

Emilie Demarsy

34 years old (18.01.1980), 1 child (Juliette, 28 02 2012)

French, permit C

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Education

2007, PhD in Cellular Biology, University Joseph Fourier, Grenoble, France

2003, Master of Science in Cellular Biology and Plant Physiology, University of Nantes, France

Research Experience

From October 2013, Group Leader

“Chloroplast biogenesis and Influence of the light environment”

Chloroplast Biogenesis, Plant Physiology Lab, **University of Neuchâtel, Switzerland**

2007-2013, Post-doc (interrupted from February to July 2012 for maternity leave).

“Study of phot1 signaling during phototropism”

Laboratory of Prof. C. Fankhauser, Centre for Integrative Genomics, **University of Lausanne, Switzerland**

2003 – 2007, PhD

“Building up of the plastid transcriptional machinery during germination and early development”

supervisor : Silva Lerbs-Mache

Laboratory “Transcription plastidiale”, CNRS/University Joseph Fourier, **Grenoble, France**

2002 – 2003, Master

“Molecular and biochemical study of asparagine synthetase in the parasitic plant *Striga hermonthica*”,

Laboratory “Physiologie et Pathologie végétales”, **University of Nantes, France**

Teaching

From October 2013, Lecturer (Maître assistante), University of Neuchâtel, Switzerland

Plant Physiology, Biochemistry: Lectures and Practical courses (all University levels), **100 hours a year**

2007 – 2013, Teaching assistant, University of Lausanne, Switzerland

Molecular Biology and Biochemistry: Practical courses and Lecture (1st and 3rd year of Bachelor), **150 hours**

2006 – 2007, Teaching assistant (“Attachée Temporaire Enseignement-Recherche), University of Grenoble, France

Plant Biology, Microbiology (1st and 2nd year of Bachelor), **96 hours**

2004 – 2006, Teaching assistant, University of Grenoble, France

Plant Biology (1st year of Bachelor) **100 hours**

Grants and fellowships

From February 2014, SNF-Marie Heim Vöglin fellowship

2011, Travel grant from the Swiss Society for Experimental Biology (USGEB) to attend a meeting in Beijing, China.

2009, Short term Fellowship EMBO, to support a collaboration with the “Laboratoire d’enzymologie et biologie structurale”, Gif sur Yvette, France.

2003-2006, PhD fellowship from the French government.

Scientific training

- SIB workshop “**Qualitative Modelling in the era of Big Data**”, 2013, Lausanne, Switzerland
- EMBO Practical Course « **Protein Bioinformatics Tools, Focus on Regulatory Proteins : Sequences, Structures, Interactions, networks** », 2011, Heidelberg, Germany.
- Workshop « **Introduction to Mass-Spectrometry based Proteomics** », 2010, University of Lausanne, Switzerland.
- **Large-scale protein purification**: 3 months training in the « Laboratoire d’enzymologie et biologie structurale », 2009, Gif sur Yvette, France. Supported by an EMBO short term fellowship.
- **Comparative Proteomic analysis by 2D gel electrophoresis**: 1 month training, 2007, in Dominique Job Lab, CNRS-BAYER CROPSCIENCE, Lyon, France.

Skills

Lab skills

- Biochemistry (protein extraction, recombinant protein production, electrophoresis, large scale protein purification by chromatography, immunoprecipitation, phosphorylation assays, cells fractionation...).
- Molecular Biology (cloning, site directed mutagenesis, qPCR...).
- Plant manipulation: crosses, Agrobacterium-mediated transformation.
- Plant physiology studies, Genetics, Microbiology.
- IT skills (Office, Photoshop, Illustrator, ImageJ, basics of R).

Communication

- Oral and written reports
- Students supervising and management
- Organisation of seminars

Languages

- French: mother tongue
- German: scholar
- English: fluent

Responsibilities

From 2014, group leader (“Chloroplast biogenesis”, 1 Master student, 1 PhD student)

2012 – 2013, supervising of a lab technician.

2008-2012 Students supervising: one in bachelor, two in master 1, and one in master 2 levels.

2011 – 2012, Co-chair of the Gordon Research Seminar “Photosensory Receptors and Signal Transduction”, Galveston, Texas (USA), 21-22 Janvier 2012.

2008 – 2011, Active member of the Scientific and Social committees of CAOS (CIG Association of Scientists), Lausanne.

2004 – 2007, Students representative of the lab « Plastid and Cell differentiation», Grenoble, France.

Scientific popularization

Since 2007, Animation during « les portes ouvertes de l’UNIL », University of Lausanne, Switzerland

2006 – 2007, Animation during « la Fête de la science », University of Grenoble, France

2005 – 2007, Editing committee member of « Le Gluon », Grenoble, France

Miscellaneous working experiences

2000-2001, Students helper, association Handisup', Nantes, France

1999-2000, Saleswoman of clothes, Nantes, France

1998, Pizzaiola, Arcachon, France

Sports and leisure

Skiing, snowboarding, hiking, travelling, playing the piano

Scientific Communications

Publications

- T. Hohm*, E. Demarsy*, C. Quan, L. Allenbach Petrolati, T. Preuten, T. Vernoux, S. Bergmann, C. Fankhauser, **2014**, “Plasma membrane H⁺-ATPase regulation is required for auxin gradient formation preceding phototropic growth”, **Mol Syst Biol.**, 10(9):751
- E. Demarsy*, A.M. Lakshmanan* and F. Kessler, **2014**, “Border control: selectivity of chloroplast protein import and regulation at the TOC-complex”, **Front. Plant Sci.**, 5:483
- B. Willige, S. Ahlers, M. Zourelidou, I. Barbosa, E. Demarsy, M. Trevisan, P.A. Davis, M.R. Roelfsema, R. Hangarter, C. Fankhauser, C. Schwechheimer, **2013**, “D6PK AGCVIII Kinases Are Required for Auxin Transport and Phototropic Hypocotyl Bending in Arabidopsis”, **Plant Cell**, 25(5):1674-88
- E. Demarsy*, I. Schepens*, K. Okajima, M. Hersch, S. Bergmann, J. Christie, K. Shimazaki, S. Tokutomi, C. Fankhauser, **2012**, “Phytochrome Kinase Substrate 4 is phosphorylated by the phototropin 1 photoreceptor”, **EMBO J.**, 31(16):3457-67
- E. Demarsy, F. Buhr, E. Lambert, S. Lerbs-Mache, **2012**, “Characterization of the plastid-specific germination and seedling establishment transcriptional programme”, **J. Exp. Bot.**, 63(2):925-39
- Z. Ding, C.S. Galván-Ampudia, E. Demarsy, L. Langowski, J. Kleine-Vehn, Y. Fan, M.T. Morita, M. Tasaka, C. Fankhauser, R. Offringa, J. Friml, **2011**, “Light-mediated polarization of the PIN3 auxin transporter for the phototropic response in Arabidopsis”, **Nat. Cell Biol.**, 13(4):447-52
- E. Demarsy, C. Fankhauser, **2009**, “Higher plants use LOV to perceive blue light”, **Curr. Opin. Plant Biol.** 12: 69–74
- J. Azevedo, F. Courtois, M.A. Hakimi, E. Demarsy, T. Lagrange, J.P. Alcaraz, P. Jaiswal, L. Maréchal-Drouard, S. Lerbs-Mache, **2008**, “Intraplastidial trafficking of a phage-type RNA polymerase is mediated by a thylakoid RING-H2 protein”, **PNAS**, 105(26): 9123-8
- F. Courtois, L. Merendino, E. Demarsy, R. Mache, S. Lerbs-Mache, **2007**, “Phage-type RNA Polymerase RPOtmp transcribes the *rrn* operon from the PC promoter at early developmental stages in Arabidopsis”, **Plant physiol.**, 145(3): 712-721
- E. Demarsy, F. Courtois, J. Azevedo, L. Buhot and S. Lerbs-Mache, **2006**, “Building-up of the plastid transcriptional machinery during germination and early plant development”, **Plant Physiol.**, 142 : 993-1003
- P. Simier, P. Delavault, E. Demarsy, J. B. Pouvreau, K. Pageau, B. Le Bizec, A. Fer and P. Thalouarn, **2004**, “Characterization of an unusually-regulated gene encoding Asparagine Synthetase in the parasitic plant *Striga hermonthica*”, **Physiol. plantarum**, 123: 9-20

Oral Communications

- **Interview for a Professorship Position, Geneva, Switzerland, 2013**, “At the crossroads of Plant Growth Regulation : Roles of PM-H⁺-ATPases?”
- **LS2 annual meeting (USGEB), Zürich, Switzerland, 2013**, “Importance of apoplastic pH regulation during phototropism”
- **Changins meeting, 2012**, “Phytochrome Kinase Substrate 4 is phosphorylated by the phototropin 1 photoreceptor”
- **TriNational Arabidopsis Meeting, Lausanne, Switzerland, 2012**, “Phytochrome Kinase Substrate 4 is phosphorylated by the phototropin 1 photoreceptor”
- **Gordon Research Conference, “Photosensory Receptors and Signal Transduction”, Il Ciocco, Barga, Italy, 2010**, “PKS4 phosphorylation can modulate hypocotyl phototropism”

Posters

- **International Symposium Plant Photobiology, Edinburgh, Scotland, 2013**, E.Demarsy, T.Hohm, C. Quan, S. Bergmann, C. Fankhauser “Importance of apoplastic pH regulation during phototropism”
- **International Symposium Plant Photobiology, Pékin, Chine, 2011**, E.Demarsy, I. Schepens, C. Fankhauser, “Phot1-dependent and phytochrome-regulated PKS4 phosphorylation modulates phototropism in Arabidopsis”
- **Keystone symposium, “Plant Sensing, Response and Adaptation to the Environment”, Big Sky, USA, 2009**, E. Demarsy, I. Schepens, C. Fankhauser, “Are PKS Phototropin Kinase Substrates ?”
- **XV FESPB Congress, Lyon (France), 2006**, E. Demarsy, F. Courtois, J. Azevedo, L. Buhot and S. Lerbs-Mache, “Building-up of the plastid transcriptional machinery during germination and early plant development”