CURRICULUM VITAE
4/2022

PERSONAL DETAILS

Name	Tuomas Hämälä
Nationality	Finland
Email address	tuomas.hamala@gmail.com
Public profiles	Google Scholar, ResearchGate
ORCID iD	0000-0001-8306-3397
Webpage	thamala.github.io

EMPLOYMENT

4/2022 – present   University of Nottingham, UK
Marie Skłodowska-Curie individual fellow
Supervisor: Levi Yant

9/2021 – 3/2022   University of Oulu, Finland
Academy of Finland postdoctoral fellow

8/2018 – 7/2021   University of Minnesota Twin Cities, USA
Postdoctoral associate
Supervisor: Peter Tiffin

EDUCATION

1/2014 – 7/2018   University of Oulu, Finland
PhD in population and evolutionary genetics
Thesis title: "Ecological genomics in *Arabidopsis lyrata*: local adaptation, phenotypic differentiation, and reproductive isolation"
Supervisor: Outi Savolainen

9/2011 – 12/2013   University of Oulu, Finland
MSc in genetics

9/2008 – 5/2011   University of Oulu, Finland
BSc in bioscience

PUBLICATIONS

*equal contribution, #corresponding author

10. **Hämälä T**#, Ning W, Kuittinen H, Aryamanesh N* & Savolainen O* (2022). Environmental response in gene expression and DNA methylation reveals factors influencing the adaptive potential of *Arabidopsis lyrata*. *bioRxiv* preprint: 485516.

9. **Hämälä T***,#, Wafula EK*, Guiltinan MJ, Ralph PE, dePamphilis CW & Tiffin P# (2021). Genomic structural variants constrain and facilitate adaptation in natural populations of *Theobroma cacao*, the chocolate tree. *PNAS* 118: e2102914118.

8. Takou M, **Hämälä T**, Koch E, Steige KA, Dittberner H, Yant L, Genete M, Sunyaev S, Castric V, Vekemans X, Savolainen O & de Meaux J# (2021). Maintenance of adaptive dynamics and no detectable load in a range-edge out-crossing plant population. *Molecular Biology and Evolution* 38: 1820–1836.

7. **Hämälä T**# & Tiffin P (2020). Biased gene conversion constrains adaptation in *Arabidopsis thaliana*. *Genetics* 215: 831–846.

6. **Hämälä T***,#, Gorton AJ*, Moeller AD & Tiffin P# (2020). Pleiotropy facilitates local adaptation to distant optima in common ragweed (*Ambrosia artemisiifolia*). *PLOS Genetics* 16: e1008707.

5. **Hämälä T**#, Guiltinan MG, Marden JH, Maximova S, dePamphilis C & Tiffin P# (2020). Gene expression modularity reveals footprints of polygenic adaptation in *Theobroma cacao*. *Molecular Biology and Evolution* 1: 110–123.

4. **Hämälä T**# & Savolainen O# (2019). Genomic patterns of local adaptation under gene flow in *Arabidopsis lyrata*. *Molecular Biology and Evolution* 36: 2557–2571.

3. Mattila TM*, Laenen B*, Horvath R, **Hämälä T**, Savolainen O & Slotte T# (2019). Impact of demography on linked selection in two outcrossing Brassicaceae species. *Ecology and Evolution* 9: 9532-9545.

2. **Hämälä T**#, Mattila TM & Savolainen O (2018). Local adaptation and ecological differentiation under selection, migration, and drift in *Arabidopsis lyrata*. *Evolution* 72: 1373–1386.

1. **Hämälä T**#, Mattila TM, Leinonen PH, Kuittinen H & Savolainen O (2017). Role of seed germination in adaptation and reproductive isolation in *Arabidopsis lyrata*. *Molecular Ecology* 26: 3484–3496.

FUNDING

SKILLS AND EXPERTISE

Population genetics: local adaptation, polygenic adaptation, structural variants, genome evolution, speciation

Bioinformatics: >8 years of experience with high-performance computing and next-generation sequence analysis; familiar with both model (whole-genome, transcriptome, assemblies) and non-model (transcriptome, RAD-Seq) organism; extensive experience with individual-based simulations (coalescent and forward-in-time); fluent in programming language C

Statistics: fluent in R; regression analysis (e.g., linear mixed models, model selection); machine-learning (e.g., random forest, neural networks); data visualization

Field and laboratory experiments: designed and maintained large-scale reciprocal transplant, common garden, and growth-room experiments

TEACHING AND MENTORING EXPERIENCE

2015 – 2016   Master's thesis supervision
Margarita Takou, ecology and population genetics

2013 – 2016   Practical trainee supervision
Petri Vänni, Weixuan Ning, Elina Haataja, Margarita Takou, Rami-Petteri Apuli, Paul DuBray, Toni Jenfors

2014   Teaching assistant
Basics in genetics, 15 h

SELECTED PRESENTATIONS

1/2022   Oral presentation, PopGroup55, Online

11/2021   Invited online talk, Agricultural Genomics Institute at Shenzhen, China

11/2020   Invited online talk, University of Oulu, Finland

1/2020   Oral presentation, PAG, San Diego, California

8/2019   Poster presentation, ESEB, Turku, Finland

8/2018   Oral presentation, Midwest PopGen meeting, Saint Paul, Minnesota

7/2018   Poster presentation, SMBE, Yokohama, Japan

2/2018   Oral presentation, Arabis symposium, Cologne, Germany

7/2017   Oral presentation, SMBE, Austin, Texas

8/2015   Poster presentation, ESEB, Lausanne, Switzerland

REFERENCES

Levi Yant (postdoctoral supervisor)
    Professor at University of Nottingham, UK, levi.yant@nottingham.ac.uk

Peter Tiffin (postdoctoral supervisor)
    Professor at University of Minnesota Twin Cities, USA, ptiffin@umn.edu

Outi Savolainen (PhD supervisor)
    Emerita professor at University of Oulu, Finland, outi.savolainen@oulu.fi

OTHER

Journal referee (Publons):
    eLife, Evolution, Evolutionary Applications, Evolutionary Ecology, Frontiers in Plant Science, G3: Genes | Genomes | Genetics, Molecular Biology and Evolution, Molecular Ecology, New Phytologist, PLOS Genetics, PNAS

Programs and scripts written for NGS data analysis: GitHub