

1. CURRICULUM VITAE: Mari Anneli Sandell (Hakala, Saarimäki) 20.2.2020

2 Date and place of birth, nationality, current residence

12.11.1973 Halikko, Finnish, Otontie 3, FI-20810 Turku, Finland

3 Education and degrees awarded

Ph.D., University of Turku (major subject: Food Chemistry. Topic of doctoral dissertation: Factors affecting the internal quality of strawberry fruit), 27.2.2003

Master of Science, University of Turku (major subject: Food Chemistry), 18.12.1997

High school graduation, Halikko, 30.5.1992

Title of docent: Flavor chemistry and perception, University of Turku, 4.12.2009

4 Other education and training, qualifications and skills

Academic Leadership program, University of Turku, Spring 2017 and 2019 (from January to June).

Leadership training (Licence to lead), University of Turku, 20.3-8.11.2012

University teaching pedagogy education program (60 credits) 20.9.2012 (University of Turku)

Other skills by completing special courses:

- CITI Human Subjects Research training program– Social-Behavioral-Educational Basic. 30.9.2018
- Skills of negotiation and innovative organisation (teacher Marja-Liisa Manka) 28.3.2011
- Good well-being practises in work community (teacher Marja-Liisa Manka) 15.10.2010
- Talent people in work community (teacher Kari Uusikylä) 22.3.2010, 14.4.2010
- National Cancer Institute and NIH: Human Participants Protections education for research teams, 13.3.2005
- Ortho- and retronasal odor perception and measurement, 10.-12.6.2003, Helsinki
- Kuntakoulutus: Kunta2003 2003, Salo, Koulutus valtuustoryhmien puheenjohtajille, 2001, Helsinki
- Elintarvikkeiden hyväksyttävyyys, 30.10.2000-15.3.2001, Kuopion yliopisto
- International Advanced Course on Chemistry and biochemistry of antioxidants, their effects on health and diseases, and risk evaluation of their use as food ingredients, 12.-18.11.2000, Wageningen, The Netherlands
- Advanced Multivariate Data Analysis, Camo Training Course, 29.-30.5.2000, Helsinki

5 Languages

mother tongue: Finnish, other languages: English, Swedish

6 Current position

Professor (full, permanent, professori) in sensory food science (University of Helsinki, Faculty of Agriculture and Forestry, Department of Food and Nutrition) 1.9.2019- (80 %)

Professor (professori) in sensory perception (University of Turku, Functional Foods Forum, Faculty of Medicine) 1.9.2019-30.8.2020 (20%)

Deputy of department (varajohtaja), Department of Food and Nutrition (University of Helsinki), 1.1.2020-31.12.2022

Affiliated scientist (vierailuva tutkija) at Monell Chemical Senses Center (Philadelphia, USA), 2018-2020.

Project director/principal investigator (vastuullinen johtaja) at the University of Turku (2007-present), University of Helsinki 2019-

Research career stage: leading researcher (team leader of Senses and Food, University of Turku and University of Helsinki)

7 Previous work experiences

Deputy director of department (varajohtaja), Functional Foods Forum (University of Turku), March 2010-31.12.2019

Associate professor (tenure track apulaisprofessori) in sensory perception (FFF, Faculty of Medicine), 1.4.2017-31.3.2022

Academy research fellow, 1.9.2011-30.10.2016 (Akatemiatutkija)

Academy postdoctoral fellow (Academy of Finland, PI), University of Turku: 1.7.2007-30.6.2010 (Akatemian tutkijatohtori)

Postdoctoral fellow Monell Chemical Senses Center, Philadelphia, USA, 15.1.2005-4.5.2006 (tutkijatohtori)

Teaching position at the University of Turku: Senior lecturer, 1.10.2010-31.12.2010, Assistant of Food Chemistry and –diagnostics (elintarvikekemian ja -diagnostiikan assistentti) 1.1.2003-30.8.2011, Senior assistant (yliassistentti) 1.8.2003-31.7.2008, researcher (tutkija), lecturer (tuntiopettaja) etc. 8.9.1997-31.12.2002

Project manager (projektipäällikkö TEKES-hankkeissa) at the University of Turku (1999-2009)

Novel (bio)processing techniques for flavour design in plant-based foods 2006-2009

On-line analyses of volatile compounds of foodstuff applying gas phase FTIR 1999-2001

Quality factors of Domestic strawberries 1999-2000

team leader of fff-Flavor, focusing on contract service research and applied research. Helping the R&D units of food companies (minor and major size) and other research institutes. 2004-2017

setting up the fff-Flavor sensory laboratory environment into FFF (University of Turku) 2002-2003

career breaks: Maternity leave August 2006-June 2007

8 Research funding, leadership and supervision

8.1 Major research funding Sandell as Principal investigator or research director

ERDF, FoodTech Platform Finland, 347654 €. 2019-2021
 Academy of Finland, Human taste sensitivity and multisensory perception of food, 709520 €, 2017-2021
 Tekes Innovative consumer-driven multisensory food experience, 329651 €, 2017-2019
 Tekes Olfactory healthcare application, 250000 €, 2016-2018
 Tekes Value added compounds from food industry by-products, 363007 €, 2015-2018
 Tekes EAKR - Co-Creative snacks and gaming, 313791 €, 2015-2017
 Academy of Finland, Academy research fellow funding, 232871 €, 2014-2016
 Tekes TUTLI - Development of Aistila concept, 249 000€, 2014-2015
 ERDF Clinic for food development, 67000 €, 2013-2014
 Academy of Finland, Strengthening the competitiveness of ERC applicants, 100000 €, 2012
 Academy of Finland, Academy research fellow funding, 700352 €, 2011-2016
 National Institute for Health and Welfare, Sapere food education in Turku, 21540 €, 2011
 Ministry of Agriculture and Forestry, Sapere food education in Turku, 10000 €, 2010
 TE-keskus, Siikatuotteiden räätälöinti, FFF, 3100 €, 2010-2011
 Academy of Finland, personal postdoctoral fellowship funding, 180 000 €, 2007-2009

8.2 Smaller personal grants for travels and publications

Suomen kemian seura, travel scholarship 2004, Turun yliopistosäätiö, publication scholarship, 500 €, 24.4.2003
 The Rotary Foundation, GSE team member, NC USA, 21.4.-19.5.2002 full exchange visitor grant
 Turun yliopistosäätiö 4500 mk 21.5.2001, Kaupallisten ja teknillisten tieteiden tukisäätiö, 7000 mk. 12.6.2001
 Suomalainen konkordialiitto 5000 mk 8.4.1999, Turun yliopistosäätiö 4500 mk travel scholarship 10.5.1999

8.3 Supervision of postdoctoral researchers (main supervisor)

Knaapila 2011-13, Laaksonen 2011-12, Hoppu 2013-, Pohjanheimo 2014-, Kumpulainen 2018

8.4 Experience as officially appointed supervisor to undergraduate and doctoral students

Supervisor of doctoral students (appointed by a University)

- Ph.D. (defended): Katja Tiitinen 2006 (co), Terhi Pohjanheimo 2010 (main), Oskar Laaksonen 2011 (main), Anna Kårlund 2018 (co) Tommi Kumpulainen 2018 (co), Heikki Aisala 2019 (main), Sari Puputti (clinical medicine 2020, main)
- Ph.D. (on going): Tuuli Puolimatka (food chemistry, started 2010-, main), Maija Paakki (food chemistry, started 2011-, co) Marina Kolkka (dentistry 2013-, co), Saara Lundén (clinical medicine 2016-), Heli Karjalainen (2017-, co), Otto Selenius (2019-, main)

Supervisor of M.Sc. theses of undergraduate students (appointed by a University):

1999: Saska Tuomasjukka (main), Juha Aapasuo (co), 2000: Anna-Maria Pelkkikangas (co), 2002: Katja Tiitinen (main) & Tiina-Kaisa Ritvanen (co), 2003: Juha Sihvonon (co), 2004: Terhi Pohjanheimo (main) & Arto Savunen (co), 2005: Arttu Heinonen (co), Riikka Nieminen (co) & Antti Järvinen (co), 2007 Tiina Naskali (main), Saila Mattila (co) & Anne Rantala (main), 2008: Oskar Laaksonen (main), 2009: Tuuli Järvinen (main), 2010: Anneli Levonmaa (Dentistry, co) & Katri Kaunismaa (co), 2011: Sari Puputti (main), Johanna Ahola (main), Mari Kallio (main), Marjut Lamminaho (University of Eastern Finland, co), 2013: Pauliina Ojansivu (main), Amma Antikainen (main), 2014: Heikki Aisala (co), Sanni Lindén (main), 2015: Mira Prinz (main), 2016: Anna Immonen (main), Anita Vanag (co), Juha Sola (co), 2018: Saara Hakkarainen, 2019: Ville Jalo, 2020: Matti Roukka, Elena Karpik

Supervisor of B.Sc. theses of undergraduate students (appointed by a University):

- 2001: Anna Immonen, Anna Ojanen, 2004: Mika Kaimainen, 2008: Mari Jääskeläinen, 2012: Mira Prinz. 2019: Venla Nykänen

9 Merits in teaching and pedagogical competence

9.1 Pedagogical training and competence

University teaching pedagogy education program (60 credits) 20.9.2012, university teacher 1997-

9.2 Involvement in curriculum planning and the implementation of courses, member of education related groups

Developing of food chemistry (2001-2004), coordinating group in biosciences (UTU) 2003, department of Biochemistry and food chemistry (2004)

9.2.1 University of Turku (in Finnish) for undergraduate students

Hermoston rakenne ja toiminta, for medical students, lecture: Sense of Taste (2012-), (Sense of smell 2017-)

Sensory evaluation: single lecture: Sense of Taste (2012, 2013, 2014, 2015)

Sensory evaluation lectures and experiments 6 ECTS (2001, 2004, 2006, 2008)

Functional foods half of lectures, focus group and supervising the take home final exam (2010), single lecture 2011

Sensory evaluation lectures and experiments 4 ECTS (2009,2010, 2011)

Challenges in product development (demonstration in sensory laboratory) 2008, 2010, 2011

Functional foods (Funktionaaliset elintarvikkeet) Focus group experiment and workshop (2003, 2004, 2007-2009)

Food Technology (Elintarviketeknologian perusteet) lectures 1 ov (2002, 2004)

Biochemistry of Fish products (Kalatuotteiden biokemia) 1 ov (2002)

Biotechnology labs (Biotekniikan harjoitustyöt, Elintarvikediagnostiikka työ) (experiments 5 ov)

Quality management systems (Laatujärjestelmät) lecture, coordinating, exams 1 ov (2002, 2003)

Food microbiology and hygiene (Elintarvikemikrobiologia ja hygienia) lectures 1,5 ov (2003)

Aroma compounds (Aromit) lectures 1 ov (2003)

Gas chromatography and SFC (Kaasukromatografia ja ylikriittinen kromatografia) lectures and lab 2 ov (2001-03)

Product development and research (Tuotetutkimus) Focus group experiment (2003)

Food chemistry general and personal laboratory courses 20 ov (1999-2001)
Single lecture in sample preparation course (2001)

9.2.2 University of Helsinki (in Finnish) for undergraduate students

Sensory evaluation (2019-) 5 cr
Advances sensory Science (2020) 5 cr
Several lectures in other courses

9.2.3 In the Finnish graduate schools (in English) as lecturer

Food and nutrition, UTU-GS (2015)
Postgraduate School of Oral Health Sciences (PeGaSOS) (2009 and 2010)
Flavor Course of ABS graduate school (2004 and 2005)
Chromatography Course of Graduate School of Bioorganic Chemistry (2001)
University of Helsinki, Viikki Food Science (2017, 2019)

9.3 Development of teaching methods

Development of Sensory-based activating workshop 5 hours (2012), Applying conceptual change to learning of flavour in teaching (2011), Future-learning –project as part of Future research network (2002)

9.4 Supervision of theses

Ph.D. defended: 6 (+1 in March 2020), Ph.D. on-going: 8, M.Sc. degrees: 30, M.Sc. (on-going): 1, B.Sc: 5, (on-going):1

10 Awards, prizes and honours

Docent of a Year in Turku, award from Docent association of University of Turku and Åbo Akademi 20.3.2017
Academy of Finland award for Social impact 9.11.2012
ERC starter grant, invited to Step 2 interview (Brussels May 2012, June 2011)
the Polak Young Investigator Award, Polak Young Investigator Award Committee (USA): (2006)
young scientist scholarship: 17th International Congress of Nutrition, Austria, (2001)
young scientist scholarship: The 4th Pangborn Sensory Science Symposium, France, (2001)

11 Other scientific or academic merits

11.1 Service as a pre-examiner or as an opponent of a doctoral dissertation

Pre-examiner of a doctoral dissertation: M.Sc. Ritvanen (2013), M.Sc. Seppä (2014) University of Helsinki, M. Sc (Econ) Petteri Puska (2019) University of Vaasa
Opponent of a doctoral dissertation M.Sc. Saarela (2013) University of Eastern Finland, M.Sc. Rosenvald (2017) Tallinn University of Technology, M.Sc. Mohd Nor (2018) University of Reading UK

11.2 Member of international peer review panels for funding applications

Austrian Young Independent Researcher Group / Executive Board of the Austrian Science Fund 2018
ERC European Research Council Starter grants 2018
Research council of Norway 2016
Croatian Science Foundation 2014

11.3 Memberships and positions of trust in scientific and scholarly societies

Member of the grading committee appointed by the Faculty of Agriculture and Forestry (University of Helsinki) 2019-
Member of Scientific committee: ICCAS 2017, Pangborn 2017, 2019, Eurosense 2018, NWFP 2013 & 2017
Member of expert group of UTU (Societal impact) 2016-
Member of planning group of UTU focusing on National Independence Jubilee Year (2015-2017)
Member of steering group of Turku Kasvustutkimus (2014-2015)
National natural resource consortium (vice chairman of the researcher group) 2010-
COST Action FA0907 (Bioflavour) MC Member 2010-2014
Member of Finnish Food Development cluster board, South-West of Finland (2009-2014)
Advisor board of Functional Foods Forum (member, 2009-2013)
Member of several steering group of research projects (2007-)
Pyhäjärvi Institute (board member) (2006-)
Finnish Society of Food Science and Technology ETS (chairman of board) (2004)
Member of executive committee of ETS (2002-2004)
Chairman of board, ETS /Sensory research section (2003)
Member of executive committee ETS/Sensory research section) (2000-2003)

11.4 Membership in national or international expert groups, steering committees, and other expert duties

European Sensory Science Society: Member of Children group (2014-), Taste sensitivity group (2016-)
The Finnish Food Research Foundation, member of Scientific committee (2016-)
Follow-up evaluator of ERKO erikoistutkimuskoulutus Pilot (2012-2013)
Expert evaluator member of Sensory laboratories, Finnish Accreditation Service (2011-)
Member of ISO/TC34/SC12 Sensory analysis expert team (2009-)
Scientific Follow-up evaluator in Baltic Sea Region Innovation Network BSR Innonets Food Pilot (2008-2009)
Admission tests into the Department of Biochemistry and Food Chemistry -part Chemistry (preparing the questions, revising and reviewing and application forms) (2004)

11.5 Positions as member of editorial boards of scientific and scholarly journals and publication series: member of

editorial board: Finnish Food Magazine (2004-)

11.6 Referee for scientific and scholarly journals

Cognitive Development (2019-), Food Quality and Preference (2015-), Foods (2016-), Molecular Nutrition and Food Research (2016-), Appetite (2014-), Nursing research (2014-), PLUS (2014-), Functional Foods (2013-), British Food Journal (2011-), Chemosensory perception (2009-), European Food and Technology (2004-), Journal of Food Science (2003-), Journal of Agric and Food Chem (2003-)

11.7 Administrative responsibilities at higher education institutions or at research organisations, responsibilities in the higher education community

Deputy director and Executive group member of Functional Food Forum (2009-2019)

Vice president of Department of Food and Nutrition (2020-)

Executive board member of Department of Food and Nutrition (2020-)

11.8 Invited keynote lectures abroad

Individual differences in sensory perception create unique experience worlds, Eighth European Conference on Sensory and Consumer Research, Eurosense, 2.-5.9.2018, Verona, Italy.

The role of genetics in children's food preferences in 4th e3s symp & 16th Nordic sensory workshop Oslo, 12.5.2015

Flavour and food education, in Food & Fun, Iceland, 26.2.2015

Bitter sensation and food perception, 14th Nordic Sensory workshop, Denmark, 5.10.2011

12 Societal impact of research

12.1 Merits related to the application of research results

Academy of Finland award for Social impact 9.11.2012, Docent of a Year Turku Universities 21.3.2017

Invited expert speaker (Senses and food choices) in several different professional forums such as National pediatrics days, National dentistry days, National public health nurse days, Duodecim seminars, Pirkanmaa and South Ostrobothnia hospital districts refresher courses, The Association of Clinical and Public Health Nutritionists days, National dental nurses days, National teacher days of home economics, National teacher days of biology, National FIDA days, kindergarten staff, chefs, school catering service staff.

Invited popular speaker (Senses and food choices) in several different general public forums such as Children's University, University of elder people (Jyväskylä), Gastro exposition, Turku Food fair Turku, Turku Science Fair

Mentor of several young scientist in Finland

PI of projects funded by Academy of Finland or the Finnish Funding Agency for Innovation

12.2 Participation in societal preparatory and policy-related processes

Known as a popular, active speaker contributing to public debate in society as scientist and chair of food-culture society

Founder member of the multidisciplinary forum: Children, food and well-being (2014-)

Member of panel (Science and food politics) in Science Forum 2013 (29.5.2013)

Member of expert group (Food and nutrition) in The State of Scientific Research in Finland 2012

Active developer or sensory-based food education (2009-)

Member of Food education group in Turku Child early care. Food education accepted and included in official Early Childhood education plan of Turku (2013)

WORKSHOP chair and speaker: Product perception with human senses (in Buscinessence 2013), Future for food education (In Future for Foods 2013), Food education (In Nordisk congress on Child welfare 2015)

Scientific congress session chair (Non-Wood Forestry product 2013, European Sapere-meeting in Turku (2014), Pangborn Sensory Science Symposium 2015).

12.3 Merits related to the production and distribution of research results and data

A1 Journal article (refereed), original research: 71 published (in addition: 3 submitted/revised, 12 manuscripts)

A2 Review article, literature review, systematic review: 7 published, 1 submitted, 1 MS

A4 Peer-reviewed Conference proceedings: 17 published

D1 Articles in a trade journal: 27 published

D2 + D5 Article in a professional manual or guide textbook material: 20 published, 1 MS

Poster presentations in international peer-reviewed scientific meetings: 77

Oral presentations in international peer-reviewed scientific meetings: 58

Lectures for Professionals as invited speaker: 82

Supervisor of 6 published academic dissertation Ph.D. (Tiitinen, Pohjanheimo, Laaksonen, Kårlund, Kumpulainen, Aisala)

Supervisor of 31 published M.Sc thesis

12.4 Merits related to science communication, science popularisation and media appearances as an expert

Lectures for General public as invited speaker in Finland: 60

Interviews (newspapers, magazines, tv, radio): 121

Perunapuuhaa lapsille <http://www.utu.fi/fi/yksikot/fff/tutkimus/aistit/perunapuuhaa/Sivut/home.aspx>

Lasten ruokakasvatus varhaiskasvatuksessa (2014) <http://urn.fi/URN:ISBN:978-951-29-5660-9>

Teacher in Children's University (University of Turku)

Host of several school (7-18 years), kindergarten (3-6 years), professional and public group visits (FFF, sensory lab)

Host of food education activities in Turku Food fair Turku, Science Fair and Science days for several times

Several interviews in UTU-online (University of Turku)

12.5 Invention disclosures, patents and other commercialisation-related merits (trademarks)

EU-trademarks: 2015 Aistila™

Patent applications: F No 991417 (22.6.1999), PCT/FI00/00562 (22.6.2000)

13 Positions of trust in society and other societal merits

13.1 Significant positions of trust, expert duties and assignments (also scientific policy advice tasks)

Decision-making and management

- Chair of scientific board of Flavoria research platform (2019-)
- Member of operative management team of FFF (2010-)
- Member of Societal Impact Group of Faculty of Agriculture and Forestry (2019-)
- National natural resource consortium (vice chairman of the researcher group) 2010-
- Member of steering group in Steps to the Healthy Development and Well-being of Children -study
- Member of steering group in Aitoja makuja (2009-2011)
- Food Culture Society in South-West of Finland, Kaffeli ry (board member 2010-2013, chairman 2013-)
- COST Action FA0907 MC member representing Finland (2010-)
- Member of Finnish Food Development cluster board, South-West of Finland (2009-)
- Advisor board of Functional Foods Forum (member, 2009-2013)
- Finnish Society of Food Science and Technology ETS: chairman of board (2004)
- Decision-making and management on local government
 - Salo District Educational Federation of Municipalities (cabinet-member) 2001-2005
 - Salo District Development Federation of Municipalities (cabinet-member) 2004-2005
 - The Finnish Folk Music Association (cabinet-member, vice president) 2002-2009
 - County board (Halikko) 2000-2005 County council (Halikko, group leader 2001-2004) 1997-2004
 - Turku University hospital (vice cabinet-member of the board) 1997-2000

13.2 other societal merits, honours, medals, decorations, and Finnish military rank (optional)

Silver medal of Finnish folk music association 2002

14 Other merits

mother (2006-)

Music CD-publications with Vissinki music group: Sampaan palo (2002), Kiviairan sammal (2005)

Potato food culture festival - children event (responsible organizer June 2011 and 2012)

Potato food culture festival - Turku summer event (responsible festival director: June 2013-2020)