



**INTERNATIONAL
SYMPOSIUM**
Toulouse, France
February 5-6
2018

**SUNFLOWER
AND CLIMATE
CHANGE**

SCIENTIFIC PROGRAM





DAY 1 Monday February 5th

| | | |
|-------|--|--|
| 8:30 | Welcome coffee (Salle des colonnes) | |
| 9:00 | Conference chair's opening remarks (Salle des pelerins) | |
| 9:05 | Opening keynote on sunflower and climate change Philippe Debaeke (INRA AGIR, Toulouse, FR) <i>Sunflower crop and climate change in Europe: vulnerability, adaptation and mitigation potential</i> | |
| 9:35 | Branislav Dozet et al. (Syngenta) Gold Sponsor <i>Sunflower breeding strategies in relation to climate change</i> | |
| 9:50 |  SESSION 1 (Salle des pelerins) Understanding the genome functioning to adapt sunflower to climate change <i>Chairman : Loren Rieseberg</i> | Keynotes and short lectures Loren Rieseberg (UBC, Vancouver, CA) <i>Genomics of Stress Adaptation in Wild Sunflowers</i> Sariel Hubner (MIGAL Institute, IL) <i>Broadening the view of cultivated sunflower genomic diversity as a mean to enhance adaptation to rapidly changing environments</i> |
| 10:50 | | Refreshments (Salle des colonnes) and posters of session 1 (church) |
| 11:35 | | Keynotes Hélène Badouin (Univ. Lyon, FR) <i>The sunflower genome provides insights into oil metabolism, flowering and Asterid evolution</i> Raquel Chan (University Santa Fe, AR) <i>Sunflower transcription factors in abiotic stress responses as tools to improve performance of different crops</i> |
| 12:45 | Lunch break (Salle des colonnes) | |
| 14:15 | SESSION 2 (Salle des pelerins) Emergent pests and diseases <i>Chairman : Felicity Vear</i> | Keynotes and short lectures Stéphane Muñoz (INRA LIPM, Toulouse, FR) <i>Understanding the mechanisms of the interaction between Orobancha cumana and sunflower for a more sustainable resistance</i> Leire Molinero-Ruiz , CSIC, Cordoba, ES) <i>Recent advances on the characterization and control of sunflower soilborne pathogens under climate change conditions</i> Maria Duca (University Moldova, MD) <i>Influence of the environmental conditions on virulence and distribution of Orobancha cumana Wallr. in the Republic of Moldova</i> Tatiana Vega (University Rosario, AR) <i>Pathogenesis-related (PR) proteins expression during IMI herbicide and ABT xenobiotic treatment in young sunflower roots</i> |
| 15:55 | | Refreshments (Salle des colonnes) and posters of session 2 (church) |
| 16:40 | | Keynotes and short lectures Ruth Heinz (INTA Castelar, AR) <i>Genetics and Genomics applied to disease resistance breeding in sunflower</i> Jun Zhao (University Inner Mongolia, CN) <i>The races type identification and genetic diversity analysis of sunflower broomrape (Orobancha cumana Wallr.) in China</i> Brent Hulke (USDA Fargo, ND, USA) <i>Phomopsis stalk canker disease in North America: correlation with climate and solutions through breeding</i> |
| 17:55 | Closing remarks | |
| 18:00 | Social event: wine tasting (Salle des pelerins) | |
| 19h30 | Cocktail & Gala diner (Salle des colonnes) | |



DAY 2 Tuesday February 6th

| | | |
|-------|--|---|
| 8:30 | Welcome coffee (Salle des colonnes) | |
| 9:00 | Conference chair's opening remarks (Salle des pelerins) | |
| 9:05 | <p>Marie Coque (Biogemma and Euralis) Silver Sponsors <i>Biogemma research to tackle sunflower adaptation to changing environment</i></p> | |
| 9:20 | <p>SESSION 3 (Salle des pelerins)</p> <p>Resilience and stability of production</p> <p><i>Chairman : Roberto Tuberosa</i></p> | <p>Keynotes and short lectures</p> <p>Nicolas Langlade (INRA LIPM, Toulouse, FR) <i>Combined approach of quantitative genetics and crop modelling to understand sunflower tolerance to drought</i></p> <p>Lili Qi (USDA Fargo, ND, USA) <i>Map and sequence-based candidate gene analysis of the male fertility restoration gene Rf5 in sunflower</i></p> <p>Andries Temme (U. of Georgia, Athens, GA, USA) <i>High-throughput and high-effort phenotyping reveal the genetic basis of key traits associated with drought, nutrient and salinity resistance in cultivated sunflower</i></p> |
| 10:40 | | Refreshments (Salle des colonnes) and posters of session 3 (church) |
| 11:25 | | <p>Keynotes and short lectures</p> <p>Christophe Bailly (University Sorbonne Paris, FR) <i>Changes in sunflower seed germination phenology in the context of global warming</i></p> <p>Ivana Imerovski (UBC, Vancouver, CA) <i>Non-invasive methods for biotic stress phenotyping in sunflowers</i></p> <p>Philippe Burger (INRA AGIR, Toulouse, FR) <i>Sunflower outdoor phenotyping facilities in Toulouse</i></p> |
| 12:40 | Lunch break (Salle des colonnes) | |
| 14:15 | <p>SESSION 4 (Salle des pelerins)</p> <p>Predicting production from genes to field</p> <p><i>Chairman : Xavier Pinochet</i></p> | <p>Keynotes and short lectures</p> <p>Brigitte Mangin (INRA LIPM, Toulouse, FR) <i>Genomic prediction is a useful tool to predict sunflower hybrid performances and their stability</i></p> <p>Pierre Casadebaig (INRA AGIR, Toulouse, FR) <i>Predicting sunflower production from traits to fields: application to assessment and recommendation of cultivars</i></p> <p>Jean-Noël Aubertot (INRA AGIR, Toulouse, FR) <i>Modeling damage caused by multiple pests on sunflower under climate change: methodological reflections</i></p> |
| 15:20 | | Refreshments (Salle des colonnes) and posters of session 4 (church) |
| 16:05 |   <p>SESSION 5 (Salle des pelerins)</p> <p>Future of sunflower breeding to adapt varieties to climate change</p> | <p>Short lecture and round table</p> <p>Gerald Seiler (USDA Fargo, ND, USA) <i>Value of Sunflower Crop Wild Relatives' Habitat Diversity for Sunflower in a Changing World</i></p> <p>Fabien Nogué (INRA IJPB, Versailles, FR) <i>Impact of new targeted genome modification techniques (CRISPR-Cas9) on plant breeding</i></p> <p>Nicola Gallai (ENFA, Toulouse, FR) <i>Determinants of Farmers' Choice in Varietal Innovation: a comparative study between French, Hungarian and Bulgarian farmers</i></p> <p>Round table "Future of sunflower breeding to adapt varieties to climate change" animated by Michel Ragot with Sébastien Chatre (RAGT), Gerald Seiler, Fabien Nogué & Nicola Gallai</p> |
| 18:00 | Closing remarks and poster prize (Salle des pelerins) | |



| | |
|---|--|
|  | <p>SUNRISE Project 24 Chemin de Borde Rouge – CS 52627 – 31326 CASTANET-TOLOSAN www.sunrise-project.fr/en Twitter: @SUNRISE_France</p> |
|  | <p>Inra Occitanie-Toulouse 24 Chemin de Borde Rouge – CS 52627 – 31326 CASTANET-TOLOSAN www.toulouse.inra.fr Twitter: @Inra_Tlse</p> |
|  | <p>Terres Inovia 1 avenue Lucien Brétignières – 78850 THIVERVAL-GRIGNON (France) www.terresinovia.fr Twitter: @terresinovia</p> |