

PEER-REVIEWED RESEARCH PAPERS

Luoto, S., Luger, J., Kallio, E., Heikkilä, T., Lindell, M., Kivelä, R., Sandell, M. & Van der Meij, M. 2022. **Identifying Challenges of Food Living Labs in Food System Sustainability Transformation in Finland**. Proceedings of the OpenLivingLab Days Conference 2022. ENoLL – European Network of Living Labs.

Kariluoto S, Edelmann M, Nyström L, Kivelä R, Herranen M, Korhola M, Sontag-Strohm T, Salovaara, H, Piironen, V. 2014. **In situ enrichment of folate in beta-glucan rich oat and barley matrices**. Food Microbiology. 176. 38-48

Mäkinen, O, Kivelä, R., Nyström, L., Andersen, M. and Sontag-Strohm, T. 2012. **Formation of oxidizing species and their role in the viscosity loss of cereal beta-glucan extracts**. Food Chemistry. 132 (4), 2007-2013.

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Kivelä, R., Nyström, L., Salovaara, H. and Sontag-Strohm, T., 2009. **Oxidative Cleavage and acid hydrolysis of oat beta-glucan in modelled beverage conditions**. Journal of Cereal Science 50, 190-197.

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Kivelä, R., Nyström, L. and Sontag-Strohm, T., 2008. **Gel structure protects cereal β -glucan from radical induced degradation in aqueous systems**. Ann. Transact. Nordic Rheology Society, vol. 16, 185-188.

BOOKS and CHAPTERS

Kivelä, R. 2022. **Kasviproteiinit ruokajärjestelmien kestävyys siirtymässä**. In Tarja Halonen, Kaisa Korhonen-Kurki, Jari Niemelä & Janna Pietikäinen (toim.). 2022. Kestävyyden avaimet Kestävyytieteiden keinoin ihmisen ja luonnon yhteisöön. P.142, Gaudeamus, Helsinki

Kivelä, R., Simonen, J. and Heikkilä, A. 2020. **Startupin menestystekijät – tarkastelussa elintarvikeala ja tapaus Nyhtökaura**. <https://www.e2.fi/hankkeet-ja-julkaisut/julkaisut/startupin-menestystekijat-tarkastelussa-elintarvikeala-ja-tapaus-nyhtokaura.html>

Doctoral Thesis:

Kivelä R, 2011. **Non-enzymtic degradation of (1→3)(1→4)-β-D-glucan in aqueous processing of oats**. ISBN 978-952-10-7097-6, Unigrafia, Helsinki

Kivelä, R and Sontag-Strohm, T., 2011. **Degradation and stability of oat soluble fibre in processing in; Oats: Cultivation, Uses and Health effects**, pp 51-96. Nova Publishers, USA.

Master's Thesis:

Kivelä R., 2004, **Stigmasterolin 5α,6α - ja 5β,6β-epoksidien sekä 3β,5α,6β-triolin synteesi**. 2003. EKT-serie 1292.

KONGRESS ABSTRACTS

Kivelä R.H, Sontag-Strohm T., Henniges U., Nyström L., Salovaara H. and Potthast A. 2010. **Change in oat β-glucan properties by heat induced oxidation**. AACC, Savannah, USA.

Kivelä, R, Salovaara, H. and Sontag-Strohm, T., 2009. **Challenges in using oat β-glucan as a functional hydrocolloid in aqueous foods**. EPNOE, Turku, Finland.

Sontag-Strohm, Kivelä, Nyström, Kuula, Ibrügger and Salovaara. 2009. **Physical properties of soluble fibre in oat products**. Dietary Fibre 2009, Vienna, Austria.

Kivelä, R, Nyström, L., Salovaara, H. and Sontag-Strohm, T., 2009. **Ascorbic acid induced oxidative cleavage of cereal β-glucan in aqueous foods**. Dietary Fibre 2009, Vienna, Austria.

Nyström, L, Kivelä, R, Salovaara, H. and Sontag-Strohm, T., 2009. **Stability of cereal beta-glucan in aqueous systems**. NCC 2009, Copenhagen, Denmark.

Kivelä, R, Gates, F., Nyström, L., Salovaara, H. and Sontag-Strohm, T., 2008. **Degradation of cereal β-glucan by ascorbic acid induced reactive oxygen species in aqueous solutions**. EYCSTW, Kaunas, Lithuania.

Kivelä, R., Gates, F. and Sontag-Strohm, T. 2008. **Non-enzymatic degradation of β-glucan in aqueous food systems**. Food Colloids 2008, Le Mans, France.

OTHERS

Non-peer-reviewed reviews:

Kivelä R., Mikola, M. 2014. **Oats –an ancient ingredient for healthy future**. Food Innovations.

Kivelä, R. and Mikola, M. 2013. **Grain based fibres in baking**. Food Innovations

Kivelä, R. 2009. **Viljan prosessointi- miten käy kuidun terveystuotosten**. Leipuri-lehti 8.

PATENTS

Reetta, KIVELÄ., Anna, HÄKÄMIES. Date of filing: 16.10.2015. European Patent Application (Granted). **"A method of manufacturing a textured food product and a texturized food product"**. Publication Number: EP3155903B1. Date of publication and mention of the grant of the patent: 03.01.2018. Designated Contracting States: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR, Designated Extension States: BA, ME. Application number: EP15190251.7A.

Reetta, KIVELÄ., Anna, HÄKÄMIES. Date of filing: 05.08.2016. United States Patent Application. "Method of manufacturing a textured food product and a texturized food product". Publication number: US2017/0105428A1. Publication date: 20.04.2017. Priority to EP15190251.7A. Application number: US15/229,290.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. International filing date: 13.10.2016. International application published under the Patent Cooperation Treaty (PCT). "A method of manufacturing a textured food product and a textured food product". International publication number: WO 2017/064172 A1. International publication date: 20.04.2017. Priority to US15/229,290. International application number: PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. South Korean Patent Application. "Method of manufacturing a textured food and textured foods". Publication number: KR20180084776A. Publication date: 25.07.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. European Patent Application (Intention to Grant). "A method of manufacturing a textured food product and a textured food product". Publication number: EP3361880A1. Publication date: 22.08.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. Brazilian Patent Application. "Manufacturing process of a textured food product and a textured food product" (translated from Portuguese). Publication number: BR112018006770A2. Publication date: 09.10.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. Australian Patent Application. "A method of manufacturing a textured food product and a textured food product". Publication number: AU2016336811A1. Publication date: 19.4.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. United States Patent Application. "A method of manufacturing a textured food product and a textured food product". Publication number: US20180279646A1. Publication date: 04.10.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. Mexican Patent Application. "A method of manufacturing a textured food product and a textured food product". Publication number: MX2018004393A. Publication date: 01.08.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. Canadian Patent Application. "A method of manufacturing a textured food product and a textured food product". Publication number: CA3000586A1. Publication date: 20.04.2017. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. Chinese Patent Application. "A method of manufacturing a textured food product and a textured food product". Publication number: CN108471778A. Publication date: 31.08.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 13.10.2016. Japanese Patent Application. "Production methods and texturizing food texturizing food" (translated from Japanese). Publication number: JP2018529387A. Publication date: 11.10.2018. Priority to PCT/EP2016/074556.

Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 27.03.2018. Croatian Patent Application. "A method of manufacturing a textured food product and a texturized food product". Publication number: HRP20180512T1. Publication date: 31.05.2018. Priority to PCT/EP2016/074556.

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REETTA KIVELÄ

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Reetta, KIVELÄ., Anna, HÄKÄMIES., Zhongqing, JIANG. Date of filing: 05.04.2018. Chilean Patent Application. "A method for manufacturing a food product with texture and textured food product" (translated from Spanish). Publication number: CL2018000890A1. Publication date: 10.08.2018. Priority to US15/229,290.

Reetta, KIVELÄ., Zhong-qing, JIANG., Maria, SILVÉN. Date of filing: 11.04.2017. European Patent Application. "**Ready-to-eat texturized protein product**". Publication Number: EP3387913A1. Publication date: 17.10.2018. Application number: EP17166065.7A.

Reetta, KIVELÄ., Zhong-qing, JIANG., Maria, SILVÉN. Date of filing: 10.04.2018. International application published under the Patent Cooperation Treaty (PCT). "Ready-to-eat texturized protein product". International Publication Number: WO2018189161A1. Publication date: 18.10.2018. Application number: PCT/EP2018/059132. Priority to EP17166065.7A

Maija, ITKONEN., Reetta, KIVELÄ., Zhong-qing, JIANG. Date of filing: 11.04.2017. European Patent Application. "**Texturized protein product**". Publication Number: EP3387914A1. Publication date: 17.10.2018. Application number: EP17166060.8A.

Maija, ITKONEN., Reetta, KIVELÄ., Zhong-qing, JIANG. Date of filing: 10.04.2018. International application published under the Patent Cooperation Treaty (PCT). "Texturized protein product". International Publication Number: WO2018189160A1. Publication date: 18.10.2018. Application number: PCT/EP2018/059131. Priority to EP17166060.8A.

Maija, ITKONEN., Reetta, KIVELÄ., Zhong-qing, JIANG. Date of filing: 11.04.2017. United States Patent Application. "Texturized protein product". Publication Number: US20200154734A1. Publication date: 21.05.2020. Application number: EP17166060.8A. Priority to EP17166060.8A.

Maija, ITKONEN., Reetta, KIVELÄ., Zhong-qing, JIANG. Date of filing: 10.04.2018. European Patent Application. "Texturized protein product". Publication Number: EP3609348A1. Publication date: 19.02.2020. Application number: EP18715733.4A. Priority to EP17166060.8A.

Zhongqing, JIANG., Reetta, KIVELÄ., Jingwei, LIU., Veera, LINTOLA., Outi, MÄKINEN. Date of filing: 13.07.2019. International application published under the Patent Cooperation Treaty (PCT). "**A meat replacement product, a method and a twin-screw extruder for manufacturing the same**". International Publication Number: WO2021008680A1. Publication date: 21.01.2021. Application number: PCT/EP2019/068926. Priority to PCT/EP2019/068926.

Outi, Mäkinen, Reetta, Kivelä. Date of filing 29.4.2022. **Fermented umami-containing enzymatically active biomass, umami concentrate, umami paste, solid umami product, salt-free or low-salt umami extract, low-salt umami product, and methods for producing the same.** Application number: 20225372. *PENDING*

Outi, Mäkinen, Reetta Kivelä. Date of filing 12.8.2022. **Texturized formed plantprotein product and method for manufacturing the same** Application number: 20225722. *PENDING*

LECTURING

2022-2023 *University of Helsinki, Faculty of Forreast and Agriculture*

Created, managed and lectured an innovation program for master students consisting of Courses

FOOD-911 Me as a Change-Maker 2 Cr

FOOD-912 From Idea to Innovation 5 Cr

2021-2023 *University of Helsinki, Faculty of Forreast and Agriculture*

Created and coached an Innovation Program for Researchers

Germinator 2021-2022

Germinator 2022-2023

2021, *University of Helsinki, Faculty of Forreast and Agriculture*

Created, managed and lectured an innovation course for Bachelor students

EKT-412 Minustako muutoksentekijä? 2 Cr

2020-2023, *University of Helsinki, Faculty of Forreast and Agriculture*

Lectures at Courses

EKM- 127 Sustainable entrepreneurship

ETK-111 Elintarviketeknologian tulevaisuus

YET-111 Transition management and food business

AGRI-007B Käytännön innovaatiojohtaminen

ETK-215V Elintarvikesuunnittelu- ja prosessointi

ORAL PRESENTATIONS

2022:

Elintarvikemessut 22: Why Food Innovations

Elintarvikepäivä 22: Why Do we need Food Innovations

EuroSense22: The Story of Nordic Umami Company

Miltä näyttää Tulevaisuuden Ruoan tuotanto/Sitra: Ruokajärjestelmän systeemi-innovaatiot

TEK Talk: Mullistaako Ruoantuotanto tulevaisuuden?

In addition smaller events presenting or paneling about systemic change of Food System, Entrepreneurship and Umami.

2021:

Food Oats – Conference: Oats – The Cinderella Story

Number of domestic and International presentations about

From Researcher to the Entrepreneur

2016-2020

Number of domestic and International presentations about

From Researcher to the Entrepreneur and

the Story of Pulled oat

2007-2014

Number of domestic and International presentations about

Oat Processing opportunities

Oat Bet-Glucan

Oxidation of beta-glucan

SUPERVISING

Mentor i.e. in the following innovation programs:

2017-2021: EIT Food

2017-2020: Startup Kiuas

2019: Helsinki Think Company

2021: Bioboard

2021: Lantmännen Greenhouse

2022: Turku Innovation week

Doctoral, Master's, Bachelor Thesis and Practical Training Supervisions:

Luoto, Sanna, on-going of living labs and innovations platforms, Doctoral Thesis.

Kaitazis Ira. 2021. **Kasviksista syntyvän ruokahävikin vähentämisen ja hyödyntäminen pellolta ruokakauppaan**, Bachelor's Thesis

Robin, Charles. 2021. **Formulation of a fermented and pasteurised flexitarian summer sausage**, Practical Training.

Clémence TABOUREUR VITRY. 2021. **Optimization of the Enzymic Manufacturing Process of Oat milk**, Practical Training.

Maija-Leena Kaltiokangas. 2017. **Convicin/Vicin and FODMAP content of pulled oats and its ingredients**, Master's Thesis

Xin Chen. 2016. **Method for characterisation of texturised products**, Master's Thesis

Liisa Lepistö, 2015. **Kauraleivän vanhenemisen hidastaminen**. Master's Thesis

Alasmaa, Terhi, 2013. **Kaurajauhon käyttö leivoskeksissä**, Master's Thesis

Kahila, Paula, 2013-. **Suklaan valmistusprosessin vaikutus suklaan flavanoleihin**. Master's Thesis

Fabritius, Emmi, 2013. **Effect of portion size of bread and sugar confectionaries on their glycaemic responses**, Master Thesis

Heikkinen, Mari, 2012. **New oat baking technologies**. Practical training.

Myllymäki Iiris, 2012. **Edible films on marmelades and liquorices**. Master Thesis

Loponen, Riikka. 2011. **Starch and beta-glucan interaction in baking**, Master Thesis

Kivinen, Alexandra. 2011. **Gelling and filming properties of degraded oat beta-glucan**. Diploma.

Väre, Taija. 2011. **Composition of oat and barley extracts**. Master Thesis.

Mäkinen, Outi. 2010. **Formation of reactive oxygen species in storage of oat and barley extracts**. Master's Thesis.

Petitpas, Valerie. 2009. **Gel formation of hydrolysed and oxidized oat beta-glucan**. Practical Training

Sanchez, Guillermina. 2008. **Effect of heating on solutions of two commercial oat brans**. Practical Training.

Jang, ZhongQuing, 2008. **Oat Emulsions with valve homogenisator**. Practical Training.

Latvala, Tiina, 2013. **Effect of sugar reduction on the nutritional value in sweet bakery products**. Master's Thesis

Siivinen, Helinä, 2013. **Extraction of fructans and other soluble fibre components from rye materials**, Master's Thesis

Toppinen, Eija. 2010. **Optimizing the emulsification process for microencapsulation with oat bran**. Diploma.

Thessler, Kari. 2009. **Effect of heating on the extractability and state of oat and barley beta-glucan**. Master's Thesis.