

LIST OF PUBLICATIONS

Anu Hopia 22.6.2023

A Peer-reviewed scientific publications (submitted in the beginning)

XX. Craig Stuart Carlson; Elina Nurkkala; Anu Hopia; Michiel Postema
Fantastic squeaks and where to find them: a method to produce audible acoustics from bread cheese, submitted

XX. Mesz B, Jean-Christophe Sakdavong J-C, Silén S, Hopia A
Aesthetic emotions in a mixed reality multisensory experience with food crossmodally matched to music and visuals, submitted to Digital Creativity special issue "Ubimus contributions to digital creative practices."

XX. Pap N, Mäkinen S, Nurmi M, Marnila P, Hopia A, Rotola-Pukkila M, Sandell M, Mäkinen J and Pihlanto A, Optimization of protein recovery from Atlantic salmon (*Salmo salar*) head and backbone by response surface methodology and characterization of functional properties and nutritional value, Submitted (Journal of Food Science and Technology)

XX. Junkkari T et al A consumer field study: The effect of point-of-choice nutrition labels on lunch buffet consumption and customer behaviour in self-service restaurants (submitted to Public Health Nutrition)

XX. Junkkari T et al. Simple ways to improve nutrient content and health profile in different types of catering products (submitted to Journal of Foodservice Business Research)

XX. Pohjanheimo et al. Sensory characteristics of a place: The development of the Sensory Walk Questionnaire (submitted to Food Quality and Preference)

XX. E. Nurkkala, M. Hannula, C. S. Carlson, A. Hopia, J. Hyttinen, and M. Postema, "Micro- computed tomography shows silent bubbles in squeaky mozzarella," Curr. Dir. Biomed. Eng. 9, accepted (2023).

117. Lindholm-Lehto et al. Quality of rainbow trout (*Oncorhynchus mykiss*) reared in recirculating aquaculture system and during depuration based on chemical and sensory analysis 2023. *Aquaculture Research*, 2023(2):1-13, <https://doi.org/10.1155/2023/3537294>

116. Paakki, M.; Kantola, M.; Junkkari, T.; Arjanne, L.; Luomala, H.; Hopia, A. "Unhealthy = Tasty": How Does It Affect Consumers' (Un)Healthy Food Expectations? *Foods* **2022**, *11*, 3139. <https://doi.org/10.3390/foods11193139>

115. Logrén N, Hiidenhovi J, Kakko T, Välimaa A.-L, Mäkinen S, Rintala N, Mattila P, Yang B, Hopia A. Effects of Weak Acids on the Microbiological, Nutritional and Sensory

Quality of Baltic Herring (*Clupea harengus membras*). *Foods* 2022, 11,1717.
<https://doi.org/10.3390/foods11121717>.

114. Lund Mathiesen S, Hopia A, Ojansivu P, Byrne D V, Wang Q J, The sound of silence: Presence and absence of sound affects meal duration and hedonic eating experience, *Appetite* 2022, 174, 106011,
<https://doi.org/10.1016/j.appet.2022.106011>.

113. Fooladi, Erik, Hopia, Anu. 2022. Revisiting the “porridge feud” in 19th century Norway: How knowledge and methods from multiple disciplines may reveal new clues to historical cooking practices. *International Journal of Gastronomy and Food Science*, 27(6):100475. DOI:10.1016/j.ijgfs.2022.100475

112. Leskinen H, Tringham M, Karjalainen H, Iso-Touru T, Hietaranta-Luoma H, -L, Marnila P, Pihlava J, -M, Hurme T, Puolijoki H, Åkerman K, Mäkinen S, Sandell M, Vähäkangas K, Tahvonon R, Rokka S, Hopia A: APOE Genotypes, Lipid Profiles, and Associated Clinical Markers in a Finnish Population with Cardiovascular Disease Risk Factors. *Lifestyle Genomics* 2021. doi: 10.1159/000520864

111. Silén S, Hopia A, Uimonen H & Kontukoski M. 2021 Acoustic design strengthening local food culture and cultural heritage Video abstract and opinion paper. Creative Tastebuds -symposium 16.-17.8. <https://creativetastebuds.dk/contributions-ct2021/abstract-for-video-acoustic-design-strengthening-local-food-culture-and-cultural-heritage/>

110. Hopia A. 2021 Multimodal Interaction between Food and Music. Presentation abstract in Food Matters and Materialities: Critical Understandings of Food Cultures September 22-25, 2021, <https://carleton.ca/foodmatters/paper-abstracts/>

109. Rotola-Pukkila, M., Välimaa, A.-L., Suomela, J.-P., Yang, B., Karhu, S., & Hopia, A. (2021). Effect of daily light integral treatments on free amino acids and sugars contributing flavor and acrylamide formation in potato tubers of *Solanum tuberosum* L. *Agricultural and Food Science*, 30(2), 85–95. <https://doi.org/10.23986/afsci.107898>

108. Manninen, H., Sandell, M., Mattila, S., Hopia, A., Laaksonen, T. Comparing the taste-modifying properties of nanocellulose and carboxymethyl cellulose. *J Food Sci.* 2021; 1– 8. <https://doi.org/10.1111/1750-3841.15711>

107. Lundén S, Hopia A, Forsman L and Sandell M. Sensory and conceptual aspects of novel ingredients of sustainable sources – Finnish consumers’ opinion *Foods* 2020, 9(11), 1669; <https://doi.org/10.3390/foods9111669>

106. De S., Tringham M., Hopia A., Tahvonon R., Pietilä A-M., Vähäkangas K. 2021, Ethical aspects of genotype disclosure: Perceptions of participants in a nutrigenetic study in Finland. *Public Health Genomics*. 2021;24(1-2):33-43. doi: 10.1159/000512640. Epub 2021 Jan 22.

105. Damerou A., Kakko T., Tian Y., Tuomasjukka S., Sandell M., Hopia A., Yang B. . 2020. Effect of supercritical CO2 plant extract and berry press cakes on stability and

consumer acceptance of frozen Baltic herring (*Clupea harengus membras*) mince, *Food Chemistry* 332(1), <https://doi.org/10.1016/j.foodchem.2020.127385>

104. Leskinen H., Tringham M., Karjalainen H., Iso-Touru T., Hietaranta-Luoma H-L., Marnila P., Pihlava J-M., Hurme T., Kankaanpää S., Puolijoki H., Åkerman K., Tanner L., Sandell M., Vähäkangas K., Hopia A., Tahvonen R., Rokka S. APOE ε4 Genotype Information Disclosure does not Enhance the Impact of Frequent Dietary and Lifestyle Advice During Short-term Randomized Intervention Study among Finnish Participants, *Nutrition and Disease*, 13 p., DOI 10.1093/jn/nxaa316

103. Hopia, A., Karjalainen, H., Engblom, J, Tringham, M., Sandell, M. Relationship between food preference and food attitudes, Abstract, Eurosense 2020: 9th European Conference on Sensory and Consumer Research.

102. Hynynen A, Aaltojärvi I, Hopia A, Uimonen H. (2020) Emotional diners and rational eaters – constructing the urban lunch experience, *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, DOI: 10.1080/17549175.2020.1762706

101. De S, Pietilä A-M, Iso-Touru T, Hopia A, Tahvonen R, Vähäkangas K. 2019. Information Provided to Consumers about Direct-to-Consumer Nutrigenetic Testing. *Public Health Genomics*, 28 Nov 2019, 1-12, DOI: 10.1159/000503977

100. Aisala M, Manninen H, Laaksonen T, Linderborg KM, Myoda T, Hopia A, Sandell M. 2019. Linking volatile and non-volatile compounds to sensory profiles and consumer liking of wild edible Nordic mushrooms. *Food Chem.* 2020 Jan 30;304:125403. doi: 10.1016/j.foodchem.2019.125403. Epub 2019 Aug 21.

99. Hietaranta-Luoma H-L, Tringham M, Karjalainen H, Tanner L, Vähäkangas K, Pietilä A-M, Åkerman K, Puolijoki H, Tahvonen R, Hopia A. 2019. A Long-term Follow-up Study on Disclosing Genetic Risk Information (*APOE*) to Promote Healthy Lifestyles in Finland. *Lifestyle Genom.* 2018;11(3-6):147-154. doi: 10.1159/000500199.

98. Paakki M, Sandell M, Hopia A. 2019. Visual Attractiveness Depends on Colorfulness and Color Contrasts in Mixed Salads. *Food Quality and Preference*, 76:81-90. <https://doi.org/10.1016/j.foodqual.2019.04.004>

97. Aisala H, Sola J, Hopia A, Linderborg K M, Sandell M. 2019 Odor-contributing volatile compounds of wild edible Nordic mushrooms analyzed with HS-SPME-GC-MS and HS-SPME-GC-O/FID. *Food Chem.* 283: 566-578. doi: 10.1016/j.foodchem.2019.01.053. Epub 2019 Jan 17.

96. Fooladi E, Hopia A, Lasa D, Arboleya J-C. 2019. “Chefs and researchers: Culinary practitioners’ views on interaction between gastronomy and sciences” *J Gastr Food Sci.* 15:6-14, <https://doi.org/10.1016/j.ijgfs.2018.11.003>

95. Aho A-M, Alkava N., Hopia A. 2018. Yhteiskehittämistä elintarvikealan tuotekehitykseen CASE: Food Bait –työpajat In: Seinäjoen ammattikorkeakoulu monipuolisena vaikuttajana. Seinäjoen ammattikorkeakoulun

julkaisusarja A. Tutkimuksia 30 Eds Päällysaho S, Latvanen J, Saarikoski S & Uusimäki S. pp 289-298.

94. Paakki, M., Aaltojärvi, I., Sandell, M., Hopia, A. 2018 The importance of the visual aesthetics of colors in food at workday lunch. *Int. J Gastr Food Sci*, 16:100131, DOI: [10.1016/j.ijgfs.2018.12.001](https://doi.org/10.1016/j.ijgfs.2018.12.001)

93. Uimonen H, Kontukoski M, Hopia A. 2018, Narinajuustoa ja karviaishilloa. Moniaistiset muistot osana ruokailutapahtumaa. *Kulttuurintutkimus* 35(3-4):3-17.

92. Rotola-Pukkila M, Yang B, Hopia A, 2019. The Effect of Cooking on Umami Compounds in Wild and Cultivated Mushrooms, *Food Chem*. 278:56-66, <https://doi.org/10.1016/j.foodchem.2018.11.044>

91. Uimonen H, Kontukoski M, Hopia A, 2018. Narinajuusto ja karviaishilloa. Moniaistiset ruokamuistot osana ääni – ja tilasuunnittelua, abstrakti, 22nd Annual Symposium for Music Scholars in Finland, 7-9.3.2018. University of Helsinki.

90. Matikainen L, Alkava N, Hopia A. 2018. Ruokaverstas- ja Food Bait ruokainnovaatio - työpajakonseptien kehittäjänä. In: *Ratkaisuja Ruokaan* (toim. Lauhanen R, Perämäki L, Mäki T, Saarikoski S. Seinäjoen ammattikorkeakoulun julkaisusarja B. Raportteja ja selvityksiä 135. Pp. 132-139.

89. Kumpulainen T., Sandell M, Hopia A. 2018. Effect of component quality on sensory characteristics of a fish soup. *Food Sci Nutr*. 2018;00:1–9. DOI: [10.1002/fsn3.661](https://doi.org/10.1002/fsn3.661)

88. Kumpulainen T., Vainio A., Sandell M, Hopia A. 2018 How young people in Finland respond to information about the origin of food products: The role of value orientations and product type. *Food Quality and Preference* 68:173-182. <https://doi.org/10.1016/j.foodqual.2018.03.004>

87. Hynynen A., Hopia A., Uimonen H., Pitkääkoski T., Aaltojärvi I., Paakki M., Kontukoski M. 2018. Ei ainoastaan leivästä – Ruoka, kokemus ja moniaistisuus. 72 s. Tampereen teknillinen yliopisto. Arkkitehtuurin laboratorio, Tampere 2018. https://tutcris.tut.fi/portal/files/14104397/Ei_ainoastaan_leiv_st_.pdf

86. Aaltojärvi I., Kontukoski M., Hopia A. 2018 Framing the local food experience: a case study of a Finnish pop-up restaurant, *British Food Journal*, 120 (1): 133-145, <https://doi.org/10.1108/BFJ-12-2016-0613>

85. Hopia A, Kontukoski M, Uimonen H, Silén S. 2017. Childhood Food Memories - A multimodal dining event based on memories from the 1940s. *Creative Tastebuds - conference*, Aarhus, Denmark, 4-5 September 2017. Abstract and video, <http://creativetastebuds.dk/experience-the-contributions/abstract-and-video-childhood-food-memories-a-multimodal-dining-event-based-on-memories-from-the-1940s/>

84. Hoppu, U, Hopia A, Pohjanheimo T, Rotola-Pukkila M, Mäkinen S, Pihlanto A, Sandell M, 2017. Effect of Salt Reduction on Consumer Acceptance and Sensory

Quality of Food. *Foods* (Basel, SwitzFoods. 2017 Nov 27;6(12). doi: 10.3390/foods6120103.

83. Manninen H, Rotola-Pukkila M, Aisala H, Hopia A, Laaksonen T. 2018, Free amino acids and 5'-nucleotides in Finnish forest mushrooms, *Food Chemistry* 247: 23–28. doi.org/10.1016/j.foodchem.2017.12.014

82. Kumpulainen, T., Vainio, A., Sandell, M., & Hopia, A. (2018). The effect of gender, age and product type on the origin induced food product experience among young consumers in Finland. *Appetite*, 123, 101–107. DOI: 10.1016/j.appet.2017.12.011

81. Hopia A, Ihanus S, Sandell M. 2017. New tools to promote vegetable consumption of college students: Participatory food development and sensory-based activities for adolescents. Oral communication/abstract, 2nd COOK & Health Scientific Symposium, London, UK 2nd of March 2017

80. Matikainen L, Hopia A. 2017. Fermentointi – uusvanha ruokatrendi tuo kaalit pitsan päälle. Sarjassa Seinäjoen ammattikorkeakoulun julkaisusarja A. Tutkimuksia 26. Kansainvälinen, yrittäjähenkkinen SeAMK - paras korkeakoulu opiskelijalle. Seinäjoen ammattikorkeakoulu 25 vuotta (toim. Varamäki E, Junell P, Päällysaho S, Saarikoski S, Uusimäki S.). ss. 203-211.

79. Mäntymaa S, Matikainen L, Päällysaho S, Hopia A. 2017. Ruokaverstas-hankkeen kiinnostavuus sosiaalisessa mediassa. Sarjassa Seinäjoen ammattikorkeakoulun julkaisusarja A. Tutkimuksia 26. Kansainvälinen, yrittäjähenkkinen SeAMK - paras korkeakoulu opiskelijalle. Seinäjoen ammattikorkeakoulu 25 vuotta (toim. Varamäki E, Junell P, Päällysaho S, Saarikoski S, Uusimäki S.). ss. 212-221.

78. Matikainen L, Mäki T, Päällysaho S ja Hopia A. 2016. Tiedonsiirto osana innovaatioprosessia - case Ruokaverstas Teoksessa Hyvinvointia ja innovaatioita monialaisesti ja raja-aitoja madaltaen: Katsaus Seinäjoen ammattikorkeakoulun toimintaan 2016. SeAMK julkaisusarja A. Tutkimuksia 25. S. 329-341.

77. Kumpulainen T, Junell P, Alarinta J ja Hopia A 2016. Tuoreuden maksimointi – makro- ja mikrotuotannon hyötyjen yhdistäminen elintarvikeketjussa. Teoksessa Hyvinvointia ja innovaatioita monialaisesti ja raja-aitoja madaltaen: Katsaus Seinäjoen ammattikorkeakoulun toimintaan 2016. SeAMK julkaisusarja A. Tutkimuksia 25. S. 342- 357.

76. Kontukoski M, Paakki M, Thureson J, Pitkäkoski T, Uimonen H, Sandell M, Hopia A. 2016. Ruokailuympäristön vaikutus terveellisiin ruokavalintoihin. Tutkimusmenetelmien testaus ja arviointi. Seinäjoen ammattikorkeakoulun julkaisusarja A, Tutkimuksia, <https://www.theseus.fi/bitstream/handle/10024/111791/A23.pdf;jsessionid=151D014E77D4F263289F4EFE19BF1A39?sequence=1>

75. Kontukoski M, Paakki M, Thureson J, Uimonen H, Hopia A. 2016. Imagined Salad and Steak Restaurants: Consumers' Colour, Music and Emotion Associations with

Different Dishes. *Journal of Gastronomy and Food Science*, 4:1-11.
doi:10.1016/j.ijgfs.2016.04.001

74. Kumpulainen T., Sandell M, Junell P and Hopia A. Lettuce Freshness from Sensory and Information Perspectives, 2016. *Journal of Culinary Science & Technology*, 14:2, 153-165, DOI: 10.1080/15428052.2015.1102783

73. Hietaranta-Luoma H.L, Luomala H, Tahvonen R, Puolijoki H, Koivusilta L and Hopia A. 2015. Using Individual, ApoE Genotype-Based Dietary and Physical Activity Advice to Promote a Healthy Lifestyle: Associations between Psychological-, Behavioral- and Clinical Factors. *Journal of Nutritional Health & Food Science*, 3(4):1-7.

72. Paakki M, Sandell M, Hopia A, Yellow and blue color in potatoes; effects of color on sensory and hedonic response, and choice.2016. *Journal of Sensory Studies*, 31(1)78-89.

71. Hopia A. 2016 Miltä ruoka maistuu? Kasvisruokien kehitystyön haasteet ja mahdollisuudet. Kirjassa.Mattila Hanna (Toim) ”Liha ja muuttuvat ruokailutottumukset”. Mukana kirjoittajat Hopia, Ovaskainen, Fogelholm, Mäkelä, Niva, Katajajuuri, Lehtonen, Risku-Norja, Tapio, Pohjolainen. (Gaudeamus).

70. Hietaranta-Luoma H-L, Åkerman K, Tahvonen R, Puolijoki H and Hopia A. 2015. Using ApoE Genotyping to Promote Healthy Lifestyles in Finland – Impacts on Cardiovascular Risk Markers: Randomized Controlled Trial, *Open Journal of Preventive Medicine*, 5, 206-217
<http://dx.doi.org/10.4236/ojpm.2015.55024>

69. Rotola-Pukkila M, Pihlajaviita S, Kaimainen M, Hopia A. 2015. Concentration of Umami Compounds in Pork Meat and Cooking Juice with Different Cooking Times and Temperatures. *Journal of Food Science*, DOI 10.1111/1750-3841.13127

68. Sandell M, Hoppu U, Lunden S, Salminen M, Laitinen K, Puolimatka T, Hopia A. 2015. Consumption of lingonberries by TAS2R38 genotype and sensory quality of texture designed lingonberry samples. *Food Quality and Preference*, 45:166-170 DOI 10.1016/j.foodqual.2015.06.015

67. Luomala H, Jokitalo M, Karhu H, Hietaranta-Luoma H-L, Hopia A, Hietamäki S. 2015 Perceived health and taste ambivalence in food consumption, *Journal of Consumer Marketing*, 32(4):290 – 301, DOI 10.1108/JCM-11-2014-1233

66. Hopia A and Fooladi E. 2015. The porridge feud – who was right in 19th century Norway? Abstract, Congress on Food Heritage and Culinary Practices, Paris 12-14.10.2015

65. Hopia A, 2015. KUMURU - Combining food with traditional arts, abstract, Food in Society: Research across the humanities and social sciences -congress. Helsinki 4.-6.5.2015.

64. Perttula K, Eromäki H, Kaukonen R, Nissinen K, Peltoniemi A and Hopia A, 2015. Kropsua, hunajaa ja puutarhan tuotteita: Ruokakulttuuri osana ikäihmisten hyvää

elämää. Seinäjoen ammattikorkeakoulun julkaisusarja B Raportteja ja selvityksiä 95. 98 p.

63. Manninen H, Paakki M, Hopia A and Franzén R. 2015. Measuring the green color of vegetables from digital images using image analysis, *LWT Journal of Food Science and technology*, 63(2):1184–1190, DOI: 10.1016/j.lwt.2015.04.005

62. Hietaranta-Luoma H-L, Luomala, H, Puolijoki H. Hopia A. 2015. Using ApoE Genotyping to Promote Healthy Lifestyles in Finland - Psychological Impacts: Randomized Controlled Trial. *Journal of Genetic Counseling*, 24(6):908-21, DOI 10.1007/s10897-015-9826-8 .

61. Hietaranta-Luoma H-L, Tahvonen R, Iso-Touru T, Puolijoki H, Hopia A. 2014, An Intervention Study of Individual, apoE Genotype-Based Dietary and Physical-Activity Advice: Impact on Health Behavior *J Nutrigenet Nutrigenomics* 2014;7:161-174 (DOI:10.1159/000371743)

60. Kontukoski M, Luomala H, Mesz B, Sigman M, Trevisan M, Rotola-Pukkila M, Hopia A. 2015. Sweet and sour: Music and taste associations, *Nutrition & Food Science* , 45(3):357-376, DOI <http://dx.doi.org/10.1108/NFS-01-2015-0005>.

59. Helenius M, Aksela M, Hopia A & Fooladi E, 2013 Rose Water Distillation. *LUMAT* 1(2):183-188, available online <http://www.luma.fi/lumat-en/1978>

58. Hopia A, Sillanpää M & Tuomisto M, 2013. Hollandaise Sauce and the Chemistry behind Old and New Preparation Techniques, *LUMAT* 1(2):47-54, available online <http://www.luma.fi/lumat-en/1978>

57. Töyrylä L, Aksela M, Hopia A & Fooladi E, 2013. Learning Acidity in the Context of Molecular Gastronomy through Argumentation – Making of a Blueberry trio, *LUMAT* 1(2):91-96, available online <http://www.luma.fi/lumat-en/1978>

56. Vilhunen A-S, Aksela M & Hopia A, 2013. Learning Proteins in the Context of Molecular Gastronomy through Higher-order Thinking as an Activity of Fluffy Meringue, *LUMAT* 1(2):97-102, available online <http://www.luma.fi/lumat-en/1978>

55. Vartiainen J, Aksela M & Hopia A, 2013. Introduction to Molecular Gastronomy and to its Applications in Science Education. *LUMAT* 1(2):143-150, available online <http://www.luma.fi/lumat-en/1978>.

54. Fooladi, E. & Hopia, A. 2013. Culinary precisions as a platform for interdisciplinary dialogue. *Flavor* 2:6-9.

53. Fooladi E, Hopia A. 2014. Interdisciplinary Learning and Collaboration through Exploration of Claims from Food and Cooking. *Nordic Research Symposium on Science Education (NFSUN)*, Helsinki, Finland. Poster abstract.

52. Fooladi E, Hopia A. 2013. Food, Science and Society – Culinary Claims as Context for Interdisciplinary Learning and Collaboration. *The ESERA 2013 Conference book/Science inquiry*.

51. Vartiainen J, Hopia A, Aksela M, 2012: Using Kitchen Stories as Starting Point for Chemical Instruction in High School. In E-Book Proceedings of the ESERA 2011 Conference: 5-9 September 2011; Lyon. Edited by Bruguière C, Tiberghien A, Clément P: European Science Education Research Association; 2012: 232-238.

50. Västinsalo, J, Aksela, M & Hopia, A. 2010, Molekyyligastronomia – uusi lähestymistapa kemian opetukseen, Tutkiva lähestymistapa kemian opetukseen. V Valtakunnalliset kemian opetuksen päivät - symposiumkirja, (toim. Maija Aksela, Johannes Perna ja Maija Rukajärvi-Saarela), Kemian opetuksen keskus, Helsinki, s. 177-185.

49. Akkanen S, Kelloniemi J, Pihlanto A, Mäkinen K, Korhonen H, Hopia A, Valkonen JPT. 2008. Inhibition of Angiotensin Converting Enzyme I Caused by Autolysis of Potato Proteins by Enzymatic Activities Confined to Different Parts of the Potato Tuber. *J. Agric. Food Chem.* 56(21):9875-83.

48. Pajunen TI, Johansson MP, Hase T, Hopia A. 2008 Autoxidation of conjugated linoleic acid methyl ester in the presence of alpha-tocopherol: the hydroperoxide pathway. *Lipids.* 43(7):599-610.

47. Pajunen TI, Koskela H, Hase T, Hopia A. 2008. NMR properties of conjugated linoleic acid (CLA) methyl ester hydroperoxides. *Chem Phys Lipids.* 154(2):105-14.

46. Peñalvo JL, Hopia A, Adlercreutz H. 2006. Effect of sesamin on serum cholesterol and triglycerides levels in LDL receptor-deficient mice. *Eur J Nutr.* 45(8):439-44.

45. Selinheimo E, Kruus K, Buchert J, Hopia A, Autio K. 2006. Effects of laccase, xylanase and their combination on the rheological properties of wheat doughs. *J. Cereal Sci.* 43:152-159.

44. Rey, AI, Hopia AI, Kivikari R, Kähkönen M. 2005. Use of natural food/plant extracts: cloudberry (*Rubus Chamaemorus*), beetroot (*Beta Vulgaris "Vulgaris"*) or willow herb (*Epilobium angustifolium*) to reduce lipid oxidation of cooked pork patties. *LWT – Food Sci. Technol.* 38:363-370.

43. Hopia A, Reunanen M, Pesonen P. 2004. GC-MS analysis of organic residues in the potsherd samples from Vantaa Maarinkunnas. *Finskt Museum* 44-55.

42. Hämäläinen TI, Sundberg S, Hase T, Hopia A. 2002. Stereochemistry of the hydroperoxides formed during autoxidation of CLA methyl ester in the presence of alpha-tocopherol. *Lipids.* 37(6):533-40.

41. Castenmiller JJM, Linssen JPH, Heinonen IM, Hopia A, Schwarz KI, Hollman PCH, West CE. 2002. Antioxidant properties of differently processed spinach products. *Nahrung* 46:290-293.

40. Kamal-Eldin A, Mäkinen M, Lampi AM, Hopia A. 2002. A multivariate study of α -tocopherol and hydroperoxide interaction during the oxidation of methyl linoleate. *Eur. Food Res. Technol.* 214:52-57.
39. Puupponen-Pimiä R, Nohynek L, Meier C, Kähkönen M, Heinonen M, Hopia A, Oksman-Caldentey KM. 2001. Antimicrobial properties of phenolic compounds from berries. *J Appl Microbiol.* 90(4):494-507.
38. Kähkönen MP, Hopia AI, Heinonen IM 2001. Berry phenolics and their antioxidant activity. *J Agric Food Chem.* 49:4076-82
37. Mäkinen M, Kähkönen M, Hopia A. 2001. Ascorbic acid and ascorbyl palmitate have only minor effect on the formation and decomposition of methyl linoleate hydroperoxides. *Eur. J. Lipid Sci. Technol.* 103:683-687.
36. Mäkinen M, Kamal-Eldin A, Lampi AM, Hopia A. 2001. α -, γ - and δ -Tocopherols as inhibitors of isomerization and decomposition of cis,trans methyl linoleate hydroperoxides. *Eur. J. Lipid Sci. Technol.* 103:286-291.
35. Mäkinen M, Kamal-Eldin A, Lampi AM, Hopia A. 2001. Effects of α - and γ -tocopherols on formation of hydroperoxides and two decomposition products from methyl linoleate. *Eur. J Lipid Sci. Technol.* 103:286-291.
34. Tammela P, Hopia A, Hiltunen R, Vuorela H, Nygren M. 2000. Aging in *Pinus sylvestris* L. seeds: changes in viability and lipids. *Biochem Soc Trans.* 28(6):878-9.
33. Mäkinen M, Hopia A. 2000. Effects of α -tocopherol and ascorbyl palmitate on the isomerization and decomposition of methyl linoleate hydroperoxides. *Lipids* 35: 1215-1223
32. Schwarz K, Bertelsen G, Christiansen J, Gardner PT, Heinonen M, Hopia A, Huynh-Ba T, Lambelet P, McPhail D, Skibsted L, Tijburg L. 2000. Comparing the antioxidant activity of different plant extracts by six different assays and their principal antioxidant compounds. *Eur. Food Res. Technol.* 212:319-328.
31. Rauha JP, Remes S, Heinonen M, Hopia A, Kähkönen M, Pihlaja K, Saarni T, Vuorela, P. 2000. Antimicrobial effects of Finnish plant extracts containing flavonoids and other phenolic compounds. *Int. J. Food Microbiol.*, 56: 3-12.
30. Haila K, Hopia A, Heinonen M. 2000. Effects of β -carotene and retinal on formation and isomer distribution of methyl linoleate hydroperoxides. *Eur. J. Lipid Sci. Technol.* 2000, 31-36.
29. Eiro M, Hopia A, Kaukovirta-Norja A, Lehtinen P, Heinonen M. 2000. Enhancing the color of blackcurrant wine by natural additives. *Vitic. Enol. Sci.* 55: 1, 3-6
28. Mäkinen M, Kamal-Eldin A, Lampi AM, Hopia A. 2000. Effects of alfa- and gamma-tocopherols on formation of hydroperoxides and two decomposition products from methyl linoleate. *JAOCs* 77(8): 801-806.

27. Rauha JP, Tammela P, Summanen J, Hopia A, Heinonen M, Kähkönen M, Pihlaja K, Saarni T, Vuorela P, Törnquist K, Vuorela H. 1999. Actions of some plant extracts containing flavonoids and other phenolic compounds on calcium fluxes in clonal rat pituitary GH4Cl cells. *Pharm. Pharmacol. Lett.* 9:66-69.
26. Lehtonen PJ, Rokka MM, Hopia AI, Heinonen IM. 1999. HPLC determination of phenolic compounds in berry and fruit wines and liquors. *Vitic. Enol. Sci.* 54(2):33-38.
25. Kähkönen M, Hopia A, Vuorela H, Rauha JP, Pihlaja K, Saarni T, Heinonen M. 1999. Antioxidant activity of plant extracts containing phenolic compounds. *J.Agric. Food Chem.*, 47: 3954-3962.
24. Pekkarinen SS, Schwarz K, Heinonen IM, Hopia AI. 1999. Antioxidant activity and partitioning of phenolic acids in bulk and emulsified methyl linoleate. *J.Agric. Food Chem.*, 47: 3036-3043.
23. Hopia A, Heinonen M. 1999. Antioxidant activity of flavonol aglycones and their glycosides in methyl linoleate *J. Am. Oil Chem. Soc.* 76:139-144.
22. Pekkarinen SP, Heinonen M, Hopia A. 1999. Flavonoids quercetin, myricetin, kaemferol and (+)catechin as antioxidants in methyl linoleate *J.Sci.Food Agric.* 79:499-506.
21. Jussila M, Sundberg S, Hopia A, Mäkinen M, Riekkola ML. 1999. Separation of linoleic acid autoxidation products with micellar elektrokinetic capillary chromatography. *Electrophoresis* 20:111-117.
20. Fuster MD, Lampi AM, Hopia A, Kamal-Eldin A. 1998. Effects of α - and γ -tocopherols on the autoxidation of purified sunflower triacylglycerols. *Lipids*, 33:715-722.
19. Lampi AM, Piironen V, Hopia A, Koivistoinen P. 1998 Characterization of the oxidation of rapeseed and butter oil triacylglycerols by four analytical methods. *Lebensm.-Wiss.u.-Technol.* 30:807-813.
17. Pekkarinen SP, Hopia A, Heinonen IM. 1998. Effect of processing on the oxidative stability of low erucic acid turnip rapeseed (*Brassica rapa*) oil. *Fett/Lipid* 100:69-74.
16. Heinonen IM, Lehtonen PJ, Hopia AI. 1997. Antioxidant activity of berry and fruit wines and liquors. *J.Agric. Food Chem.* 46:25-31.
15. Lampi AM, Piironen V, Hopia A. 1997. Effect of minor amounts of γ -tocopherol on oxidation of rapeseed oil and butter oil TAG mixtures. *J. Am. Oil Chem. Soc* 74(5):549-555.
14. Ohshima T, Hopia A, German B, Frankel E. 1996. Determination of hydroperoxides and structures by HPLC with post-column detection with diphenyl-1-pyrenylphosphine. *Lipids* 31:1091-1096.

13. Piispa E, Hyvönen L, Hopia A. 1996. Characterization of quality of fat in processed foods by fatty acid analysis and high-performance size-exclusion chromatography. *Fett/Lipid* 98:257-260.
12. Hopia AI, Huang SW, Schwarz K, German JB, Frankel EN. 1996. Effect of different lipid systems on antioxidant activity of rosemary constituents carnosol and carnosic acid with and without α -tocopherol. *J. Agric. Food Chem.* 44:2030-2036.
11. Hopia AI, Huang SW, Frankel EN. 1996. Effect of α -Tocopherol and Trolox C on the Decomposition of Methyl Linoleate Hydroperoxides. *Lipids* 31:357-365.
10. Mäkinen M, Piironen V, Hopia A. 1996. Postcolumn chemiluminescence, ultraviolet and evaporative light-scattering detectors in high-performance liquid chromatographic determination of triacylglycerol oxidation products. *J. Chrom. A* 734:221-229.
9. Huang SW, Hopia AI, Schwarz K, German JB, Frankel EN. 1996. Antioxidant Activity of α -Tocopherol and Trolox in Different Lipid Substrates: Bulk Oils vs Oil-in-Water Emulsions. *J. Agric. Food Chem.* 44:444-452.
8. Viinanen E, Hopia A. 1993. RP-HPLC Analysis of Triacylglycerol Autoxidation Products using UV and Evaporative Light-Scattering Detectors. *J. Am. Oil Chem. Soc.* 71:537-539.
7. Hopia A. 1993. Analysis of High Molecular Weight Autoxidation Products using High-Performance Size-Exclusion Chromatography: II Changes during processing. *Food Sci. Technol.* 26:572-576.
6. Hopia A. 1993. Analysis of High Molecular Weight Autoxidation Products using High-Performance Size-Exclusion Chromatography: I Changes during Autoxidation. *Food Sci. Technol.* 26:568-571.
5. Hopia AI, Ollilainen VM. 1993. Comparison of the Evaporative Light-Scattering Detector (ELSD) and Refractive Index Detector (RID) in Lipid Analysis. *J. Liq. Chrom.* 16: 2469-2482.
4. Hopia AI, Lampi AM, Piironen VI, Hyvönen LET, Koivistoinen PE. 1992. Application of HPSEC to Study the Autoxidation of Unsaturated Triacylglycerols. *J. Am. Oil Chem. Soc.* 70: 779-784.
3. Lampi AM, Hopia A, Ekholm P, Piironen V. 1992. Method for the Preparation of Triacylglycerol fractions from Rapeseed and Other Oils for Oxidation Studies. *Lebensm. -wiss. u.-Technol.* 25:386-388.
2. Hopia A, Piironen V, Koivistoinen P, Hyvönen, L. 1992. Analysis of Lipid Classes by Solid-Phase Extraction and High-Performance Size-Exclusion Chromatography. *J. Am. Oil Chem. Soc.* 69:772-776.
1. Hopia A, Pyysalo H, Wickström K. 1986. Margarines, butter and vegetable oils as sources of polycyclic aromatic hydrocarbons. *J. Am. Oil Chem. Soc.* 63:889-893.

B Non-refereed scientific articles

23. Hopia A and Rotola-Pukkila M, 2014. Kypsennysajan ja lämpötilan vaikutus porsaanlihan umamiyhdisteisiin, Effect of cooking time and temperature on umami compounds in pork meat Uudet elintarvikeprosessit – näkökulmina laatu ja kestävä tuotantolaous –hankkeen päätösseminaari, Seinäjoki 31.10.2014.

22. Manninen H, Franzen R and Hopia A, 2014. Measuring the red color of berry juices from digital images using image analysis. Poster abstract in XII Encontro de Química dos Alimentos - Bridging Traditional and Novel Foods: composition, structure and functionality, Lisbon Portugal 10.-12.9.2014, Instituto Superior de Agronomia, Portugal.

21. Hopia A. 2014. You can see, hear, smell, taste and feel it – What is it? It is taste of food. In: 5DCookbook, p. 8-9., available in www.5Dcookbook.fi.

20. Spence C, Velasco C, Vanne M, & Hopia A. 2014. Can you taste the music? In: 5DCookbook, p. 73, 13 pages, available in www.5Dcookbook.fi.

17. Luomala H, Hopia A, Finne M, Nissinen K, Peltoniemi A. (Toim.) 2012. Terveelliset valinnat: räätälöidyt syömisen ja liikkumisen mallit - TERVAS-hankkeen keskeiset tulokset ja johtopäätökset. Vaasan yliopiston selvityksiä, julkaisuja ja raportteja, Vaasa. 91 s.

16. Vartiainen J, Aksela M, Hopia A. 2012. Using kitchen stories as starting point for chemical instruction in high school. The ESERA 2011 Conference book, Part 3. Teaching and learning science. Pp 232-

15. Karhu H, Luomala H, Hietaranta-Luoma H-L, Hopia A. 2011. Terveellisyys ja hyvä maku samassa paketissa? Elintarvikkeiden ja hyvinvoinnin kokeminen erilaisia terveystarkoituksiin arvostavien kuluttajien keskuudessa. Vaasan yliopiston julkaisuja, Selvityksiä ja raportteja 164.

14. Hietaranta-Luoma H-L, Karhu H, Eromäki H, Finne M, Luomala H, Nissinen K, Nygård S, Peltoniemi A, Puolijoki H, Tuuri H, Hopia A. 2011. Eteläpohjalaiset elämäntavat – millaisia ovat ja missä mennään? Turun yliopiston julkaisuja, Selvityksiä ja raportteja, 85 p.

13. da Silva Magalhães M, Tommola J, Ferreira CL, Salminen S, Hopia A. 2010. Molecular Gastronomy. In: da Silva Magalhães M, Salminen S, Ferreira CL, Tommola J (Eds). Terminology – Functional Foods, Probiotics, Prebiotics, Synbiotics, Health claims, Sensory evaluation of foods, Molecular gastronomy. University of Turku, Functional Foods Forum, Turku 2010. Pp. 93-106.

12. Hopia A. 2009. Molekyyliogastronomia – luonnontieteellinen näkökulma ruokaan. In: Maija Aksela M and Pernaa J (Eds). Arkipäivän kemia, kokeellisuus ja työturvallisuus kemian opetuksessa perusopetuksesta korkeakouluihin - IV Valtakunnalliset kemian opetuksen päivät, Yliopistopaino Oy, pp. 12-16.
11. Salo P, Hopia A, Lahtinen R. Laakso P. 2005. Plant stanol ester as a cholesterol-lowering ingredient of Benecol Foods. In: Akoh CC and Oi-ming Lai (Eds). Healthful lipids, AOCS Press. Pp. 699-730.
10. Salo P, Wester I, Hopia A. 2005. Phytosterols. In: Gunstone FD (Ed.). Lipids for functional foods and nutraceuticals, The Oily Press. pp. 183-224.
9. Lehtonen, P., Hopia, A., Jakobson, U., Rokka, M. & Heinonen, M. 1996. HPLC determination and antioxidant activity of flavonoids in berry wines. Symposium on polyphenols and anthocyanins as food colourants and antioxidants. FLAIR-FLOW EUROPE, Vienna, 15th November 1996. Proceedings. pp. 97-102.
8. Haila, K., Hopia, A. & Heinonen, A. 1996. Beta-carotene as a lipid pro-oxidant. VIII Biennial Meeting International Society for Free Radical Research. October 1.-5. 1996. Barcelona. Proceedings.
7. Mäkinen, M., Hopia, A. & Frankel, E.N. 1996. Effects of antioxidants on the decomposition of methyl linoleate hydroperoxides. VIII Biennial Meeting International Society for Free Radical Research. October 1.-5. 1996. Barcelona. Proceedings.
6. Viinanen, E. & Hopia, A. 1995. HPSEC analysis of oxidation products of deep fat fried food. 18th Nordic Lipid Symposium, June 18.-21., 1995, Reykjavik, Iceland. Proceedings pp. 148-152.
5. Hopia, A. 1993. Application of high-performance size exclusion chromatography (HPSEC) when analyzing the quality of edible oils. 17th Nordic Lipid Symposium, June 13.-15., 1993, Imatra, Finland. Proceedings pp. 222-225.
4. Lampi, A.-M., Piironen, V. & Hopia, A. 1993. Effect of gamma-tocopherol on autoxidation of rapeseed and butter oil triacylglycerols. 17th Nordic Lipid Symposium, June 13.-15., 1993, Imatra, Finland. Proceedings pp. 134-136.
3. Piironen, V. I., Hopia, A. I., Lampi, A.-M., Hyvönen, L.E.T. and Koivistoinen, P. E. 1992. Effect of trace amounts of α -tocopherol on Autoxidation of Rapeseed Oil Triacylglycerol Fraction. Chemical Reactions in Foods II. Prague 23.-25.9.1992. Proceedings. pp. 133-138.
2. Hopia, A. and Piironen, V. 1991. Separation of Lipid Classes by High-Performance Size-Exclusion Chromatography. 16th Scandinavian Symposium on Lipids, Norway, Hardanger, 9.-13.6.1991. Proceedings pp. 90-95.
1. Hopia, A. Hyvönen, L., Lampi, A.-M. and Eskelinen, P. 1989. The effect of feeding on the nutritional value of rainbow trout. 15th Scandinavian Symposium on Lipids, Denmark 11.-15.6.1989. Proceedings pp. 471-476.

C Scientific books (monographs)

Hopia, A. ja Ihanus, S. 2014 (Toim). Moniaistinen keittokirja – 5D Cookbook, sähköinen suomen- ja englanninkielinen julkaisu, www.5Dcookbook.fi, ISBN 978-951-29-5742-2

Hopia, A., Hyvönen, L. & Viinanen, E. 1994. Elintarvikkeiden rasvapitoisuus - analyttinen ja tutkimuksellinen ongelma. Elintarvikeviraston julkaisu no 15/94. 20 s. + liites.

D Publications intended for professional communities

Välimaa, A-L., Aisala, H., Aitta, E., Alakomi, H-L., Hiidenhovi, J., Honkapää, K., Hopia, A., Huo- tari, J., Kakko, T., Logrén, N., Mattila, P., Mäkinen, S., Setälä, J., Yang, B. & Svanbäck, G. 2021. Kaiken takana on laadukas raaka-aine – Silakan laadun mittausmenetelmät. Luonnonvara- ja biotalouden tutkimus 58/2021. Luonnonvarakeskus. Helsinki. 91 s. <http://urn.fi/URN:ISBN:978-952-380-259-9>

Hopia A, Ihanus S, Rintala N, Aho A-M, Sillvan N, Hannu H, Berggren J, Nóren B, Rehn J, Walter U. 2020. Food Bait Toolbox - Kehittämistyökaluja PK-yrityksille. ISBN 978-951-29-8353-7. https://issuu.com/turun_yliopisto/docs/food-bait-esite-fi-2020

Hopia A, Ihanus S, Rintala N, Aho A-M, Sillvan N, Hannu H, Berggren J, Nóren B, Rehn J, Walter U. 2020. . Food Bait - utvecklingsverktyg för SMF-företag by Turun yliopisto - Issuu. ISBN 978-951-29-8354-4. https://issuu.com/turun_yliopisto/docs/food-bait-esite-sv-2020.

Hopia A, Ihanus S, Rintala N, Aho A-M, Sillvan N, Hannu H, Berggren J, Nóren B, Rehn J, Walter U. 2020. Food Bait – development tools for SMEs by Turun yliopisto – Issuu. ISBN 978-951-29-8355-1. https://issuu.com/turun_yliopisto/docs/food-bait-esite-en-2020.

E Publications intended for the general public, linked to research (in Finnish/Norwegian)

Hopia A, Lehtonen P. 2021. Kuplivaa kemiaa: Kiehtovat juomat kotikaljasta kombuchaan. 258 s. Gaudeamus Oy, Helsinki.

Hopia A, Fooladi E. 2019. A Pinch of Culinary Science - Boiling an Egg Inside Out and Other Kitchen Tales, CRC Press

Hopia A, Fooladi E. 2017. Hyppysellinen Tiedettä – Valeomenapiirakka ja muita kertomuksia keittiöstä. Gaudeamus.

Hopia A, Fooladi E. 2017. Kjemi på kjøkkenet - Om hvorfor kaka faller sammen og andre kjøkkenhistorier. Humanist, Norge.

Hopia A & Lehtovaara T 2015 Kasvikset kemistin keittiössä, Minerva Kustannus Oy, Helsinki

Tuomisto M, Hopia A & Aksela M (toim.) 2014 Kemian ja kotitalouden opetusta molekyyli-gastronomian kontekstissa, e-Oppe Oy (elektroninen oppikirja)

Hopia A, Lehtovaara T & Rastas A 2014 Kaksi kokkia ja kemisti, Nemokustannus 2014

Hopia A 2013 e-Kokki –elektronisen oppikirjan Ruoan kemia –osakokonaisuus, saatavilla ekokki.fi. Electronic education material for chef students entitled e-Kokki "e-Chef", available www.ekokki.fi.

Lehtovaara, T. & Hopia, A. Molekyyli Sopassa, WSOYpro. 2011 (Chemistry book for chef students entitled "Molecule in the soup")

Hopia, A. Kemiaa Keittiössä, Nemokustannus. 2008. (popular science book entitled "Chemistry in the Kitchen")

Välimäki, H. Parviainen, V. Takala, M. & Hopia A. P.S. – Parasta Sokerista – jälkiruokakirja, Otava. 2007. (cook book on desserts entitled "P.S. Best of Sugar")

F Public artistic and design activities

Researcher at ISEAS2022 – International Socially Engaged Art Symposium

<https://iseasfinland.com>

Research director at KUMURU-project on Culture, Music and Food 2012-2014 funded by Etelä-Pohjanmaan Liitto, <http://kumuru.blogspot.com/>, in collaboration with Food, Music and Consumer sciences, musicians and food artisans

Organizer of SENSIBUS FESTIVAL <http://sensibusfestival.blogspot.com/> organised as a closing event of the KUMURU-project

Research director at VÄRINÄ-project, Health promoting dining environment 2014-2017, funded by Tekes

Research director at MURULA-project, Music, Food and Children 2019, Funded by Foundation of Seinäjoki University Consortium

G Theses

H Patents and invention disclosures

Wester I, Palmu T, Hopia A., Alho-Lehto P, Virtanen P, Pouri A. Improved edible compositions for lowering cholesterol. EP 1377181. 2004/01/07.

I Audiovisual material, ICT software

POSTERs

- Poster-esitykset EUROSENSE 2022-kongressissa 13.-16.9.2022 Turussa
 - Sensory Walk - A tool to measure sensory experiences in a place, Pohjanheimo Terhi, Ojansivu Pauliina, Hopia Anu
 - Impact of sustainability vs. sensory communications in the marketing of sustainable food products, Forsman Laura, Lundén Saara, Hopia Anu, Sandell Mari
 - Aesthetic emotions in a mixed reality food experience, Mesz Bruno, Sakdavong Jean-Christophe, Hopia Anu
 - “Unhealthy is tasty” belief among Finnish consumers
 - Consumer case study – a successful reformulation of catering product with unhealthy health profile, Junkkari Terhi, Arjanne Leena, Mattila Saila, Paakki Maija, Kantola Maija, Luomala Harri, Hopia Anu
 - Effect of hedonic audiovisual stimulus on food experience, Hopia Anu, Kantola, Maija, Paakki Maija, Junkkari Terhi, Arjanne Leena, Luomala Harri
 - Baltic herring (*Clupea harengus membras*) as a part of Finnish fish consumption Logrén, Nora, Lundén Saara, and Hopia Anu