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Handledare för doktorandprogram, forskningskoordinator  
Forskningsprogrammet för organism- och evolutionsbiologi  
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## Anställning

**forskningskoordinator**  
Forskningsprogrammet för organism- och evolutionsbiologi  
Helsingfors universitet  
Finland  
1 jan. 2018 → present

**Viikki Plant Science Centre (ViPS)**  
Helsingfors universitet  
1 jan. 2014 → present

**Plant Phenomics**  
Helsingfors universitet  
Finland  
24 okt. 2011 → present

**Plant Production Sciences**  
Helsingfors universitet  
1 aug. 2011 → present

**Handledare för doktorandprogram**  
Doctoral Programme in Integrative Life Science  
Helsingfors universitet  
Finland  
1 jan. 2021 → present

**Handledare för doktorandprogram**  
Doctoral Programme in Plant Sciences  
Helsingfors universitet  
Helsinki, Finland  
1 jan. 2014 → present

## Forskningsoutput

**Image-based time series analysis to establish differential disease progression for two Fusarium head blight pathogens in oat spikelets with variable resistance**

Pavicic, M., Mouhu, K., Hautsalo, J., Jacobson, D., Jalli, M. & Himanen, K., 14 mars 2023, I: *Frontiers in plant science*. 14, 13 s.

**Effects of poty-potexvirus synergism on growth, photosynthesis and metabolite status of *Nicotiana benthamiana***

Pollari, M., Sipari, N., Poque, S., Himanen, K. & Mäkinen, K., jan. 2023, I: *Viruses (Basel)*. 15, 1, 24 s.

**Tree architecture: A strigolactone-deficient mutant reveals a connection between branching order and auxin gradient along the tree stem**

Su, C., Kokosza, A., Xie, X., Pěnčík, A., Zhang, Y., Raumonen, P., Shi, X., Muranen, S., Topcu, M. K., Immanen, J., Hagqvist, R., Safronov, O., Alonso-Serra, J., Eswaran, G., Venegas, M. P., Ljung, K., Ward, S., Mähönen, A. P., Himanen, K., Salojärvi, J., & 6 andraFernie, A. R., Novák, O., Leyser, O., Pałubicki, W., Helariutta, Y. & Nieminen, K., 2023, I: *Proceedings of the National Academy of Sciences of the United States of America*. 120, 48, e2308587120.

**Regulation of PaRBOH1-mediated ROS production in Norway spruce by Ca<sup>2+</sup> binding and phosphorylation**

Nickolov, K., Gauthier, A., Hashimoto, K., Laitinen, T., Väisänen, E., Paasela, T., Soliymani, R., Kurusu, T., Himanen, K., Blokhina, O., Fagerstedt, K., Jokipii-Lukkari, S., Tuominen, H., Haggman, H., Wingsle, G., Teeri, T. H., Kuchitsu, K. & Kärkönen, A., 13 okt. 2022, I: *Frontiers in plant science*. 13, 19 s., 978586.

**Functional phenomics for improved climate resilience in Nordic agriculture**

Himanen, K., Roitsch, T. G., Chawade, A., Jaakola, L., Nehe, A. & Alexandersson, E., 3 sep. 2022, I: *Journal of Experimental Botany*. 73, 15, s. 5111-5127 17 s.

**Image-based methods to score fungal pathogen symptom progression and severity in excised *Arabidopsis* leaves**

Pavicic, M., Overmyer, K., Rehman, A. U., Jones, P., Jacobson, D. & Himanen, K., jan. 2021, I: *Plants (Basel)*. 10, 1, 14 s., 158.

**Two chloroplast thioredoxin systems differentially modulate photosynthesis in *Arabidopsis* depending on light intensity and leaf age**

Guinea Diaz, M., Nikkanen, L., Himanen, K., Toivola, J. & Rintamäki, E., nov. 2020, I: *Plant Journal*. 104, 3, 1365-313X.

**Korkean läpivirtauksen kasvien kuvantamislaitteisto National Plant Phenotyping Infrastructure (NaPPI)**

Himanen, K., 8 jan. 2020.

**Roles of endogenous glycinebetaine in plant abiotic stress responses**

Mäkelä, P., Jokinen, K. & Himanen, K., 5 dec. 2019, *Osmoprotectant-mediated abiotic stress tolerance: Recent advances and future perspectives*. Hossain, M. A., Kumar, V., Burritt, D., Fujita, M. & Mäkelä, P. (red.). 1 red. Springer, s. 153-173

**High throughput in vitro seed germination screen identified new ABA responsive RING-type ubiquitin E3 ligases in *Arabidopsis thaliana***

Pavicic, M., Wang, F., Mouhu, K. & Himanen, K., dec. 2019, I: *Plant Cell, Tissue and Organ Culture*. 139, 3, s. 563-575 13 s.

**Histone 2B monoubiquitination complex integrates transcript elongation with RNA processing at circadian clock and flowering regulators**

Woloszynska, M., Le Gall, S., Neyt, P., Boccardi, T. M., Grasser, M., Laengst, G., Aesaert, S., Coussens, G., Dhondt, S., Van De Slijke, E., Bruno, L., Fung-Uceda, J., Mas, P., Van Montagu, M., Inze, D., Himanen, K., De Jaeger, G., Grasser, K. D. & Van Lijsebettens, M., 16 apr. 2019, I: *Proceedings of the National Academy of Sciences of the United States of America*. 116, 16, s. 8060-8069 10 s.

**Harnessing the versatile Ubiquitin signals to combat plant pathogens**

Himanen, K., 2019.

**A transnational and holistic breeding approach is needed for sustainable wheat production in the Baltic Sea region**

Chawade, A., Armoniene, R., Berg, G., Brazauskas, G., Frostgard, G., Geleta, M., Gorash, A., Henriksson, T., Himanen, K., Ingver, A., Johansson, E., Jorgensen, L. N., Koppel, M., Koppel, R., Makela, P., Ortiz, R., Podyma, W., Roitsch, T., Ronis, A., Svensson, J. T., & 2 andraVallenback, P. & Weih, M., dec. 2018, I: *Physiologia Plantarum*. 164, 4, s. 442-451 10 s.

**Nordic research infrastructures for plant phenotyping**

Alexandersson, E., Keinanen, M., Chawade, A. & Himanen, K., 2018, I: *Agricultural and Food Science*. 27, 1, s. 7-16 10 s.

**Genome sequencing and population genomic analyses provide insights into the adaptive landscape of silver birch**

Salojärvi, J., Smolander, O-P., Nieminen, K., Rajaraman, S., Safronov, O., Safdari, P., Lamminmäki, A., Immanen, J., Lan, T., Tanskanen, J., Rastas, P., Amiryousefi, A., Jayaprakash, B., Kammonen, J. I., Hagqvist, R., Eswaran, G., Ahonen, V. H., Serra, J. A., Asiegbu, F. O., Barajas-Lopez, J. D. D., & 65 andraBlande, D., Blokhina, O., Blomster, T., Broholm, S., Brosche, M., Cui, F., Dardick, C., Ehonen, S. E., Elomaa, P., Escamez, S., Fagerstedt, K. V., Fujii, H., Gauthier, A., Gollan, P. J., Halimaa, P., Heino, P. I., Himanen, K., Hollender, C., Kangasjarvi, S., Kauppinen, L., Kelleher, C. T., Kontunen-Soppela, S., Koskinen, J. P., Kovalchuk, A., Karenlampi, S. O., Kärkönen, A. K., Lim, K-J., Leppälä, J., Macpherson, L., Mikola, J., Mouhu, K., Mähönen, A. P., Niinemets, U., Oksanen, E., Overmyer, K., Palva, E. T., Pazouki, L., Pennanen, V., Puhakainen, T., Poczai, P., Possen, B. J. H. M., Punkkinen, M., Rahikainen, M. M., Rousi, M., Ruonala, R., van der Schoot, C., Shapiguzov, A., Sierla, M., Sipilä, T. P., Sutela, S., Teeri, T. H., Tervahauta, A. I., Vaattovaara, A., Vahala, J., Vetchinnikova, L., Welling, A., Wrzaczek, M., Xu, E., Paulin, L. G., Schulman, A. H., Lascoux, M., Albert, V. A., Auvinen, P., Helariutta, Y. & Kangasjarvi, J., 8 maj 2017, I: *Nature Genetics*. 49, 6, s. 904-912 12 s.

**Genomic and phenomic screens for flower related RING type ubiquitin E3 ligases in Arabidopsis**

Pavicic, M., Mouhu, K., Wang, F., Bilicka, M. M., Chovanček, E. & Himanen, K. I. H., 28 mars 2017, I: *Frontiers in plant science*. 8, 17 s., 416.

**Haastattelututkimus molekyylibiotieteellisiltä aloilta valmistuneiden tohtoreiden kokemuksista koulutuksen ja työelämän vastaavuuksista.**

Himanen, K. I. H., 2016, *Teaching in Life Sciences: Current practices and development*. Vol. 2. s. 33-51 19 s. (Teaching in Life Sciences: Current practices and development; vol. 2).

**Didaktinen essee biotekniikan yliopisto-opetuksesta**

Himanen, K. I. H., 22 dec. 2015, *Esseitä tieteenalakohtaisesta opetuksesta lukuvuosilta 2013-2015*. Lahtinen, A-M. & Lindfors, B. (red.). Helsinki: Helsingin yliopisto, Yliopistopedagogiikan tutkimus- ja kehittämisyksikkö , s. 2-8 7 s.

**Functional Analysis of the Arabidopsis TETRASPAVIN Gene Family in Plant Growth and Development**

Wang, F., Muto, A., Van de Velde, J., Neyt, P., Himanen, K., Vandepoele, K. & Van Lijsebettens, M., 2015, I: *Plant Physiology*.

**Haastattelututkimus molekyylibiotieteellisiltä aloilta valmistuneiden tohtoreiden kokemuksista koulutuksen ja työelämän vastaavuuksista.**

Himanen, K., 2015, I: *Teaching in life sciences : current practices and development : reports from University pedagogy courses at Viikki Campus* . 2, s. 33-51 19 s.

**Kasvibioteeknikka täyttää tänä vuonna 30 vuotta (mutta ei juhli)**

Himanen, K. & Pietäinen, M. I., 9 jan. 2014, *maataloustieteen päivät*.

**Histone H2B monoubiquitination is required to reach maximal transcript levels of circadian clock genes in Arabidopsis**

Himanen, K., Woloszynska, M., Boccardi, T. M., Groeve, S. D., Nelissen, H., Bruno, L., Vuylsteke, M. & Lijsebettens, M. V. , 2012, I: *Plant Journal*. 72, 2, s. 249-260 12 s.

**Is HUB1 a hub for plant fitness?**

Himanen, K., Boccardi, T. M., De Rycke, R., Odeny, O. P. & Van Lijsebettens, M., 2012, I: *Plant Signalling & Behavior*. 7, 12, s. 1537-1540 4 s.

Ectopic expression of PtaRHE1, encoding a poplar RING-H2 protein with E3 ligase activity, alters plant development and induces defence related response in tobacco  
Bopopi, J. M., Vandepitte, O. M., Himanen, K., Mol, A., Vaessen, Q., El Jaziri, M. & Baucher, M., 2010, I: Journal of Experimental Botany. 61, s. 297-310

**Plants having modified growth characteristics and a method for making the same**  
Himanen K., Boccardi TM., Reuzeau C., Van Lijsebettens, 2010, Patentnr. wo/2010/012760

The transcript elongation factor FACT affects *Arabidopsis* vegetative and reproductive development and functionally interacts with HUB1/2.  
Lolas, I. B., Himanen, K., Grønlund, J. T., Lynggaard, C., Houben, A., Melzer, M., Van Lijsebettens, M. & Grasser, K. D., 2010, I: Plant Journal. 61, 4, s. 686-697 12 s.

Overexpression of the *Arabidopsis* Anaphase Promoting Complex subunit CDC27a increases growth rate and organ size  
Rojas, C. A., Eloy, N. B., de Freitas Lima, M., Rodrigues, R. L., Franco, L. O., Himanen, K., Beemster, G. T. S., Hemerly, A. S. & Ferreira, P. C. G., 2009, I: Plant Molecular Biology. 71

Genetic and epigenetic control of leaf size and shape  
Himanen, K., Dino Adem, G. & Van Lijsebettens, M., 2007, I: International journal of plant developmental biology.

Impact of core histone modifications on transcriptional regulation and plant growth  
Nelissen, H., Boccardi, T. M., Himanen, K. & Van Lijsebettens, M., 2007, I: Critical Reviews in Plant Sciences. 26, s. 243-263

Novel Plant-specific cyclin-dependent kinase inhibitors induced by biotic and abiotic stresses  
Peres, A., Churchman, M. L., Hariharan, S., Himanen, K., Verkest, A., Vandepoele, K., Magyar, Z., Hatzfeld, Y., Van Der Schueren, E., Beemster, G. T. S., Frankard, V., Larkin, J. C., Inze, D. & De Veylder, L., 2007, I: Journal of Biological Chemistry. 282, 35, s. 25588-96 10 s.

The *Arabidopsis thaliana* homolog of yeast BRE1 has a function in cell cycle regulation during early leaf and root growth.  
Fleury, D., Himanen, K., Cnops, G., Nelissen, H., Boccardi, T. M., Maere, S., Beemster, G. T. S., Neyt, P., Anami, S., Robles, P., Micl, J. L., Inze, D. & Van Lijsebettens, M., 2007, I: Plant Cell.

**Auxin regulation of cell cycle and its role during lateral root initiation.**  
Vanneste S., Maes L., De Smet I., Himanen K., Naudts M., Inzé D., Beeckman T. , 2005, I: Physiologia Plantarum.

**Transcript profiling of early lateral root initiation.**  
Himanen K., Vuylsteke M., Vanneste S., Vercruyse S., Boucheron E., Alard P., Chriqui D., Van Montagu M., Inzé D., Beeckman T., 2004, I: Proceedings of the National Academy of Sciences of the United States of America. 6

**The *Arabidopsis* locus RCB mediates upstream regulation of mitotic gene expression.**  
Himanen K., Reuzeau C., Beeckman T., Melzer S., Gorben L. and Inzé D. , 2003, I: Plant Physiology. 133, s. 1862-1872

**Auxin-mediated cell cycle regulation during early lateral root development**  
Himanen K., Boucheron E., Vanneste S., De Almeida Engler J., Inzé D. and Beeckman T, 2002, I: Plant Cell. 14, s. 2339-51

**Expression of cell cycle regulatory genes and morphological alterations in response to salt stress in *Arabidopsis thaliana***  
Burssens S., Himanen K., Van De Cotte B., Beeckman T., Van Montagu M., Inzé D. & Verbruggen N. , 2000, I: Planta.

**Projekt**

**FusNaPPI: Automated imaging for Oat breeding for Fusarium resistance**  
Himanen, K. & Pavicic, M.

**BalticWheat: Baltic Wheat Network Swedish Institute**  
Himanen, K., Chawade, A., Brazauskas, G. & Koppel, M.  
01/10/2017 → ...

**Constitutive Photomorphogenesis1 target protein characterization**  
Himanen, K.  
01/08/2011 → ...

**EMPHASIS: EMPHASIS**  
Himanen, K. & Keinänen, M.  
01/03/2017 → ...

**EMPHASIS: ESFRI**  
Himanen, K.  
01/11/2017 → ...

**EPPN2020: European Plant Phenotyping Network2020**  
Himanen, K.  
01/05/2017 → ...

**Functional characterization of AIP2 ubiquitin E3 ligase in plant pathogen interactions**  
Pavicic, M. & Himanen, K.  
01/10/2013 → 30/09/2017

**Genokaura - genomic selection for Fusarium head blight resistant oat cultivars/ genomivalinnalla puhahomeen kestäviä kauralajikkeita**  
Himanen, K., Mouhu, K., Hautsalo, J. & Jalli, M.

**Identification and functional characterization of Flower specific Ubiquitin Proteasome System.**  
Himanen, K.  
01/09/2011 → 31/08/2016

**Della: Image-based phenotyping of dwarfing Bzh spring turnip rape**  
Niemelä, T., Pavicic, M. & Himanen, K.

**IPPN: International Plant Phenotyping Network**  
Himanen, K.  
01/03/2016 → ...

**Kvantamistekn. ratkaisuja kasvihuonetuo**  
Himanen, K. & Poque, S.  
Luonnonvarakeskus Sisäiset palvelut  
01/01/2023 → 31/03/2026

**NaPPI: NaPPI-Kansallinen Kasvi Fenotyppaus Infrastruktuuri**  
Palva, E. T., Asiegbu, F., Elomaa, P., Fagerstedt, K., Helariutta, Y., Himanen, K., Hytönen, T., Kangasjärvi, J., Mäkelä, P., Schulman, A., Sims-Huopaniemi, K., Stoddard, F., Teeri, T., Valkonen, J., Oksanen, E., Keinänen, M., Dumont, J., Hauta-Kasari, M., Hiltunen, J., Karjalainen, P., Aro, E. & Häggman, H.  
Unknown funder  
01/12/2013 → ...

**New omics biomarkers for disease resistant and drought tolerant potatoes**  
Himanen, K., Mouhu, K. & Alexandersson, E.

**NJK Resilient northern crops network**  
Himanen, K.  
01/06/2020 → 31/12/2022

**NordPlant: NordForsk University Hub**  
Himanen, K., Alexandersson, E., Chawade, A., Jaakola, L. & Christensen, S.  
01/02/2018 → 31/01/2024

**Nordforsk/ Upscaling crop performance**  
Himanen, K. & Poque, S.  
NordForsk  
01/01/2023 → 31/12/2026

**NordPlant – A Climate and Plant Phenomics Hub for Sustainable Agriculture and Forest Production in Future Nordic Climates**  
Alexandersson, E., Himanen, K., Roitsch, T. G. & Jaakola, L.

**ViPS: Viikki Plant Science Centre**  
Elomaa, P., Aphalo, P., Asiegbu, F., Bäck, J., Berninger, F., Brosche, M., Fagerstedt, K., Hänninen, H., Heinonsalo, J., Helariutta, Y., Himanen, K., Hölttä, T., Hytönen, T., Hyvönen, J., Kangasjärvi, J., Kärkönen, A., Korpelainen, H., Laine, A., Mähönen, A. P., Mäkelä, A., Mäkinen, K., Ojala, A., Overmyer, K., Palonen, P., Palva, E. T., Pihlatie, M., Pirhonen, M., Porcar-Castell, A., Pumpanen, J., Rikkinen, J., Robson, T. M., Salojärvi, J., Schulman, A., Stoddard, F., Teeri, T., Valkonen, J., Vesala, T., Wrzaczek, M. & Sims-Huopaniemi, K.  
01/01/2015 → ...