

# GAËLLE CASSIN-ROSS

## EDUCATION

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### University of Sciences, Montpellier, France

- PhD degree in Plant Physiology and Biochemistry with honors (Dec. 2008)
- Master degree in Integrative Plant Biology with honors (July 2005)

### University of Denis Diderot, Paris, France

- Bachelor degree in Cell Biology and Plant Physiology with honors (July 2004)
- Associate degree in Biology (July 2002)

## RESEARCH EXPERIENCE

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### Lab manager (April 2015–present)

Plant Research Laboratory, Michigan State University, East Lansing, Mich.

Mentors: Sheng Yang He, PhD

### Postdoctoral Research Associate (April 2009–Oct. 2014)

Plant Research Laboratory, Michigan State University, East Lansing, Mich.

Research topics: Peroxisomal proteomes in etiolated seedlings and senescent leaves in Arabidopsis  
Systematic phenotypic analysis of mutants of novel peroxisomal genes in Arabidopsis  
Characterization of novel peroxisomal proteins in germination and pathogen response

Mentors: Jianping Hu, PhD

### Graduate student (Sept. 2005–Dec. 2008)

Biochemistry and Plant Molecular Physiology Laboratory, INRA, Montpellier, France

Doctoral thesis: Role of nicotianamine in iron homeostasis and characterization of its potential transporters in Arabidopsis

Mentors: Catherine Curie, PhD and Pierre Czernic, PhD

### Graduate student (Jan. 2005–July 2005)

Biochemistry and Plant Molecular Physiology Laboratory, INRA, Montpellier, France

Master thesis: Role of nicotianamine in iron homeostasis

Mentor: Pierre Czernic, PhD

### Undergraduate student (June 2003–Aug. 2003)

Institute of Plant Biology, CNRS, Gif-sur-Yvette, France

Research topic: Characterization of GLUTATHIONE REDUCTASE1

Mentor: Graham Noctor, PhD

## TECHNICAL SKILLS

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- Plant physiology, genetics and molecular biology.

- High Performance Liquid Chromatography-Mass Spectrometry (HPLC-MS), Atomic Absorption Spectroscopy (AAS) and Gas Chromatography- Flame Ionization Detector (GC-FID).
- Isolation of plant organelles.
- Plant pathology: callose deposition, isolation, incubation and inoculation of bacterial pathogen in Arabidopsis, quantification of bacteria by Fluorescence Assisted Cell Sorting (FACS).
- Microscopy: staining, sectioning, light and confocal laser scanning microscopy (CLSM).
- Acquisition, processing and analysis of large data sets, image analysis with ImageJ and Photoshop, common statistical tools; Microsoft® Office; Endnote, Scaffold, basic programming.

## PUBLICATIONS

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1. **Cassin-Ross G** and Hu J. Systematic phenotypic screen of Arabidopsis peroxisomal mutants identifies proteins involved in  $\beta$ -oxidation. **Plant Physiology** (*in press*)
2. **Cassin-Ross G** and Hu J (2014) A simple assay to identify peroxisomal proteins involved in 12-oxo-phytodienoic acid metabolism. **Plant Signaling & Behavior** 9:e29464.
3. Quan S\*, Yang P\*, **Cassin-Ross G\***, Kaur N\*, Switzenberg R, Aung K, Li J, Hu J (2013) Proteome analysis of peroxisomes from etiolated *Arabidopsis* seedlings reveals novel and plant-specific proteases involved in  $\beta$ -oxidation and development. **Plant Physiology** 163(4):1518-1548.  
\*equal contribution
4. **Cassin G**, Mari S, Curie C, Briat JF, Czernic P (2009) Increased sensitivity to iron deficiency in Arabidopsis thaliana overaccumulating nicotianamine. **Journal of Experimental Botany** 60(4):1249-59.
5. Curie C, **Cassin G**, Couch D, Divol F, Higuchi K, Le Jean M, Misson J, Schikora A, Czernic P, Mari S. (2009) Metal movement within the plant: contribution of nicotianamine and yellow stripe 1-like transporters. **Annals of Botany** 103(1):1-11.

## PRESENTATION AT SCIENTIFIC MEETINGS

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1. **Open European Peroxisome Meeting (Dijon, France) – July 2012.**  
**Cassin G**, Hu J. A systematic analysis of mutants of peroxisomal genes in Arabidopsis reveals novel proteins involved in germination and pathogen response.
2. **International Conference on Plant Peroxisome Research (Minneapolis, USA) – Aug 2011.**  
**Cassin G**, Hu J. Systematic phenotypic analysis of mutants of novel peroxisomal genes in Arabidopsis.

## POSTERS

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1. **Open European Peroxisome Meeting (Dijon, France) – July 2012**  
**Cassin G**, Kremer J, He SY, Hu J. A systematic analysis of mutants of peroxisomal genes in Arabidopsis reveals novel proteins involved in pathogen response.
2. **International Conference on Plant Peroxisome Research (Minneapolis, USA) – Aug 2011**

- **Cassin G**, Hu J. A systematic analysis of mutants of peroxisomal genes in Arabidopsis reveals novel proteins involved in germination.
- Phee BK, **Cassin G**, Hu J. Identification and functional elucidation of peroxisomal proteins from Arabidopsis senescent leaves.

**3. ASPB Plant Biology (Minneapolis, USA) – Aug 2011.**

- **Cassin G**, Hu J. Systematic phenotypic analysis of mutants of novel peroxisomal genes in Arabidopsis.
- Phee BK, **Cassin G**, Hu J. Identification and functional elucidation of peroxisomal proteins from Arabidopsis senescent leaves.

**4. ASPB Plant Biology (Montreal, Canada) – Aug 2010.**

**Cassin G**, Hu J. Systematic phenotypic analysis of mutants of novel peroxisomal genes in Arabidopsis.

**5. XIV International Workshop Plant Membrane Biology (Valencia, Spain) – June 2007.**

**Cassin G**, Mari S, Curie C, Briat JF, Czernic P. Role of nicotianamine in iron homeostasis and characterization of its potential transporters.

**6. 13th International symposium on Iron Nutrition and Interactions in Plants (Montpellier, France) – July 2006**

**Cassin G**, Mari S, Briat JF, Czernic P. Role of nicotianamine in iron homeostasis

**CONTRIBUTION TO THE ACADEMIC AND SCIENTIFIC COMMUNITY**

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Service position

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| 2012–2013 | Postdoctoral Research Associate representative at the Academic Personnel Council<br>Plant Research Laboratory, Michigan State University, East Lansing, MI. |
| 2012–2013 | Postdoctoral mentor in Science Career Insider (SCI) program<br>Michigan State University, East Lansing, MI  |

Society membership

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| 2009–present | American Society of Plant Biologists (ASPB)                |
| 2014-present | American Association for the Advancement of Science (AAAS) |