

8.1.2016

Curriculum Vitae

Panhelainen (*née* Heikkinen), Anne Elina

PERSONAL DATA

Date and place of birth March 20th 1979, Kiiminki, Finland
Nationality Finland
Address Institute of Biotechnology, Biocenter 1, Viikinkaari 9, 00014 Helsinki
Last Employment Post doctoral researcher, Institute of Biotechnology, University of Helsinki
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EDUCATION

28.8.2012 PhD, University of Helsinki, Faculty of Medicine, Neuropharmacology
13.4.2005 MSc, University of Helsinki, Faculty of Biosciences, Animal Physiology

METHODOLOGICAL SKILLS

- Brain slice fast scan cyclic voltammetry and patch-clamp electrophysiology
- Behavioral Animal models (addiction and Parkinson's disease)
- Stereotactic surgery and brain-injections to mice and rats
- Laser-capture microdissectioning of dopamine neurons from midbrain slice
- Cell culture
- Molecular biology (RNA and DNA work, PCR, Affymetrix GeneChip)
- Brain slice immunohistochemistry

LINGUISTIC SKILLS

First Language Finnish
Other Languages English, excellent
 Swedish, good
 German, basics

EMPLOYMENTS

Sep 2014 - Post doctoral researcher at the Institute of Biotechnology, University of Helsinki, Prof. Mart Saarma's lab
Aug 2013 – Aug 2014 Post doctoral researcher at Columbia University, NY, USA, Prof. David Sulzer's laboratory
Apr 2013 – Jul 2013 Post doctoral researcher at the Institute of Biotechnology, University of Helsinki, Prof. Mart Saarma's lab
Dec 2011 – Mar 2013 Maternity leave (second child)
Apr 2010 - Nov 2011 PhD Researcher, at the professor Esa Korpi's group, in the department of Pharmacology, University of Helsinki and in the Helsinki Biomedical Graduate School
May 2009 - Mar 2010 Maternity leave (first child)
Jan 2006 - Apr 2009 PhD Researcher, at the professor Esa Korpi's group, in the department of Pharmacology, University of Helsinki and in the Helsinki Biomedical Graduate School
May 2005 - Dec 2005 PhD Researcher at the professor Esa Korpi's group, in the department of Pharmacology, University of Helsinki

LABORATORY VISITS

- Aug 2013 – Aug 2014 Post doctoral researcher at Columbia University, NY, USA, Prof. David Sulzer's laboratory
- Feb-Apr 2005 Department of Psychiatry, University of Mainz, Germany, Professor Lüddens' Group

CONFERENCE PRESENTATIONS (ORAL 1, POSTER 6)

- 2015 Gordon Conference: "Parkinson's Disease", New London, NH, USA, poster presentation
- 2011 "Neuroscience 2011", the annual meeting of the Society for Neuroscience in Washington, DC, poster presentation
- 2010 Federation of European Neurosciences (FENS) forum in Amsterdam, poster presentation
- 2008 Scandinavian Physiological Society (SPS) annual meeting in Oulu, Finland, Oral Presentation
- 2008 Federation of European Neurosciences (FENS) forum in Geneve, poster presentation
- 2007 Dopamine 50-years meeting in Göteborg, poster presentation
- 2006 Federation of European Neurosciences (FENS) forum in Wien, poster presentation

GRANTS

- 2015 The Finnish Parkinson Foundation, travel grant for Gordon Conference on Parkinson's disease
- 2013 Jane and Aatos Erkko Foundation, a-three-year grant for post doctoral research
- 2013 Finnish Cultural Foundation, for post doc research in Columbia University, NY, USA
- 2012 Finnish Foundation of Alcohol Studies, A one year continuation for the grant
- 2009 Finnish Foundation of Alcohol Studies, A three year grant for research costs
- 2006 Helsinki Biomedical Graduate School, Doctoral Candidate position, four years
- 2005 Foundation of Yrjö Jahnsson, One Year Grant for PhD research work
- 2005 The Research Foundation of the University of Helsinki, "Grant For Young Scientist"

SUPERVISION OF STUDENTS

- Sep 2015 - Supervising the Master's Thesis work of one student
- Jan 2016 - Supervising an Erasmus Program Trainee

MAJOR TEACHING DUTIES

- Spring and autumn 2015 Several lectures in graduate schools: "Stimulants and the dopamine system: mechanisms and persistent actions", "Distinctive electrophysiological phenotype of nigral dopamine neurons could explain their vulnerability in Parkinson's disease" and "Hallucinogens and designer drugs"
- Spring 2011 "Pharmacology of Rheumatoid Arthritis and NSAID's"-course to Medical students of University of Helsinki
- Autumn 2010 Neuropharmacology to Medical students of University of Helsinki
- Autumn 2008 Laboratory Demonstrations to Medical students of University of Helsinki
- Spring 2007 Endocrinology (Pharmacological) to Medical students of University of Helsinki
- Autumn 2006 Introduction to Pharmacology, Neuropharmacology, and Cardiovascular Pharmacology to Medical students of University of Helsinki

PEDAGOGICAL TRAINING

- 2006 Problem-based learning I -course
- 2007 Problem-based learning II -course

MEMBERSHIPS

- 2006- Brain Research Society of Finland
- 2006- Finnish Pharmacological Society (Suomen Farmakologiyhdistys, SFY)

OTHER ACADEMIC MERITS

- 2014 Serving as a pre-examiner for Master's Thesis of Sari Ahola, MSc

LIST OF PUBLICATIONS

PEER-REVIEWED SCIENTIFIC ARTICLES (9)

- 2015 Kumar A, Kopra J, Varendi K, Porokuokka LL, Panhelainen A, Kuure S, Marshall P, Karalija N, Härma MA, Vilenius C, Lilleväli K, Tekko T, Mijatovic J, Pulkkinen N, Jakobson M, Ola R, Palm E, Lindahl M, Strömberg I, Vöikar V, Piepponen TP, Saarma M, Andressoo JO. GDNF Overexpression from the Native Locus Reveals its Role in the Nigrostriatal Dopaminergic System Function. *PLoS Genet*. 2015 Dec 17;11(12):e1005710
- 2015 Choi SJ*, Panhelainen A*, Schmitz Y, Larsen KE, Kanter E, Wu M, Sulzer D, Mosharov EV. Changes in Neuronal Dopamine Homeostasis Following 1-Methyl-4-Phenylpyridinium (MPP+) Exposure. *J Biol Chem*. 2015 Mar 13;290(11):6799-809. **shared first-authorship*
- 2014 Vashchinkina E, Panhelainen A, Aitta-aho T, Korpi ER. GABA_A receptor drugs and neuronal plasticity in reward and aversion: focus on the ventral tegmental area. *Frontiers in Pharmacology*. 2014 Nov 25;5:256.
- 2012 Aitta-aho T, Möykkynen TP, Panhelainen AE, Vekovischeva OY, Bäckström P, Korpi ER. Importance of GluA1 subunit-containing AMPA glutamate receptors for morphine state-dependency. *PLoS One*. 2012;7(5):e38325.
- 2012 Vashchinkina E, Panhelainen A, Vekovischeva OY, Aitta-aho T, Ebert B, Ator NA, Korpi ER. GABA site agonist gaboxadol induces addiction-predicting persistent changes in ventral tegmental area dopamine neurons but is not rewarding in mice or baboons. *J Neurosci*. 2012 Apr 11;32(15):5310-20.
- 2012 Panhelainen AE, Korpi ER. Evidence for a role of inhibition of orexinergic neurons in the anxiolytic and sedative effects of diazepam: A c-Fos study. *Pharmacol Biochem Behav*. 2012 Mar;101(1):115-24.
- 2011 Panhelainen AE, Vekovischeva OY, Aitta-Aho T, Rasanen I, Ojanperä I, Korpi ER. Diazepam-induced neuronal plasticity attenuates locomotor responses to morphine and amphetamine challenges in mice. *Neuroscience*. 2011 Sep; 192:312-21.
- 2011 Procaccini C, Aitta-aho T, Külli J-M, Zharkovsky A, Panhelainen A, Sprengel R, Linden A-M, Korpi E. Excessive Novelty-Induced c-Fos Expression and Altered Neurogenesis in the Hippocampus of GluA1 Knockout Mice. *Eur J Neurosci*. 2011 Jan;33(1):161-74.
- 2009 Heikkinen AE, Möykkynen TP, Korpi ER. Long-lasting modulation of glutamatergic transmission in VTA dopamine neurons after a single dose of benzodiazepine agonists. *Neuropsychopharmacology*. 2009 Jan;34(2):290-8

NON-REFEREED SCIENTIFIC ARTICLES (2)

- 2012 Panhelainen A. Bentsodiatsepiiniiriippuvuuden taustalla muutoksia aivojen palkkioradan dopamiinisoluissa. *Erikoislääkärilehti*. 2012 Dec;4:180-2.
- 2008 Heikkinen AE, Möykkynen TP, Korpi ER. Diatsepaami muovaa dopamiinineuroneita. *Lääketieteellinen Aikakauskirja Duodecim*. 2008;124(14):1670-1.

PHD THESES

- 2012 Panhelainen AE. Drug-induced synaptic plasticity in addiction: the mesolimbic dopamine pathway and benzodiazepines