

AMANDA K. TILOT

Curriculum vitae

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EDUCATION

Case Western Reserve University Cleveland, Ohio, USA
PhD, Cleveland Clinic Department of Molecular Medicine January 2015
Dissertation: “Altered Social Behavior and Neuroinflammation in a Mouse Model of *Pten* Mislocalization”
Albion College Albion, Michigan, USA
BA, majors in Biology and Psychology, concentration in Neuroscience 2009
Graduated magna cum laude with college honors
Honors Thesis: “Pregnancy and Reentrainment after Phase Shifts in *Octodon degus*”

EXPERIENCE

University of Southern California Los Angeles, CA, USA
Visiting Researcher, Institute for Neuroimaging and Informatics 08/2018 – Present
Projects: ENIGMA Consortium - Evolution group, genetics of synaesthesia and brain globularity
Supervisors: Prof. Dr. Simon E. Fisher, Prof. Paul Thompson
Max Planck Institute for Psycholinguistics Nijmegen, the Netherlands
Postdoctoral Research Staff, Language and Genetics Dept. 07/2015 – 05/2018
Project: Marie Skłodowska-Curie Actions fellowship, “Defining the genetics of synaesthesia”
Supervisor: Prof. Dr. Simon E. Fisher
Cleveland Clinic Cleveland, OH, USA
Postdoctoral Fellow, Genomic Medicine Institute 10/2014 – 05/2015
Project: Cellular and transcriptomic phenotyping of a mouse model of cytoplasm-predominant *Pten*, with a focus on phenotypes relevant to Autism Spectrum Disorder
Supervisor: Prof. Charis Eng, MD, PhD
Case Western Reserve University Cleveland, OH, USA
Graduate Student, Genomic Medicine Institute, Cleveland Clinic 07/2009 – 9/2014
Dissertation Research: Behavioral, cellular, and molecular phenotyping of a mouse model of cytoplasm-predominant *Pten*, with a focus on phenotypes relevant to Autism Spectrum Disorder
Thesis Advisor: Prof. Charis Eng, MD, PhD
Clinical Mentor: Dr. Thomas W Frazier II, PhD

PUBLICATIONS

Gunz P*, **Tilot AK***, Wittfeld K, Teumer A, Shapland C, van Erp TGM, Dannemann M, Vernot B, Neubauer S, Guadalupe T, Fernandez G, Brunner H, Enard W, Fallon J, Hosten N, Völker U, Profico A, Di Vincenzo F, Manzi G, Kelso J, St. Pourcain B, Hublin J, Franke B, Pääbo S, Macciardi F, Grabe HJ, Fisher SE. “Using Neandertal introgression to understand modern human brain globularity”. *In revision*. * co-lead authors.
Tilot AK, Kucera KS, VINO A, Asher JE, Baron-Cohen S, Fisher SE. “Rare variants in axonogenesis genes connect three families with sound–color synesthesia”. *Proceedings of the National Academy of Sciences of the United States of America*, 2018, 115(12):3168-3173.
Related media (selected): [National Public Radio’s Science Friday](#) (USA), [Science Magazine](#) (USA), [El Pais](#) (Spain).

- Tilot AK**, Bebek G, Niazi F, Altemus, J, Romigh T, Frazier TW 2nd, Eng C. “Neural transcriptome of constitutional Pten dysfunction in mice and its relevance to human idiopathic autism spectrum disorder”. *Molecular Psychiatry*, 2016, 21(1):118-125. PMID: PMC4565786.
- Tilot AK**, Frazier TW 2nd, Eng C. “Balancing proliferation and connectivity in PTEN-associated autism spectrum disorder”. *Neurotherapeutics*, 2015, 12(3):609-19. PMID: PMC4489960. Review.
- Frazier TW 2nd, Embacher R, **Tilot AK**, Koenig K, Mester J, Eng C. “Molecular and phenotypic abnormalities in individuals with germline heterozygous *PTEN* mutations and autism”. *Molecular Psychiatry*, 2015, 20(9):1132-1138. PMID: PMC4388743.
- Leung W, **Tilot AK**, Saville K, Elgin, SC. “The Drosophila muller F elements maintain a distinct set of genomic properties over 40 million years of evolution”. *G3: GENES, GENOMES, GENETICS*, 2015, 5(5):719-40. PMID: PMC4426361. [Total 940 student co-authors, 74 faculty co-authors.]
- Komuro Y, Galas L, Lebon A, Raoult E, Fahrion JK, **Tilot A**, Kumada T, Ohno N, Vaudry D, Komuro H. “The role of calcium and cyclic nucleotide signaling in cerebellar granule cell migration under normal and pathological conditions”. *Developmental Neurobiology*, 2015, 75(4):369-87. PMID: 25066767. Review.
- Tilot AK**, Gaugler M, Yu Q, Romigh T, Yu W, Miller RH, Frazier TW 2nd, Eng C. “Germline disruption of Pten localization causes enhanced sex-dependent social motivation and increased glial production”. *Human Molecular Genetics*, 2014, 23(12): 3213-27. PMID: PMC4030776.
- Mester JL, **Tilot AK**, Rybicki LA, Frazier TW, Eng C. “Analysis of prevalence and degree of macrocephaly in patients with germline *PTEN* mutations and brain weight in *Pten* knock-in murine model”. *European Journal of Human Genetics*, 2011, 19(7): 763-8. PMID: PMC3137495.

FUNDING

European Commission, Marie Skłodowska-Curie Actions Individual Fellowship 2016 – 2018
Max Planck Institute for Psycholinguistics
Supervisor: Prof. Dr. Simon E. Fisher
Title: Defining the genetics of grapheme-colour synaesthesia (SynGenes)
Amount: €171,460.80

AWARDS AND HONORS

Cleveland Clinic/Case Western Reserve University
Doctoral Excellence Award in Molecular Medicine, Case Western Reserve University, 2015
F. Merlin Bumpus Junior Investigator Award, Cleveland Clinic Lerner Research Institute, 2014
1st Place Poster Award, Biomedical Graduate Student Symposium, Case Western Reserve University, 2014
Graduate Student Award, Neurological Institute Research Day, Cleveland Clinic, 2014

SERVICE

Max Planck Institute for Psycholinguistics, Radboud University
Co-organizer, [Royal Society Discussion Meeting](#) on synaesthesia 2017 – 2019
Publicity, Web, and Library Committees 2016 – 2018
Course Instructor, Honors Academy Think Tank: Animal Research 2016 – 2017
Cleveland Clinic
Lerner Research Institute Graduate Student Association Steering Committee 2013 – 2014
Molecular Medicine Student Retreat Planning Committee 2011 – 2012

SUPERVISING, MENTORING ACTIVITIES

Max Planck Institute for Psycholinguistics

Ivo Van der Stelt, BA, Radboud University 2017
Role: Co-supervisor of 6-month Master's internship focused on DNA structural variation as a contributor to language disorders.

B.A. Rudolph Foundation Fall 2015
Role: Mentor to female undergraduate students pursuing unpaid internships in the sciences

Cleveland Clinic

Houriya Ayoubieh, MD, 3rd year resident in Internal Medicine, Cleveland Clinic Fall 2014
Role: Supervisor during translational research rotation in the Eng Lab

Mary Gaugler, undergraduate student in Biology, Notre Dame University 2011 – 2013
Role: Mentor, supervisor for summer research internships in the Eng laboratory.

MEETING ABSTRACTS

- 2018 Tilot AK, Liu S, Brotman S, ENIGMA Evolution Working Group, Bralten J, Grasby K, Painter J, Colodro Conde L, Lind P, Jahanshad N, Hibar DP, Medland SE, Thompson PM, ENIGMA Consortium, Fisher SE, Stein JL. Unearthing the evolutionary history of genetic variants influencing human cortical surface area. Selected for a Nanosymposium at the Society for Neuroscience Annual Meeting, San Diego, CA, November.
- 2017 Tilot AK, Kucera KS, VINO A, Asher JE, Baron-Cohen S, Fisher SE. Rare variants in axonogenesis genes connect three families with sound-colour synaesthesia. Presented at the IASAS Synaesthesia Symposium, Los Angeles, USA, October, and the Society for Neuroscience annual meeting, Washington D.C., USA, November.
- 2017 Imaging genetics of Neanderthal brain shapes. Platform presentation at Cognomics 2017, Neurogenomics: the road ahead, Nijmegen, the Netherlands, September.
- 2016 Tilot AK, Kucera KS, Briscoe J, Skuse D, Fisher SE. Whole genome sequencing in a multigenerational family with a specific deficit in semantic cognition. Presented at the American Society for Human Genetics annual meeting, Vancouver, Canada, October.
- 2016 Tilot AK, Fisher SE. Decoding the genetics of synaesthesia through studies large and small. Poster presented at the Synaesthesia and Cross-Modal Perception conference, Dublin, Ireland.
- 2014 Tilot AK, Gaugler M, Yu Q, Romigh T, Yu W, Miller RH, Frazier TW 2nd, Eng C. The *Pten*^{m3m4} mouse: a model for high functioning autism spectrum disorder with neuroinflammation. Presented at the Biomedical Graduate Student Symposium, Case Western Reserve University, Cleveland, OH, May.
- 2011 Tilot AK, Gaugler M, Frazier TW, Eng C. PTEN and Autism Spectrum Disorders: new insights from a knock-in model of cytoplasm predominant Pten. Presented at the Cleveland Clinic Molecular Medicine Student Retreat, Cleveland, OH, April.
- 2008 Tilot AK, Jechura TJ. Effects of continuous phase shifts on pregnancy and offspring in *O. degus*. Presented at the Society for Research in Biological Rhythms Biannual Meeting, Destin, FL, May.
- 2007 Tilot AK, Jechura TJ. Examination of unihemispheric sleep in an Australian lizard, the bearded dragon (*Pogona vitticeps*). Presented at the Society for Neuroscience Annual Meeting, San Diego, CA, November.