

## Scientific Program of Systems Biology Meeting

- Sept 3 **5 pm** **Registration at IBB PAN, Pawinskiego 5a, Warsaw**
- 6 pm Welcome address and introductory session
- 6.15-7.00 Gene and pathway discovery in the steroidal alkaloids pathway  
**Asaph Aharoni**
- 7 pm** **Get-together with appetizers and wine at IBB PAS**
- Sept 4 **9 am** **Morning session Chair: Rob Last**
- 9– 9:40 Evaluation and integration of functional annotation pipelines for non-model organisms: the potato genome as a test case.  
**Erik Alexandersson**
- 9:40 – 10:20 Using granger causality, genome-scale metabolic modelling and mass spectrometry- based structural elucidation at the interface of primary and secondary metabolism.  
**Wolfram Weckwerth**
- 10:20 – 10:40** **Coffee break**
- 10:40 – 11:20 Genetics dissection and biochemical reconstruction of plant defensive metabolites in tomato trichomes.  
**Rob Last**
- 11:20 – 12:00 Phenotypic networks in tomato fruit.  
**Ali Fernie**
- 12 am** **lunch at IBB PAS**
- 1 pm** **Afternoon session – Short talks**
- 1- 1.15 Connecting traits to gene functions.  
**Aalt-Jan van Dijk**
- 1.20-1.35A targeted transcriptomic approach enabled the selection of housekeeping genes for expression level normalization in the medicinal plant *Catharanthus roseus*.  
**Teresa Martínez-Cortés**
- 1.40- 1.55 Comparative transcriptomic and metabolomic analysis of ripening tomato fruits facilitates the characterization of the genes responsible for lycoperoside metabolism.  
**Samuel Bocobza**
- 2 – 2.15 The MORPH-R web and software tool for predicting missing genes in biological pathways.  
**David Amar**
- 2.20-2.35 PredictProtein—an open resource for online prediction of protein structural and functional features.  
**Tatyana Goldberg**
- 2.40-2.55 Dolichol vs. polyprenol – how important double bond can be?  
**Adam Jozwiak**

### 3-3.30 coffee break

3:30 2<sup>nd</sup> afternoon session

3.30-3.45 Biosynthesis and Evolution of Betalains in the Caryophyllales Plant Order  
**Guy Polturak**

3.50-4.05 Proteomic analysis of the leaf vacuoles from *Catharanthus roseus* revealed several candidate transporters to alkaloid metabolic fluxes.  
**Sara Bettencourt**

4.10-4.25 Boosting the synthesis of aromatic amino acids as precursors for the production of valuable polyphenol metabolites in flowers and fruits.  
**Moran Oliva**

4.30-4.45 Investigating the role of autophagy in *Arabidopsis* metabolism.  
**Tamar Avin-Witenberg**

4.50-5.05 Mutation in GGPS7 (geranylgeranyl diphosphate synthase 7) in *Arabidopsis* cause gibberelin deficiency in seedlings.  
**Malgorzata Gutkowska**

5.10-5.25 L-Methionine catabolism into S-methyl thioesters in melon fruits: gene identification via a systems biology approach.  
**Itay Gonda**

5.30-5.45 Non-Symbiotic Plant Hemoglobins in Sugar Beet.  
**Nélida Leiva-Eriksson**

### 8.30 Dinner

Sept 5 **9 am Morning session Chair: Ali Fernie**

9:00–9:40 Systems biology of plant signalling response to viral infection  
**Kristina Gruden**

9:40–10:20 A systems view of regulation and messengers  
**Chris Ghering**

### 10:20 – 10:40 Coffee break

10:40 – 11:20 Computational Frameworks for Studying Biological Pathways in Sequenced Plants Species  
**Oren Tzfadia**

11:20 – 11:45 The adjustment of plant cell biology and metabolism to stresses causing senescence and energy deprivation.  
**Gad Galili**

12 am lunch at IBB PAS

1 pm Discussion panel: "Bridging the rift between plant biologists and systems biology"  
Discussants: **Heribert Warzecha, Paul Fraser, Didi Amar, Erik Alexandersson, Oren Tzfadia.**

3 pm Warsaw sightseeing tour (2-3h)