

Curriculum vitae – Melissa Hamner Magerøy

PERSONAL INFORMATION

Name: Magerøy, Melissa Hamner

Date of birth: 01.11.1984

Sex: Female

Nationality: United States

ORCID: 0000-0001-7801-1007

URL for personal websites:

<https://www.nibio.no/en/employees/melissa-mageroy>

<https://publons.com/researcher/1003529/melissa-mageroy/>

<https://app.cristin.no/persons/show.jsf?id=782844>

<https://twitter.com/SpruceDefender>



From an early age, I have been curious about how and why things work the way they do. I also found plants fascinating as they contribute so much to our lives: food, oxygen, shelter, medicines. I am particularly interested in plant secondary metabolism and how these metabolites contribute to plant and human health. During my PhD at the University of Florida I worked on characterizing the biosynthesis pathways of molecules that contribute to tomato flavor. I then moved to the University of British Columbia where I began researching spruce defense against insect pest and the biosynthesis of defense compounds. After receiving a Young Researcher Talent grant from the Norwegian Research Council, I moved to Norway to study the molecular mechanism of spruce defense priming. I am currently a researcher at the Norwegian Institute for Bioeconomy Research.

EDUCATION

2011 PhD: 11.11.2011

Plant Molecular and Cellular Biology, University of Florida, USA

2007 Bachelors of Science: 15.05.2007

Major: Biology; Minors: Chemistry and Spanish, Trinity University, USA

CURRENT AND PREVIOUS POSITIONS

2016-present Researcher, Forest Health, Norwegian Institute for Bioeconomy Research

2012- 2016 Post-doctoral fellow

Michael Smith Laboratories, University of British Columbia, Canada

2007- 2011 Graduate Research Assistant

Plant Molecular and Cellular Biology, University of Florida, USA

2006-2007 Undergraduate Independent Research, Trinity University, USA

FELLOWSHIPS, AWARDS AND PRIZES

2017 Borregaard Research Fund, 35 kNOK

2016-2019 Young Researcher Talent Grant, FRIPRO, Norwegian Research Council, 7000 kNOK

2015 Post-doctoral Travel Grant, Faculty of Science, University of British Columbia

2009 Best student presentation, Plant Molecular and Cellular Biology, University of Florida, USA

- 2007-2011 Alumni Fellowship, Plant Molecular and Cellular Biology, University of Florida, USA
- 2006 Summer Undergraduate Research Fellowship, American Society of Plant Biology, USA
- 2003-2007 President's Scholarship, Trinity University, USA

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

- 2019-2020 4 master's students, co-supervisor, Norwegian University of Life Science
- 2018-2019 Konrad Skåravik Bryhn, MS, co-supervisor, Forestry, Norwegian University of Life Sciences
- 2017-2018 Thomas Olufsen Skrautvol, MS, co-supervisor, Forestry, Norwegian University of Life Sciences (winner of best Master's thesis in Forestry 2018)
- 2016-2020 Samuel Wilkinson, PhD, co-supervisor, Animal & Plant Sciences, University of Sheffield (PhD project funded by FRIPRO Project code: 249920 to MHM)
- 2014- 2015 1 PhD and 4 master's students, mentor, Genome Science and Technology Graduate Program, University of British Columbia, Canada
- 2009-2011 3 undergraduate Research Students, mentor, Plant Molecular and Cellular Biology, University of Florida, USA

TEACHING ACTIVITIES

- 2014 Guest Lecturer-Forest Ecology, University of the Fraser Valley, Canada
- 2005-2006 Teaching Assistant-Cellular and Molecular biology; Organismal Biology, Trinity University, USA

PROJECT MANAGEMENT EXPERIENCE

- 2016-2019 Project manager, EpiSpruce, FRIPRO Project code: 249920

COMMISSIONS OF TRUST

- 2014- 2016 Scientific Advisory Board, A Rocha: Environmental Stewardship, Canada

MEMBERSHIPS OF ACADEMIES / SCIENTIFIC SOCIETIES

- 2016-present Scandinavian Plant Physiology Society
- 2016-present European Plant Science Organisation

MAJOR COLLABORATIONS

Jurriaan Ton, Epigenetic mechanisms of Norway spruce defense priming, Animal & Plant Sciences, University of Sheffield. Project partner in FRIPRO Project code: 249920

CAREER BREAKS

- 07.07.2017 – 01.01.2018 100% Maternity leave
- 01.01.2018 – 01.06.2018 40% Maternity leave
- 07.08.2020 – 31.01.2021 100% Maternity leave
- 01.02.2021 – 15.07.2021 37% Maternity leave

TRACK RECORD

Publications

Published: 15 Accepted: 1 Submitted: 1 Scopus h-index: 10

- De Kesel J, Conrath U, Flors V, Luna E, **Mageroy MH**, Mauch-Mani B, Pastor V, Pozo MJ, Pieterse CMJ, Ton J, and Kyndt T. (Accepted) The induced resistance lexicon: do's and don'ts. *Trends in Plant Science*. (Scopus citations excluding self citations:0)
- Mageroy MH**, Wilkinson SW, Tengs T, Cross H, Almvik M, Pétriacq P, Vivian-Smith A, Zhao T, Fossdal CG and Krokene P. (2020). Molecular underpinnings of methyl jasmonate-induced resistance in Norway spruce. *Plant Cell and Environment*. 43, 1827–1843. (0)
- Mageroy MH**, Christiansen E, Langström B, Borg-Karlson A-K, Solheim H, Björklund N, Schmidt A, Fossdal CG and Krokene P. (2020) Priming of inducible defenses protects Norway spruce against tree-killing bark beetles. *Plant Cell and Environment*, 43, 420-430. (6)
- Wilkinson SW, **Mageroy MH**, Sánchez AL, Smith LM, Furci L, Cotton TEA, Krokene P and Ton J. (2019) Surviving in a hostile world : plant strategies to resist pests and diseases. *Annual Review of Phytopathology*, 57. (17)
- Parent GJ, Méndez-Espinoza C, Giguère, I, **Mageroy MH**, Charest M, Bauce E, Bohlmann J, and MacKay JJ. (2019) Hydroxyacetophenone defenses in white spruce against spruce budworm. *Evolutionary Applications*. 13, 62–75. (2)
- Annacondia ML, **Mageroy MH**, and Martinez G. (2018) Stress response regulation by epigenetic mechanisms: changing of the guards. *Physiologia plantarum*. 162, 239-250. (20)
- Parent GJ, Giguère I, **Mageroy MH**, Bohlmann J and MacKay JJ. (2018) Evolution of the Biosynthesis of Two Hydroxyacetophenones in Plants. *Plant Cell and Environment*, 41, 620–629. (10)
- Mageroy MH**, Jancsik S, Yuen MMS, Fischer M, Paetz C, Schneider B, MacKay JJ, and Bohlmann J (2017) A conifer UDP-sugar dependent glycosyltransferase contributes to acetophenone metabolism and defense against insects. *Plant Physiology* 175, 641-651. (10)
- Mageroy MH**, Lachance D, Jancsik S, Parent GJ, Séguin A, MacKay JJ, and Bohlmann J (2017) *In vivo* function of *Pgβglu-1* in the release of acetophenones in white spruce. *PeerJ*, 5, e3535. (2)
- Mageroy MH**, Parent GJ, Germanos G, Giguère I, Delvas N, Maaroufi H, Bauce É, Bohlmann J, MacKay JJ (2015) Expression of the beta-glucosidase gene *Pgβglu-1* underpins natural resistance of white spruce against spruce budworm. *Plant Journal*, 81, 68-80. (35)
- Goulet C, **Mageroy MH**, Lam N, Floystad A, Tieman DM, Klee HJ (2012) The role of an esterase in flavor volatile variation within the tomato clade. *Proceedings of the National Academy of Science*, 109, 19009-19014. (50)
- Wang Y, Maruhnich SA, **Mageroy MH**, Justice JR, Folta KM (2012) Phototropin 1 and cryptochrome action in response to green light in combination with other wavelengths. *Planta*, 237, 225-237. (23)
- Tieman D, Bliss P, McIntyre LM, Blandon-Ubeda A, Bies D, Odabasi AZ, Rodríguez GR, van der Knaap E, Taylor MG, Goulet C, **Mageroy MH**, Snyder CJ, Colquhoun T, Moskowitz H, Clark DG, Sims C, Bartoshuk L, Klee HJ (2012) The chemical interactions underlying tomato flavor preferences. *Current Biology*, 22, 1035-1039. (183)
- Mageroy MH**, Floystad A, Tieman DM, and Klee HJ (2011) A *Solanum lycopersicum* catechol-O-methyltransferase involved in synthesis of the flavor molecule guaiacol. *Plant Journal*, 69, 1043–1051. (50)

Mageroy MH, Kowalik EH, Folta KM, and Shinkle J. (2010) Evidence of physiological phototropin1 (phot1) action in response to UV-C illumination. *Plant signaling and behavior*, 5, 1204-1210. (9)

Jeanguenin L, Lara-Núñez A, Pribat A, **Mageroy MH**, Gregory JF, Rice KC, de Crécy-Lagard V and Hanson AD (2010) Moonlighting glutamate formiminotransferases: can functionally replace 5-formyltetrahydrofolate cycloligase. *Journal of Biological Chemistry*, 285, 41557-41566. (23)

Popular sciences publications

2020 **Mageroy MH** & Krokene P. (2020) A battle in the forest: spruce castles and bark beetle attacks. *Frontiers for Young Minds*.

2018 News article: Dagens Næringsliv, Fra gift til vaksine mot juletrebillen, Mandag 24. desember

2014 Press Release: EurekaAlert!, < http://www.eurekaalert.org/pub_releases/2014-11/ul-rdn112114.php>

Granted patent

Mageroy MH, Tieman DM, and Klee HJ (2013) Tomato catechol-*O*-methyltransferase sequences and methods of use. US patent WO2013043666. Tomato catechol-*O*-

Invited presentations

2018 Invited Talk: Forest Health Symposium, Norway

2017 Invited Talk: Norwegian Plant Biology Conference 2017, Norway

2017 Invited speaker: Swedish University of Agricultural Sciences Uppsala: Epigenetics workshop, Sweden

2017 Invited Talk: University of Sheffield, Animal and Plant Sciences Department seminar, England

2016 Invited Talk: Norwegian Plant Biology Conference 2016 Norway

2015 Invited Keynote Talk: International Society of Chemical Ecology 2015, Sweden

2014 Invited Talk: Banff Conference on Plant Metabolism, Canada

2014 Invited Talk: Forest Genetics Council Interior Technical Advisory Committee Meeting, Canada

2013 Invited Talk: Gordon Research Conference, Plant Metabolic Engineering, USA

Referee/Editorial

Canadian Journal of Forest Research; eLife; Forest Pathology; New Phytologist; Plant Cell & Environment; Plant Journal; Plant Physiology; Plant Gene; Plant and Soil Frontiers in Plant Science (Review Editor Plant Metabolism and Chemodiversity)
Frontiers for Young Minds (Associate Editor)