (2017–2018) Chair (2016–2017) Vice Chair (2015–2016) Secretary (2014–2015)
2011–2015	Food Chemistry Division	Institute of Food Technologists	Past Chair (2014–2015) Chair (2013–2014) Incoming Chair (2012–2013) Secretary (2011–2012)
2013	Food Chemistry Division Poster Competition	Institute of Food Technologists	Judge
2012–2016	Food Chemistry Subpanel	Institute of Food Technologists	Member
2012–2014	Award Selection Committee, Lipid Oxidation and Quality Division	American Oil Chemists' Society	Member
2011–2016	Food Chemistry Division Poster Competition	Institute of Food Technologists	Judge
2009	Graduate Student Research Expo	*Gamma Sigma Delta*	Judge

Reviewer (*ad hoc*) for Refereed Journals

Journal of Agricultural and Food Chemistry
Food Chemistry
American Journal of Enology and Viticulture
Journal of the American Society of Brewing Chemists
Journal of the American Oil Chemists' Society
Journal of the Science of Food and Agriculture
Critical Reviews in Food Science and Nutrition
Journal of Food Science
Tetrahedron
Langmuir
Food Biophysics
Food Hydrocolloids
Carbohydrate Polymers
Analytica Chimica Acta
Journal of AOAC International
Journal of Chromatography A
Journal of Dairy Science
International Dairy Journal
International Journal of Dairy Technology
Journal of Pharmaceutical and Biomedical Analysis
Colloids and Surfaces A: Physicochemical and Engineering Aspects
Colloids and Surfaces B: Biointerfaces