1 BACKGROUND INFORMATION

1.1 Basic information

Name: Tomi Pentti Johannes Rantamäki
Date and place of birth: 13.1.1978, Kangasala, Finland
Gender: Male
Place of domicile: Vesilahti, Finland
Citizenship: Citizen of Finland
Family status: Married, 2 children

1.2 Contact information

Rantamäki Tomi, PhD
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1.3 Education and degrees

1.3.1 Degrees

- Ph.D. (Neuroscience/Pharmacology) in 2006, Univ. of Helsinki, Finland
- M.Sci (Pharm.) in 2003, Univ. of Kuopio, Finland
- B.Sci (Pharm.) in 2001, Univ. of Kuopio, Finland

1.3.2 Professorships, docentships and other degrees

- Associate Professor (molecular pharmacology / tenure track), 2018-, Univ. of Helsinki, Finland
- Adjunctated Associate Professor, 2018-, Århus University, Denmark
- Docent (Adjunct Professor) in Neuropharmacology, 2011-, Univ. of Helsinki, Finland

1.3.3 Important courses

- UNILEAD (leadership course), University of Helsinki, 2015
- University pedagogy V (pedagogy course), University of Helsinki, 2015

2 RESEARCH AND SCIENTIFIC ACTIVITIES

2.1 Experience of research and other scientific activities

- 2014- Independent group leader and principal Investigator. University of Helsinki.
- 2011-2014 Senior PhD researcher and Project Leader. Co-principal investigator in Pharma collaboration projects. University of Helsinki.
- 2006-2011 Postdoctoral researcher. Project manager in NeuProtec commercialization project during (1.6.2006 – 31.12.2007). University of Helsinki.
- 2003-2006 PhD student. University of Helsinki.
- Coordinator of *the Finnish Neurodegeneration Initiative* during 2009-2013.
- Coordinator of *the Neuroscience VRGO* (Viikki Research Group Organization) since 2016.

2.2 Research philosophy and ethics, focus areas and vision

I became interested in neuroscience, especially neuropharmacology, already during my undergraduate studies in pharmacology. After extensive training and research periods with one the pioneers in the field, prof. Eero Castrén, I got my own research laboratory in 2014 through a highly acknowledged project funded by the Academy of Finland. This project is based on my groundbreaking observations demonstrating that isoflurane, a commonly used volatile anaesthetic, rapidly regulates molecular signalling events intimately implicated in rapid antidepressant mechanisms and synaptic plasticity. Our subsequent studies show that isoflurane produces very similar functional and behavioural alterations in adult rodents as observed after intravenous ketamine, a clinically effective rapid-acting antidepressant. These data provide plausible explanation for the decades old, almost forgotten, clinical observations indicating that deep brief isoflurane anaesthesia can bring rapid antidepressant effects in a subset of patients. For me, however, these findings opened new critical questions and have guided innovative thinking that will challenge and improve current hypotheses explaining rapid antidepressant actions and induced plasticity. To facilitate my research and secure my academic independency I moved the lab to a new environment in 2015 and set-up techniques required to optimally test the key hypothesis: all clinically demonstrated practices that *can* bring rapid antidepressant effects share common neurobiological mechanisms. My highly motivated team of talents has now produced wealth of unpublished data that have already convinced several stakeholders, including psychiatrists and fellow scientists, and have lead to positive grant decisions in major national funding agencies (Academy of Finland, TEKES). In particular, we have discovered neuronal oscillations – readily and safely captured by the EEG (electroencephalography) – that predict on-going regulation of molecular pathways associated with rapid

antidepressant effects and synaptic plasticity. While providing potential tool to control antidepressant efficacy in real-time during treatment administration, our findings also help to clarify critical obscurities in the field and guide the refinement of current rapid antidepressant theories. Novel mechanistic principles underlying synaptic and homeostatic plasticity, new neuropharmacological concepts and improvements of translational models/approaches of neuropsychiatry are inevitable "by-products". Potential translation of obtained findings is continuously evaluated in collaboration with clinicians involved. The ultimate goal is to develop novel interventions that would allow immediate remedy for most, if not all, individuals suffering from major depression or other nervous system disorder associated with compromised synaptic plasticity (e.g. neurodegenerative disorders, anxiety).

2.3 Publications and publication statistics

2.3.1 Statistics (4.5.2018)

- Total number of peer-review articles: 39
- H index 19/20 (Web of Science / Scopus)
- Number of citations 1663 / 1875 (Web of Science / Scopus)

2.3.2 Ten most important peer-review publications (* equal contribution)

1. **Rantamäki T**, Hendolin P, Kankaanpää A, Mijatovic J, Piepponen P, Domenici E, Chao M, Männistö P and Castrén E: Pharmacologically diverse antidepressants rapidly activate Brain-derived neurotrophic factor (BDNF) receptor TrkB and induce phospholipase-Cγ1 signaling pathways in mouse brain. *Neuropsychopharmacology* 32:2152-62, 2007.
2. Castrén E and **Rantamäki T:** The role of BDNF and its receptors in depression and the antidepressant drug action: reactivation of developmental plasticity. *Developmental Neurobiology* 70:289-97, 2010.
3. **Rantamäki T**, Vesa L*, Antila H*, Di Lieto A, Tammela P, Schmitt A, Rios M, Lesch KP and Castrén E: Antidepressant drugs transactivate TrkB neurotrophin receptors in the adult rodent brain independently of BDNF and monoamine transporter blockade. *PLoS One* 6:e20567, 2011.
4. Di Lieto A*, **Rantamäki T***, Vesa L, Sudhirkumar Y, Antila H, Lindholm J, Rios M, Tessarollo L, and Castrén E: Contrasting postnatal regulation of TrkB autophosphorylation and signalling by antidepressants and BDNF. *PLoS One* 7:e32869, 2012. *equal contribution
5. **Rantamäki T**, Kemppainen S, Autio H, Stavén S, Koivisto H, Kojima M, Antila H, Miettinen PO, Kärkkäinen E, Vesa L, Karpova N, Lindemann L, Hoener MC, Tanila H and Castrén E: The impact of Bdnf gene deficiency to the memory impairment and brain pathology of APPswe/PS1dE9 mouse model of Alzheimer's disease. *PLoS One* 3;8(7):e68722*,* 2013.
6. Thakker-Varia S, Behnke J, Doobin D, Dalal V, Thakkar K, Khadim F, Wilson E, Antila H, **Rantamäki T** and Alder J: VGF-induced Neurogenesis Targets Early Phase Neural Progenitor Cells in the Adult Hippocampus and Requires Glutamate Signaling. *Stem Cell Research* 12:762-777, 2014.
7. Kohtala S, Suomi T*, Theilmann W*, Wigren H-K, Stenberg T, Elo LL, Rokka A and **Rantamäki T**: Brief isoflurane anesthesia produces prominent phosphoproteomic changes in the adult mouse hippocampus. *ACS Chemical Neuroscience* 6:749-56, 2016.
8. Rosenholm M, Paro E, Antila H, Võikar V and **Rantamäki T**: Repeated brief isoflurane anesthesia during early postnatal development produces negligible changes on adult behavior in male mice. *PLoS One* 5;12(4):e0175258, 2017.
9. Leikas J, Kohtala S, Theilmann W, Jalkanen A, Forsberg M and **Rantamäki T**: Brief isoflurane anesthesia regulates GSK3β signaling and ameliorates motor deficiency in an early-stage rat model of Parkinson´s disease. *Journal of Neurochemistry* 142(3):456-463, 2017.
10. Antila A, Ryazantseva M, Popova D, Sipilä P, Guirado R, Kohtala S, Vesa L, Lindholm J, Yalcin I, Sato V, Cordeira J, Autio H, Kislin M, Rios M, Joca S, Casarotto P, Khiroug L, Lauri S, Taira T, Castrén E and **Rantamäki T**: Isoflurane produces antidepressant effects and activates TrkB signaling in rodents. *Scientific Report* 7(1):7811. doi: 10.1038/s41598-017-08166-9.

2.3.3 Other scientific publications and other means of disseminating own research

- Conference abstracts in scientific meetings: >40
- Book chapters: 2
- Podcasting: 1
- Writing in blogs: 1

2.4 Research assessments and awards

2.4.1 Funding (total: ~2 M€)

- Academy Research Fellow project, Academy of Finland (2014-19; 434.5k€); Academy Research Fellow project (2014-17; 330k€); Academy of Finland Key Project funding (2016-18; 298k€); Academy Research Fellow project (2017-19; 220k€); Business Finland (2016-18; 477.7k€); Finnish Cultural Foundation (2006, 16k€).

2.4.2 Awards

- Award of excellent success, 2010 (nominated by Neuroscience Center, University of Helsinki)
- Colleague of the year, 2015 (nominated by Proviisoriyhdistys)
- Poster prizes: 2

2.5 Activities in the academic community

2.5.1 Invited speaker in academic institutions:

University of Helsinki, Finland (several times), Helsinki University Hospital, Finland (several times), University of Tampere, Finland (several times), University of Porto, Portugal (2010), Medicines Agency of Finland, Finland (2012), Peking University, China (2014), University of Tarto, Estonia (2016), Technical University of Tallinn, Estonia (2017), University of Århus, Denmark (2016), Hannover Medical School, Germany (2017), Fudan University, Shanghai, China (2017), Niuvanniemi Psychiatric Hospital, Finland (2017), University of Copenhagen, Denmark (2018).

2.5.2 Invited speaker in scientific meetings:

Psychiatry Days, Helsinki, Finland (2012), The International College of Neuropsychopharmacology, Vancouver, Canada (2014), Congress of European Forum for Research in Rehabilitation, Helsinki, Finland (2015), World Congress of Biological Psychiatry, Copenhagen, Denmark (2017), Neurex Mood & Pain, Strasbourg, France (2017)

2.5.3 Short talks:

Brain & Mind symposium, Finland (several times), Neuroplasticity, Neurotrophic Factors & Mood Disorders, Italy (2005), Society for Neuroscience, USA (2014)

2.5.4 Chair and organizer of scientific symposia

Viikki Neuroscience Day, Finland (2016), World Congress of Biological Psychiatry, Denmark (2017), ECNP, France (2017)

2.5.5 Major collaborators currently

Preclinical research

Finland: Henna-Kaisa Wigren, Tarja Stenberg, Vootele Võikar, Markus Forsberg, Anne Rokka, Leena Elo-Uhlgren, Iiris Hovatta, Juha Partanen, Leonard Khiroug, Olli Gröhn, Iiris Hovatta, Petteri Piepponen
Germany: Wolfgang Löscher, Claudia Brandt, Christoph Turck
France: Ipek Yalcin, Catherine Belzung, Nicola Orefice
Japan: Nobuaki Matsui
Denmark: Gregers Wegener, Anders Klein, Simon Glerup
Spain: Jordi Riba
USA: Giuseppe Cortese, Maribel Rios, Lisa Monteggia

Clinicians & psychologists

Finland: Arvi Yli-Hankala, Kaija Järventausta, Maija Kalliomäki, Mona Moisala, Jesper Ekelund
Germany: Helge Frieling, Alexandra Kleimann

2.5.6 Short laboratory visits (< 1 week)

Dept. of Psychiatry, Univ. of Würzburg, Germany (2003, 2008), Dept. of Biomedicine, Univ. of Bergen, Norway (2005), NeuroSearch A/S, Copenhamn, Denmark (2006), Institut du Fer à Moulin, INSERM, Paris, France (2008), Dept. of Neuroscience, Karolinska Institute, Stockholm, Sweden (2009), Picover Institute, MIT, Boston, USA (2011), MIND Institute, Harvard, Boston, USA (2011); NYU, New York, USA (2011), Columbia University, New York, USA (2011), Skirball Institute, New York, USA (2011); University of Philadelphia, Philadelphia, USA (2011), Univ. Veterinary Medicine, Hannover, Germany (2014).

2.5.7 Major scientific and academic conferences

- FENS (2004, 2010, 2012, 2014, 2016), Neuroplasticity, Neurotrophic factors and Mood Disorders (2005), Society for Neuroscience (2005, 2007, 2008, 2010, 2012, 2013, 2015, 2016, 2018), NGF (2006, 2010), IBRO (2007, 2011), Gordon Neurotrophic Factors (2009, 2011), Gordon Inhibition in CNS (2015), Sortilins in sorting and disease (2010), Farmasiapäivät (2011, 2014), Psykiatriapäivät (2012), *In vivo* microscopy (2012, 2013), Neurogaming expo (2013), CINP (2014), Congress of European Forum for Research in Rehabilitation (2015), CINP Thematic Treatment-Resistant Depression (2017), World Congress of Biological Psychiatry (2017), ECNP (2017), Neurex Mood & Pain (2017).

2.5.8 Memberships

- The Finnish Pharmacists' Association, The Finnish Stuttering Association, Brain Research Society of Finland (BRSF), Federation of European Neuroscience Societies (FENS), Finnish Pharmacological Association, Society for Neuroscience (SfN), International Society for Neurochemistry (ISN).

2.6 Innovations, commercialization and company interactions

2.6.1 Innovation disclosures and patents

- Innovation disclosures: >10
- Patent applications: 2 (one pending, one elapsed)

2.6.2 Important partnering, marketing and commercialization conferences

- The Neurotech Investing & Partnering Conference (2011), BIO (2011), The European Neurotech Investing & Partnering Summit (2011, 2013), Bio-Europe Spring (2018).

2.6.3 Other activity

- Organizer of company seminars and visits
  - Eisai Ltd, 2009; Sanofi-Aventis, 2011; ONO Pharmaceutical, 2013
- Organizer of lectures and seminars:
  - Killu Sanborn (2010, 2011), Susanne Somersalo (2011), Ipek Yalcin (2014), Anne Andrews (2015), Claudia Brandt (2016), Lisa Monteggia (2017), Carlos Zarate (2018)

2.7 Other scientific qualifications

- Reviewer in the following journals: ACS Chemical Neuroscience (IF ~4; year 2015→), ACS Omega (IF; year 2017→), Behavioural Brain Research (IF ~3; year 2013→), Biomedicine and Pharmacotherapy (IF ~3; year 2017→), BMC Neuroscience (IF ~ 3; year 2013→), Cellular and Molecular Neurobiology (IF ~3, year 2014→), Clinical Pharmacology & Biopharmaceutics (year 2012→), Developmental Neurobiology (IF ~4; year 2014→), European Journal of Neuroscience (IF ~3; year 2017 →), European Neuropsychopharmacology (IF ~4; year 2011→, several times), Evidence-Based Complementary and Alternative Medicine (IF ~5; year 2012→), Experimental Brain Research (IF ~2; year 2014→), F1000Research (year 2014→), International Journal of Developmental Neuroscience (IF ~3; year 2014→), International Journal of Molecular Sciences (IF ~3; year 2013→; several times), International Journal of Neuropsychopharmacology (IF ~5; year 2010→, several times), Journal of Affective Disorders (IF ~4; year 2015→), Journal of Psychiatric Research (IF ~4, year 2015→), MethodsX (year 2015→), Mini-Reviews in Medicinal Chemistry (IF ~3; year 2012→), Molecular Neurodegeneration (IF ~4; year 2012→), Naunyn-Schmiedeberg's Archives of Pharmacology *(IF ~2; several times),* Neuropharmacology (IF ~5; year 2010→, several times), Neuroscience (IF ~3; year 2013→, several times), PLoS One (IF ~4; year 2014→, several times), Scientific Reports (IF ~6; year 2016→), Translational Neuroscience (IF ~1; year 2015→), Drug Delivery and Translational Research (IF ~3; year 2017→), Journal of Neuroscience Research (IF ~3, year 2018).
- Field/Guest Editor: 2 journals
  The International Journal of Neuropsychopharmacology, Cell & Tissue Research
- Grant Reviewer:
  Internation stichting Alzheimer onderzoek (ISAO)
  University of Helsinki 3-year Research Grants (several times)
- Reviewer of recruitment process:
  Post doc position in Århus University
  Post doctoral position, University of Eastern Finland (several times)
  Associate professor position in Århus University

3 TEACHING AND SUPERVISION

3.1 Teaching and mentoring experience

3.1.1 PhD thesis opponent: 3 times

- Marjo Piltonen (2012), Simon Molgaard Jensen (2015, Denmark), Kristi Luberg (2017, Estonia)

3.1.2 Reviewer for docentship application: 5 times

- Markus Forsberg (2011), Saara Nuutinen (2014), Eva Ruusuvuori (2015), Merja Voutilainen (2016), Teemu Aitta-aho (2016)

3.1.3 PhD thesis reviewer: 10 times

- Teemu Aitta-aho (2012), Raili Koivuniemi (2013), Martin Puskarjov (2013), Elisa Piccinini (2014), Simon Molgaard Jensen (2015); Emmi Takalo (2015), Ekaterina Savchenko (2015); Mikhail Yuryev (2017), Kärt Varendi (2017), Olena Santangeli (2017).

3.1.4 Experience in undergraduate and postgraduate teaching and supervision

- Supervisor of PhD studies (5 times): Hanna Antila (2016), Samuel Kohtala (estimated graduation: 2019), Juuso Leikas (estimated graduation: 2019), Marko Rosenholm (estimated graduation 2020), Okko Alitalo (estimated graduation 2022)
- Supervisor of pro gradu work (14 times): Henri Autio (2007), Liisa Vesa (2008), Hanna Antila (2009), Tuomas Pylkkö (2009), Jenni Anttila (2011), Kaija Himanka (2012), Pia Sipilä (2013), Maija Koskinen (2013), Samuel Kohtala (2014), Emmi Paro (2015), Iris Yorke (2015), Markus Rosenholm (2016), Joonas Molari (2017), Katarzyna Dudek (2018)
- Reviewer of *pro gradu* thesis (15 times): Henri Autio (2008), Liisa Vesa (2010), Hanna Antila (2011), Kai Kysenius (2012), Pekka Miettinen (2012), Jenni Anttila (2013), Elisabeth Rappou (2013), Katrina Albert

(2013), Samuel Kohtala (2014), Päivi Siukonen (2015), Pihla Parkkinen (2017), Ragani Velusamy (2017), Ana Rosa Montaño Rodríguez (2017), Kira Elfving (2018), Ilmari Parkkinen (2018).
- Reviewer of B.Sci thesis: Daniel Vladimirov (2013)
- Supervisor of laboratory practise work (6 times): Hanna-Kaisa Vikkula (2013), Julie Hamon (2013), Georgios Mertikas (2013), Sulo Kolehmainen (2014), Miikka Tanhua (2015), Joan Fernando (2017).
- Member of PhD student steering group: Martin Puskarjov, Carolina Amberg, Niko-Petteri Nykänen, Pyry Koivula, Sebnem Kesaf, Tony Eteläinen.
- Opponent of pro gradu seminar: 3 times
- Opponent of research plan: once

3.1.5 Organizer of courses
- *Basic methods in molecular biology* (2012-, annual; 920028, 2.5-5 cr)
- *Social outreach* (2013-)

3.1.6 Teacher/lecturer in course (* upcoming)
- 2007-, "*In vivo methods in Pharmacology*", Univ. of Helsinki, Finland
- 2008*, "Cell culture techniques and alternative methods in toxicology II*", Univ. Tampere, Finland
- 2010, "*Depression: associated mechanisms and neuropathologies*", Univ. of Porto, Portugal
- 2010-2015,*"Phenotypic analysis of transgenic animals",* Univ. of Helsinki, Finland
- 2010-, "*Novel ideas about depression and its treatment*", Univ. of Helsinki, Finland
- 2012-, "*Basic methods in molecular neurobiology*", Univ. of Helsinki, Finland
- 2012, "*Translational neuroscience*", Univ. of Helsinki, Finland
- 2012-, "*Social outreach*", Univ. of Helsinki, Finland
- 2014, *Research Funding and Exploitation Course for Doctoral Candidates and Post-Docs,* Univ. of Helsinki, Finland
- 2014, *Functional neuroanatomy*, Univ. of Helsinki, Finland
- 2017 *Neuropharmacology and neural drug targets*, University of Eastern Finland
- 2017-, *Systems Neuroscience*, Univ. of Helsinki, Finland
- 2017- *Cellular Neurobiology*, Univ. of Helsinki, Finland
- 2018-, *Animal models in behavioural neuroscience*, Univ. of Helsinki, Finland

3.2 Pedagogical thinking and education

Teaching should be dynamic interaction between subjects involved where both the student(s) and the teacher learn always something new. Active interaction and engaging and motivating environment is essential for the best learning outcomes. Combination of different pedagogical modalities and tools (self-learning, lectures, web-learning, discussions) further facilitates learning. Learning is, however, ultimately also hard work that must involve in-depth understanding of the subject matter through self-learning (e.g. books). Notably, there is no single fundamental strategy how such understanding can be obtained for all individuals and the teacher must guide the selection of learning tools best for each individual. Moreover, in higher-level education the teacher must be an expert, not only the "chairman", of the topic in question. This requires continuous and life-long learning of the teacher as well.

My pedagogical education has been mostly self-learning; and thus observing of others has been instrumental. I am actively participating in different teaching events, as a student and/or a teacher, which helps to understand those teaching methods that best fit for me (and others). I have (and will) participated, however, also in pedagogical courses organized within the university. I am also discussing about teaching and pedagogical thinking actively with my wife who is a professional teacher herself.

Lectures, group exercises and practicals take time from all participants. Therefore the teaching events must be prepared well in advance and provided material should be elaborate and prepared well. Indeed, if the teacher is not motivated and excited in teaching, it is very difficult to engage others.

3.3 Production of pedagogical material and utilization of teaching technologies

3.3.1 Most important publications used for teaching purposes
- Castrén E, Võikar V and **Rantamäki T**: Role of neurotrophic factors in depression. *Current Opinion in Pharmacology* 7:18-21, 2007. (>400 citations)
- Castrén E and **Rantamäki T**: The role of BDNF and its receptors in depression and the antidepressant drug action: reactivation of developmental plasticity. *Dev Neurobiology* 70:289-97, 2010. (~400 citations)
- **Rantamäki T** & Yalcin I: Antidepressant drug action – from rapid changes on network activity to network rewiring. *Progress in Neuro-Psychopharmacology & Biological Psychiatry,* 64:285-292, 2016.
- **Rantamäki T**: Masennuslääkkeet edistävät hermoverkkojen muovautuvuutta – mitä hyötyä siitä on aivoille? *Lääkärilehti* 68:2675-2680, 2013. (Finnish)
- **Rantamäki T**: Lääke antaa masentuneelle mahdollisuuden. *Tiede* 33:52-55, 2013. (Finnish)

3.3.2 Research on pedagogical science

- Tammeorg P, Mykkänen A*, **Rantamäki T***, Lakkala M, Muukkonen H: Improving group work practices in teaching life sciences: Trialogical learning. *Research in Science Education* (2017). doi:10.1007/s11165-017-9649-8 *equal contribution

3.3.3 Production of other pedagogical material

- Substance expert: a scientific animation (in collaboration with Woltti Ltd., Helsinki)

3.3.4 Utilization of teaching material

Powerpoint presentations, handouts, online materials

3.4 Development and assessment of pedagogical skills, and awards in teaching

- Title of Docent self-report on teaching evaluation (2011)
- Teaching evaluation feedback in the following courses: *Basic methods in molecular biology, In vivo methods in pharmacology*
- Leadership analysis during UNILEAD course (2015)
- Neuroscience Center teaching evaluation and development in Lammi Biological Station (2012) and Hotel Korpilampi (2014)

3.5 *Strengths, weaknesses and visions on own teaching*

3.5.1 Strength

I consider myself as highly engaging and motivating teacher. Indeed, several master students have contacted me right after my teaching events and requested to work under my supervision to conduct a *pro gradu* work. Many of them have continued working with me to pursue the PhD degree.

3.5.2 Weaknesses and need for improvements

I have limited teaching experience in undergraduate level. While I have exceptional skills in motivating others to learn and encourage critical thinking, I have limited understanding for those students who don´t show interest in subject matter in question.

3.5.3 Vision

My vision is to utilize most recent pedagogical tools (e.g. mobile applications) and strategies (e.g. flipped classroom, trialogical learning) more in my teaching.

3.6 Other teaching merits and experience

- *Invited expert in numerous national professional events organized by the following instances: FGSN/Brain & Mind graduate school (several times), OmaPlus Pharmacy (*2005), Erityisluokanopettajien koulutustilaisuus (2007), Pharmacy days, Helsinki (several times), Farmasian oppimiskeskus (several times) Tampereen Psykiatriayhdistyksen vuosikokous (2012), Helsingin työväenopisto (several times), Aducate (several times), Änkytysyhdistys (several times).
- Pure Finland, Finnish Schooling system, Learning and Brain in Shanghai, China, 2014.
- Active publishing in pharmacy and medicine –oriented Finnish journals

4 ADMINISTRATION AND OTHER ACTIVITIES

4.1 Administrative and management duties

- Principal investigator since 2014

4.2 Duties in one's field outside the University

- Temporary employee in the following Finnish pharmacies during 2003-2012: Kangasala 1, Sahalahti, Längelmäki, Korkeakoski and Sääksjärvi 2
- Combat Medic at 1998, Kuorevesi, Finland, The Finnish Defense Forces

4.3 Duties of trust

- Board member at the Brain Research Society of Finland, 2017-
- Board member at Finnish Brain Council, 2017-
- Accountant at the Brain Research Society of Finland, 2015-2016
- Member of Finnish Pharmacists´ Central Council Association during 2001-2003
- Responsible management days in Finnish pharmacies: 92

4.4 Dissemination of scientific knowledge to professionals and to the general public

4.4.1 Most important publications

- **Rantamäki T**: Aivoyhdyshenkilö apteekkiin. *Apteekkari* 7-8:31, 2010.
- **Rantamäki T**: Masennuslääkkeet edistävät hermoverkkojen muovautuvuutta – mitä hyötyä siitä on aivoille? *Lääkärilehti* 68:2675-2680, 2013.

4.4.2 Chair and organizer of symposia

- 2011, Pharmacy Days (Helsinki): *Aivot ja lääkkeet – Uutta toivoa*
- 2014, Pharmacy Days (Helsinki): *Kun mikään ei tunnu miltään*

4.4.3 Lectures

- 2008-2009, lecture series at The Finnish Open University
- 2016, Aulangon kylpylä “Living with stuttering: from neuroscience to personal experience”

4.4.4 Important other activities

- School visits (e.g. *Brain Awareness Week*): 2009, 2012, 2014, 2015, 2017, 2018 (e.g. Suoraman ala-aste, Kirkonkylän koulu Vesilahti, Kangasalan Lukio, Lyseon lukio Tampere, Annalan ja Karosen ala-aste Tampere)
- 2011, Docent lecture, University of Helsinki
- 2017, Pod casting
- 2017, Open doors at Säätytalo

4.5 Other significant qualifications and duties

- Qualified pharmacy chemist in 4.4.2003
- Qualified pharmacist in 18.4.2001