

Towards an integrative modeling approach for peach ideotype design adapted to sustainable agriculture

Bénédicte Quilot-Turion

► **To cite this version:**

Bénédicte Quilot-Turion. Towards an integrative modeling approach for peach ideotype design adapted to sustainable agriculture. 2. trilateral INUPRAG symposium, Umea Plant Science Centre (UPSC). SWE., Jun 2018, Barcelone, Spain. hal-02791337

HAL Id: hal-02791337

<https://hal.inrae.fr/hal-02791337>

Submitted on 5 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Monday 4th of June, 2018

8:45 – 9:15 Registration

9:15 – 9:30 Welcome introduction

José Luis Riechmann, ICREA Research Professor. Director of CRAG

Catherine Bellini, Professor, INRA (Institut Jean-Pierre Bourgin) & Umeå University (Umeå Plant Science Centre)

Session 1: Interactions with the Environment

Chair: Ignacio Rubio (CRAG)

9:30 – 10:00 **Judith Felten** (UPSC, Umeå, Sweden)

Deciphering the molecular mechanisms behind root growth attenuation and fungal root invasion during ectomycorrhiza formation

10:00 – 10:30 **Claire Veneault-Fourrey** (INRA Nancy/Lorraine University, France)

Controlling phytohormone-signaling in mutualistic interaction between trees and fungi (Populus-Laccaria ectomycorrhiza)

10:30 – 11:00 **Benedicte Albrechtsen** (UPSC, Umeå, Sweden)

Long lasting defence traits in P. tremula – do they exist? A study of the Swedish aspen genets and associated organisms grown in varied environments.

11:00 – 11:30 Coffee break*

11:30 – 12:00 **Juan José López-Moya** (CRAG, CSIC, Barcelona, Spain)

From the regulation of gene expression to ecology: the unexpected impact of mixed infections of plant viruses

12:00 – 12:30 **Núria Sánchez-Coll** (CRAG, Barcelona, Spain)

Regulation of pathogen-triggered programmed cell death in plants

12:30 – 13:00 **Stephane Ravanel** (INRA, PCV, Grenoble, France)

Plant responses to heavy metal stress

13:00 – 14:00 Lunch*

14:00 – 14:30 **Graham Noctor** (IPS2 (INRA/CNRS/Paris-Saclay Univ.), Orsay, France)

Climate change, CO₂ levels, and plant defense: the metabolic and redox angles

Session 2: Physiology, Metabolism and Signaling

Chair: Catherine Bellini (INRA & UPSC)

14:30 – 15:00 **Alizée Malnoë** (UPSC, Umeå, Sweden)

Molecular players of sustained energy dissipation in plants

15:00 – 15:30 **Giovanni Finazzi** (INRA, PCV, Grenoble, France)

Multilevel regulation of photosynthetic capacity in vivo

15:30 – 16:00 Coffee break*

16:00 – 16:30 **Åsa Strand** (UPSC, Umeå, Sweden)

Redox regulation of PEP activity during seedling establishment in Arabidopsis thaliana

16:30 – 17:00 **Albert Ferrer** (CRAG, UB, Barcelona, Spain)

Beginning to unravel the role of conjugated sterol metabolism in tomato

17:00 – 17:30 **Samantha Vernhettes** (INRA, IJPB, Versailles, France)

Signaling pathways to control the cell wall integrity during development and pathogen attack

17:30 – 18:00 **David Caparrós** (CRAG, Barcelona, Spain)

Perturbations of cell walls in maize mutants lacking lignin methylases

*All meals are funded by the "Center of Excellence Severo Ochoa" Award (SEV-2015-0533)

Tuesday 5th of June, 2018

Session 3: Genomic, Metagenomic, Genome Evolution, Natural variation

Chair: **Maria José Aranzana** (CRAG)

9:30 – 10:00 **Valerie Geffroy** (INRA, IPS2, Orsay, France)

How plants cope with NLR resistance cost

10:00 – 10:30 **Jordi Garcia-Mas** (CRAG, IRTA, Barcelona, Spain)

Genetic dissection of fruit quality traits in melon

10:30 – 11:00 **Stefan Jansson** (UPSC, Umeå, Sweden)

Natural variation in aspen

11:00 – 11:30 **Coffee break***

11:30 – 12:00 **Laura Botigué** (CRAG, Barcelona, Spain)

How can ancient genomes contribute to the study of the domestication process?

12:00 – 12:30 **Jerôme Salse** (INRA, GDEC, Clermont-Ferrand, France)

Deciphering plant evolution through ancestral genome reconstruction

Session 4: Kempe Foundation Fellowships

12:30 – 13:00 Presentation of the awarded Kempe Foundation postdoctoral fellowship projects

Catherine Bellini, Professor, INRA (Institut Jean-Pierre Bourgin) & Umeå University (Umeå Plant Science Centre)

13:00 – 14:00 **Lunch***

Session 5: Quantitative Genetics, Breeding

Chair: **Rishikesh Bhalerao** (UPSC)

14:00 – 14:30 **Rosario Garcia-Gil** (UPSC, Umeå, Sweden)

Genome wide association analysis (GWAS) of growth and wood quality in Norway spruce

14:30 – 15:00 **Harry Wu** (UPSC, Umeå, Sweden)

Genomic selection in Norway spruce

15:00 – 15:30 **Véronique Jorge** (INRA, Unité BioForA, Orléans, France)

Survey of genetic diversity in European Populus breeding programs

15:30 – 16:00 **Coffee break***

16:00 – 16:30 **Iban Eduardo** (CRAG, IRTA, Barcelona, Spain)

Whole genome based strategies for peach breeding

16:30 – 17:00 **Bénédicte Quilot-Turion** (INRA, GAFL, Avignon, France)

Towards an integrative modeling approach for peach ideotype design adapted to sustainable agriculture

17:00 – 17:30 **Amparo Monfort** (CRAG, IRTA, Barcelona, Spain)

Genetic Analysis of Fruit Quality in strawberry

17:30 – 19:00 **Poster Session (with coffee/appetizers) & (optional) visit to CRAG**

Wednesday 6th of June, 2018

Session 6: Cell Biology, Signaling and Development

Chair: **Ove Nilsson** (UPSC)

9:00 – 9:30 **Paloma Mas** (Crag, CSIC, Barcelona, Spain)

The Arabidopsis circadian clock: studies on organization and function

9:30 – 10:00 **Markus Schmid** (UPSC, Umeå, Sweden)

*Integration of flowering time signals in *A. thaliana**

10:00 – 10:30 **Chloe Zubieta** (INRA, IBB Grenoble, France)

SEPALLATA3 - The role of tetramerisation and cooperative binding in flower development

10:30 – 11:00 **Patrick Laufs** (INRA, IJPB, Versailles, France)

*The ins and outs of leaf margin morphogenesis in *Arabidopsis**

11:00 – 11:30 Coffee break*

11:30 – 12:00 **María Lois** (Crag, CSIC, Barcelona, Spain)

Deciphering SUMO conjugation in plants

12:00 – 12:30 **Catherine Rameau** (INRA, IJPB, Versailles, France)

Evolution of strigolactone functions and signaling

12:30 – 13:00 **Ana Caño-Delgado** (Crag, CSIC, Barcelona, Spain)

Brassinosteroids-mediated metabolic signature confers drought resistance without impacting plant growth

13:00 – 13:15 Closing Remarks

13:15 – 14:30 Lunch*

Social dinner

For the speakers and those assistants to the meeting who asked for it in the registration form, a social dinner will take place on Monday, 4th June, at 21:00 at the Flamant Restaurant.

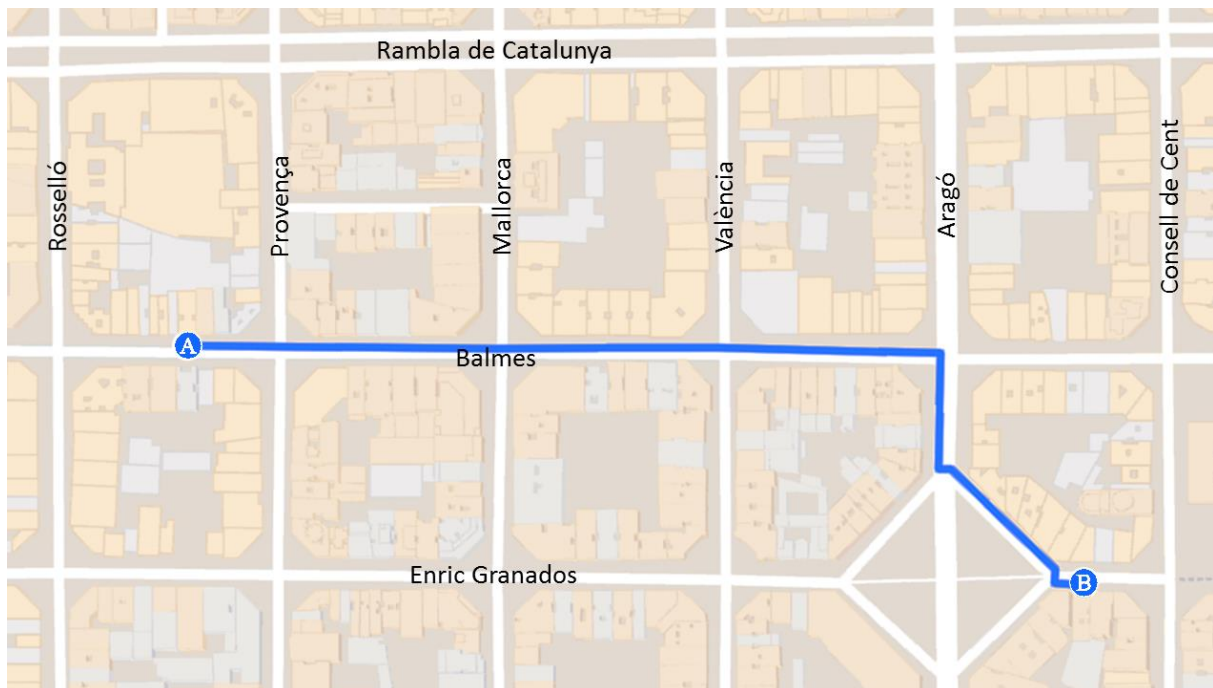
How to get to the Flamant Restaurant

Address: Carrer Enric Granados, 23, 08007 Barcelona.

The Flamant Restaurant is located at the city centre of Barcelona and it can be reached by public or private transport.

By public transport, the best option is to take a train – *Line S2* (Sabadell-Barcelona) or *Line S6* (Universitat Autònoma-Barcelona) – from the *Universitat Autònoma* station to the *Provença* station. The journey time from the UAB Campus is about 30 minutes, and trains depart approximately every 10 minutes in rush hour and every 20 minutes in valley hours. You will have to purchase a 2-zone train ticket.

Once at the *Provença* station (A), you can get to the Flamant Restaurant (B) by walking 7 minutes.



A Provença train station; B Flamant Restaurant