

CURRICULUM VITAE

January 7, 2019

Personal information

Name: Hytönen, Timo Petteri
Gender: Male
Date and place of birth: October 31, 1975, Laukaa, Finland
Nationality: Finnish
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Google Scholar: <https://scholar.google.fi/citations?user=jZUEXeIAAA&hl=fi&oi=ao>
URL for web site: <https://www.helsinki.fi/en/researchgroups/strawberry-research-group>

Education and degrees awarded

- PhD, Biology of Plant Production, Department of Agricultural Sciences, University of Helsinki, Finland, April 16, 2009, Thesis: Regulation of strawberry growth and development, Supervisors: Prof. Paula Elomaa, Prof. Olavi Junntila
- Title of Docent, Horticulture, Faculty of Agriculture and Forestry, University of Helsinki, Finland, February 25, 2013
- MSc. Agric., Horticulture, Department of Applied Biology, University of Helsinki, Finland, September 27, 2001

Language skills

- Finnish (mother tongue); English (excellent); Swedish (good)

Current position

- Associate Professor (tenure track, research oriented position), Molecular and Translational Plant Biology, Department of Agricultural Sciences & Department of Biosciences, University of Helsinki, Finland, September 2018 –
- Principal Research Scientist (20%), NIAB-EMR, UK, November 2018 –

Previous professional appointments and career breaks

- Postdoctoral researcher funded by the Academy of Finland, Department of Agricultural Sciences, University of Helsinki, Finland, January 2011 – August 2013
- Postdoctoral researcher, Department of Agricultural Sciences, University of Helsinki, Finland, April 2009 – December 2010
- University lecturer, horticulture (20%), Department of Agricultural Sciences, University of Helsinki, Finland, September 2009 – August 2010
- Doctoral student, Viikki Graduate School in Biosciences, University of Helsinki, Finland, January 2004 – April 2009
- Research visit to Institute of Biology, University of Tromsø, Norway, March – April 2004, plant hormone purification and analysis by HPLC and GC-MS
- Doctoral student, Department of Applied Biology, Univ. Helsinki, April – December 2003
- Project researcher, Department of Applied Biology, University of Helsinki, Finland, May 2001 – March 2003

Major research funding and academic leadership, student supervision

- Academy of Finland, Temperature as a driver of climate adaptation, 521 330 EUR, project leader, 2018-2022
- Academy of Finland, Climatic adaptation of reproductive development in strawberry, 585 366 EUR, project leader, 2014-2018
- Ministry of Agriculture and Forestry, Adapting berry production to the changing climate: gene test for cultivar selection, 95 000 EUR, project leader, 2012 – 2014
- Academy of Finland, postdoctoral fellowship, Molecular control of perennial growth cycle in strawberry, 298 380 EUR, personal grant, 2011 – 2013

- University of Helsinki, Regulation of major phase transitions in strawberry, 119 000 EUR, project leader, 2010 – 2012
- Ministry of Agriculture and Forestry, Enhancing berry production in the changing Nordic climate, 380 000 EUR, consortium leader, 2010 – 2012
- Ministry of Agriculture and Forestry, Introduction of day-neutral varieties for improving the profitability of Finnish strawberry production, 66 365 EUR, project partner, 2007 – 2009
- Ministry of Agriculture and Forestry, Control of crown branching in strawberry, 150 000 EUR, project leader, 2004 – 2007
- University of Helsinki young researcher award 13000 EUR, 2003
- Ministry of Agric. and Forestry, Greenhouse strawberry production, project leader, 2001 – 2003
- Group leader/PI, Department of Agricultural Sciences, University of Helsinki, Finland, Dec 2009 -
- Supervision of postdoctoral researchers as a responsible supervisor: (1) Takeshi Kurokura, June 2010 – December 2012 (current position: Lecturer, Utsunomiya University, Japan), (2) Tuomas Toivainen, March 2015 –, (3) Elli Koskela, October 2016 – 2017 and January 2019 –, (4) Kathryn Mackenzie, September 2018 –
- Supervision of PhD students as a responsible supervisor: (1) Elli Koskela, defended in September 2016, Pass with Distinction, the best thesis award, University of Helsinki, (2) Marja Rantanen, defended in September 2017 (current position: researcher, Natural Resources Institute Finland), (3) Samia Samad, 2014 – 2018, (4) Guangxun Fan, 2017 –, (5) Javier Andrés Jimenez, 2017 –, (6) Sergei Suprun, 2018 –
- Supervision of PhD students as an assisting supervisor: (1) Katriina Mouhu, defended in 2014, the best thesis of the Faculty of Agriculture and Forestry in 2014 (current position: postdoctoral researcher, University of Helsinki)
- Supervision of undergraduate students as a responsible supervisor: Ilpo Koivu, Elli Koskela, Anna Tujula, Salla Anttila, Panpan Jiang, Daniel Richterich, Sonja Kymäläinen
- Supervision of undergraduate students as an assisting supervisor: Katriina Mouhu, Johanna Aura, Krista Kauste, Javier Jimenez, Sonja Still, Hrannar Hilmarsson (Agricultural University of Iceland)
- PhD student follow-up groups: Marcelina Bilincka, Juan Alonso Serra, Yan Yan, David Israel

Other scientific or academic merits and activities

- ERC Starting Grant application 2016, Panel LS9: Applied Life Sciences, Temperature as a driver of climate adaptation, interviewed candidate
- Invited keynote speaker, Horticulture Research Conference, East Malling, UK, July 16 – 20, 2017
- Invited speaker, The Rank Prize Funds: Mini-symposium on perennality –potential and challenges for future sustainable crop production, August 24-27, 2015, Grasmere, UK
- Invited keynote speaker, Pleiotropic effects of flowering time genes and impact of adaptation and speciation –workshop, January 21-23, 2013, Max Planck Institute for Plant Breeding Research, Cologne, Germany
- PhD thesis pre-examiner (Doctor Europaeus), Laura Medina-Puche, Univ. Córdoba, Spain
- PhD thesis pre-examiner and opponent (dissertation in August 23, 2013), Micael Wendell, Norwegian University of Life Sciences
- Evaluator of project proposals: Agence nationale de la recherche, France, 2013 – (2 proposals); FORMAS, Sweden, 2017 (1 proposal)
- Member of the scientific committee, International Strawberry Conference, Antwerp, Belgium, September 4-6, 2013
- Member of the organizing committee, Finnish Plant Science Days, Helsinki, May 13 – 15, 2013
- Memberships in scientific societies: Scandinavian Plant Physiology Society; European Plant Science Organization; Finnish Academy of Science and Letters, Academy Club for Young Scientists, member, term 2012-2013 (invited)
- Associate editor, Horticulture Research, 2017 –
- Co-editor, The genomes of Rosaceous berries and their wild relatives, Compendium of plant genomes, Springer, in press
- Acting as a reviewer: 18 journals including e.g. Nature Plants, Plant Cell, New Phytologist, Journal of Experimental Botany, BMC Genomics, Theoretical and Applied Genetics, Scientia Horticulturae

- Member, committee for research and postgraduate education, Faculty of Agriculture and Forestry, University of Helsinki, 2012 – 2018
- Member, management group, plant biology MSc program, Department of Biosciences, University of Helsinki, 2017 –

Scientific and societal impact of research

- 28 peer reviewed scientific articles; 6 non-refereed scientific articles; 4 scientific books or book chapters; 2 theses; 17 publications in professional journals
- H-index: 13 (12 since 2014), 584 citations (Google Scholar)
- Several oral presentations in international conferences including e.g. Sainsbury Laboratory Symposium, University of Cambridge (2018), Rosaceae Genomics Conference (2012, 2016), International Horticulture Conference (2010)
- Oral presentations in several national meetings intended for professional communities (breeders, growers, advisors etc.)
- Interview in National newspaper Helsingin Sanomat, 2p., June 12, 2014

Peer reviewed scientific publications since 2012

1. Koskela E, Mouhu K, Albani MC, Kurokura T, Rantanen M, Sargent D, Battey NH, Coupland G, Elomaa P, **Hytönen T**. 2012. Mutation in *TERMINAL FLOWER1* reverses the photoperiodic requirement for flowering in the wild strawberry, *Fragaria vesca*. *Plant Physiology* 159: 1043-1054.
2. Deng X, Elomaa P, Nguyen CX, **Hytönen T**, Valkonen JPT, Teeri TH. 2012. Virus-induced gene silencing for Asteraceae – a reverse genetics approach for functional genomics in *Gerbera hybrida*. *Plant Biotechnology Journal* 10: 970-978.
3. Pinho P, **Hytönen T**, Rantanen M, Elomaa P, Halonen L. 2012. Dynamic control of supplemental lighting intensity in greenhouse environment. *Lighting Research and Technology* 45: 295-304.
4. Bi Y, Artola K, Kurokura T, **Hytönen T**, Valkonen JPT. 2012. First report of raspberry leaf blotch virus in raspberries in Finland (disease note). *Plant Disease* 96: 1231.
5. Kurokura T, Mimida M, Battey NH, **Hytönen T**. 2013. The regulation of seasonal flowering in the Rosaceae. *Flowering Newsletter* review article. *Journal of Experimental Botany* 64: 4131-4141.
6. Mouhu K, Kurokura T, Koskela E, Albert VA, Elomaa P, **Hytönen T**. 2013. *Fragaria vesca* homolog of *SUPPRESSOR OF OVEREXPRESSION OF CONSTANS1* represses flowering and promotes vegetative growth. *Plant Cell* 25: 3296-3310.
7. Rantanen M, Kurokura T, Mouhu K, Pinho P, Tetri E, Halonen L, Palonen P, Elomaa P, **Hytönen T**. 2014. Light quality regulates flowering in *FvFT1/FvTFL1* dependent manner in the woodland strawberry *Fragaria vesca*. *Research topic article: “Recent Advances in Flowering Time Control”*. *Frontiers in Plant Science* 5: 271.
8. Rantanen M, Kurokura T, Jiang P, Mouhu K, **Hytönen T**. 2015. Strawberry homolog of *TERMINAL FLOWER1* integrates photoperiod and temperature signals to inhibit flowering. *Plant Journal* 82: 163-173.
9. Koskela E, Sønsteby A, Flachowsky H, Heide O, Hanke V, Elomaa P, **Hytönen T**. 2016. *TERMINAL FLOWER 1* is a breeding target for a novel everbearing trait and tailored flowering responses in cultivated strawberry *Fragaria × ananassa* Duch.). *Plant Biotechnology Journal* 14: 1852–1861.
10. Denoyes B, Amaya I, Liston A, Tennessen J, Ashman T, Whitaker V, **Hytönen T**, van der Weg E, Osorio S, Folta K, Slovin J, Harrison R, Monfort A, Bassil N. 2016. Genomics tools available for unravelling mechanisms underlying agronomical traits in strawberry with more to come. *Acta Horticulturae* 1156: 13-24.
11. Samad S, Kurokura T, Toivainen T, Patel V, Sargent J, **Hytönen T**. 2017. Additional QTLs on three chromosomes control flowering time in strawberry. *Horticulture Research* 4: 17020.
12. Koskela EA, Kurokura T, Toivainen T, Sønsteby A, Heide OM, Sargent DJ, Isobe S, Jaakola L, Hilmarsson H, Elomaa P, **Hytönen T**. 2017. Altered regulation of *TERMINAL FLOWER 1* causes the unique vernalisation response in an arctic woodland strawberry accession. *New Phytologist* 216: 841-853.

13. Kurokura T, Samad S, Mouhu K, Koskela E, **Hytönen T**. 2017. *Fragaria vesca* CONSTANS controls photoperiodic flowering and vegetative development. *Journal of Experimental Botany* 4839–4850.
14. Hilmarsson H, **Hytönen T**, Isobe S, Göransson M, Toivainen T, Hallsson J. 2017. Molecular analysis of a global collection of *Fragaria vesca* using microsatellite markers. *PLoS One* 12: e0183384.
15. Edger P, VanBuren R, Colle M, Poorten T, Wai CM, Niederhuth C, Alger EI, Ou S, Acharya C, Wang J, Callow P, McKain M, Shi J, Collier C, Xiong Z, Mower J, Slovin J, **Hytönen T**, Jiang N, Childs K, Knapp S. 2017. Single-molecule sequencing and optical mapping yields an improved genome of woodland strawberry (*Fragaria vesca*) with chromosome-scale contiguity. *Giga Science* 7: gix124. doi.org/10.1093/gigascience/gix124.
16. **Hytönen T**, Pinho P, Rantanen M, Kariluoto S, Lampi A, Edelmann M, Joensuu K, Kauste K, Mouhu K, Piironen V, Halonen L, Elomaa P. 2018. Effects of LED lighting spectra on lettuce (*Lactuca sativa* L. 'Frillice') growth and nutritional composition. *Lighting Research & Technology* 50: 880-893.