



LEGumes for the Agriculture of TOmorrow

# **LEGATO-EUROLEGUME INTERNATIONAL CONFERENCE**

**27 & 28 SEPTEMBER 2017  
NOVI SAD, SERBIA**

**Advances in grain legume breeding,  
cultivation and uses  
for a more competitive value-chain**



**EUROLEGUME**  
2014-2017



## 27 SEPTEMBRE 2017

08h30 - 08h45 Opening Ceremony

### Session 1. Genetics & Breeding (08h30 - 10h30)

**Co-chairs: Paolo Annicchiarico and Juan Fernández**

08h45 - 09h10 **Timothy Close** (20'+5') Cowpea: a Warm Season Legume and its Genome

09h10 - 09h35 **M. Egea-Cortines** (20'+5') Clock resetting during cowpea seed development. Implications on storage protein

09h35 - 10h00 **P. Madueno /A. Torres** (20'+5') Regulating yield genes in cool-season grain legumes

10h00 - 10h15 **C. Vaz Patto /A. Torres** (12'+3') Marker-based selection for low anti-nutritional content in pulses

10h15 - 10h30 **P. Annicchiarico** (12'+3') Genomic selection for production traits in white lupin and pea

10h30 - 11h00 **COFFEE BREAK**

### Session 2. Biotic stress resistances (11h00 - 13h00)

**Co-chairs: Diego Rubiales and Graça Pereira**

11h00 - 11h25 **D. Rubiales** (20'+5') Phenotyping novel resistances to fungal diseases

11h25 - 11h50 **S. Fondevilla** (20'+5') Identification of genes and proteins involved in resistance to *Didymella pinodes* in pea

11h50 - 12h05 **M. Seidenglanz** (10'+5') Searching for resistance to aphids and weevils in peas and faba bean

12h05 - 12h20 **J.C. Sillero** (10'+5') Phenotyping novel resistances to broomrape

12h20 - 12h35 **A. Torres** (10'+5') Orthologs of ascochyta resistance genes in legume crops

12h35 - 12h50 **C. Polanco** (10'+5') MLO homologous genes in legume crops

12h50 - 14h00 **LUNCH**

### Session 3. Enhancing legume quality - novel food & feed (14h00 - 17h00)

**Co-chairs: Carlota Vaz Patto and Ruta Galoburda**

14h00 - 14h25 **Stephanie Mittermaier** (20'+5') Food ingredients from lupins

14h25 - 14h50 **C. Brites** (20' + 5') Improvement of maize bread formulation and fortification with legumes based on consumer preferences

14h50 - 15h10 **M. Bronze /A. Silva** (15'+5') Phenolic content and antioxidant activity of legume accessions from five different species and prediction by FTIR-ATR. Grass pea (*Lathyrus sativus*) as a study case

15h10 - 15h25 **S. Muizniece-Brasava** (12'+3') Innovative legumes-based food products

15h25 - 15h40 **F. Fogelberg** (12'+3') Bean Blue - a faba bean-based blue mould cheese

15h40 - 15h55 **D. Savvas** (12' +3') Cowpea fresh pods, a new legume for the market. Assessing the quality and dietary characteristics of 37 cowpea landraces grown in southern Europe

**5 min. BREAK**

## **27 SEPTEMBRE 2017**

### **Chair: Miguel Rodrigues**

- 16h00 - 16h15** **L. Ferreira** (12'+3') Nutritional valorization of cowpea stovers in animal feeding
- 16h15 - 16h30** **E. Prestlokken** (12'+3') Effect of processing on nutritive value of peas and field beans for ruminants
- 16h30 - 16h45** **E. Armero /F. Moya** (12'+3') Use of *Pisum sativum* (L.) seeds and straw as alternative in feeding of dairy goats
- 16h45 - 17h00** **L. Proskina** (12'+3') Economic gains from the consumption of legumes in broil chicken and dairy cows diets

### **EU vision and perspectives for Research, for food and nutrition security (17h00 - 17h15)**

- 17h00 - 17h15** **Massimo Burioni (Project officer/EC)** FOOD 2030, a new EU policy framework for Research and Innovation to future-proof our food systems

### **Consumer behaviour (17H15-17H40)**

**Maira Dean** (20+5') Grains and claims: consumer perceptions, understandings and intentions to buy

### **Dissemination / Outreach (round table) (17H45-18H30)**

Contributors: Plant Breeders, Food processors, Nutritionists, H2020 project coordinators

### **Show cooking (18H30-19H30)**

## **28 SEPTEMBRE 2017**

### **Session 4. Defining ideotypes root phenotyping & microbial interaction (08h30 - 10h30)**

**Co-chairs: Christophe Salon and Boris Rewald**

- 08h30 - 08h55** **G. Bodner** (20'+5') Model-based prediction of mature pea root systems from seedling root phenotyping information
- 08h55 - 09h20** **R. Metzner** (20'+5') Investigating photoassimilate allocation and development of legume root system, nodules and pods with non-invasive methods
- 09h20 - 09h45** **M. Lepetit** (20'+5') Does the rhizobium partner modulate the capacities of symbiotic pea to compensate a partial water stress?
- 09h45 - 10h00** **G. Marques** (12'+3') Multilocus sequence analysis for the assessment of phylogenetic diversity of rhizobia associated with cowpea (*Vigna unguiculata* (L.) Walp) in Portugal
- 10h00 - 10h15** **D. Savvas** (12'+3') Impact of rhizobia inoculation on cowpea performance under nitrogen or stress

**10h30 - 11h00** **COFFEE BREAK**

### **Session 5. Agronomy (11h00 - 13h00)**

**Co-chairs: Erik Jensen and Līga Lepse**

- 11h00 - 11h25** **Mark Peoples** (20'+5') Inputs of fixed N and soil mineral N benefits derived from legume cropping
- 11h25 - 11h50** **E. Pelzer** (20'+5') Design, assessment and feasibility of legume-based cropping systems according to stakeholders in three regions of Europe
- 11h50 - 12h15** **G. Carlsson** (20'+5') Does a mixture of pea varieties with different leaf morphology improve crop performance?
- 12h15 - 12h30** **S. Dane** (12'+3') Evaluation of legume-strawberry intercropping
- 12h30 - 12h45** **K. Schmidtke** (12'+3') Effects of cover cropping and tillage system on weed infestation, yield formation and N accumulation of organic pea
- 12h45 - 13h00** **G. Ntasi** (12'+3') Soil N availability and crop performance in a 3-year rotation of pea, faba bean and cabbage

**13h00 - 14h00** **LUNCH**

**Poster session including Flash Talks (14h00 - 15h30)**

**Refreshments (served with posters) (15h30 - 16h00)**

## **28 SEPTEMBRE 2017**

### **Session 6. Climate changes, stress adaptation & mitigation measures (16h00 - 18h00)**

**Co-chairs: Steve Belcher and Eduardo Rosa**

- 16h00 - 16h25** **Thomas Nemecek** (20'+5') Environmental impacts of the production and use of grain legumes
- 16h25 - 16h50** **V. Biarnes /C. Lecomte /J. Poslusna** (20'+5') Gene x Environment interactions in a European GL trials network
- 16h50 - 17h15** **C. Henriot /G. Petrovic** (20'+5') Dissection of pea responses to drought during vegetative growth and seed filling
- 17h15 - 17h30** **M. Carvalho** (12'+3') - Effects of drought stress in cowpea: a gene expression analysis during seed development
- 17h30 - 17h45** **H. Trindade** (12'+3')- Emissions of greenhouse gases in legume-cereal crop rotations in the north of Portugal

### **Round table and conclusion (18H00-19H00)**

Contributors: SYMBION, tropical, mediterranean and boreal region agronomists,  
H2020 coordinators: LEGVALUE, REMIX

**Flash talks (14H00-15H30)**

Sessions	Names and titles
1	<p><b>M. Hybl</b> The genomic and phenotypic evaluation of chromosome segment substitution lines of wild pea (<i>Pisum fulvum</i>) to widen genetic diversity of pea crop</p> <p><b>M. Książkiewicz</b> Genetic diversity in white lupin</p> <p><b>M. Carvalho</b> Illumina Cowpea iSelect Consortium Array used to evaluate the genetic diversity and population structure of Iberian Peninsula cowpeas</p>
2	<p><b>A. Cimmino</b> Identification of constitutive metabolites in pea responsible for antixenosis and antibiosis against <i>Bruchus pisorum</i></p>
3	<p><b>P. Gomez</b> Quality changes of fresh and then microwaved minimally processed faba seeds</p> <p><b>L. Strauta</b> The nutritional value of legume based extruded products</p> <p><b>L. Papa</b> - Chemical characterization and dry matter digestibility of some varieties of faba beans and their straw.</p>
4	<p><b>L. Lepse</b> - Influence of Rhizobium and AMF inoculation on Faba bean yield and protein content</p> <p><b>A. Senberga</b> - Rhizobia and Mycorrhiza Fungi Inoculum Evaluation for the Pea and Bean Growth Promotion</p>
5	<p><b>N. Carton</b> - Lupin-cereal intercropping to improve weed control in lupin: interactions dynamics and performances.</p> <p><b>M. Seidenglanz</b> - The effect of crop structure on the abundances and distributions of bruchids (<i>Bruchus pisorum</i>) in field peas (<i>Pisum sativum</i>)</p> <p><b>A. Villegas-Fernandez</b> - Faba bean rust and pea powdery mildew management by intercropping with cereals and by cultivar mixtures</p> <p><b>U. Quendt</b> - Demonstration and knowledge transfer network for expanding and improving cultivation and utilisation of field peas and field beans in Germany [DemoNetErBo]</p>
6	<p><b>L. Pecetti</b> Grain and biomass yield of white lupin germplasm under contrasting moisture availability</p>