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

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## 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, CO<sub>2</sub> 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

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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

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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

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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

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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, 4<sup>th</sup> June, at 21:00 at the Flamant Restaurant.

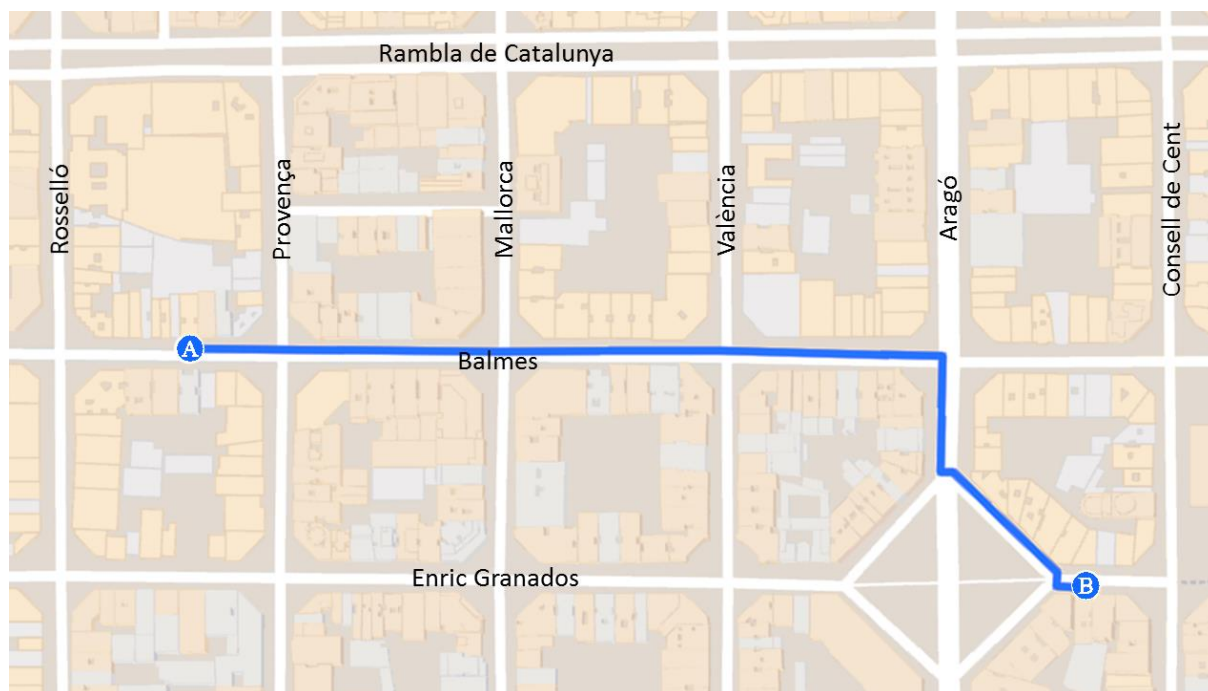
### How to get to the Flamant Restaurant

**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