



ESOF
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TOULOUSE

9-14 JULY 2018

SHARING SCIENCE:
TOWARDS NEW HORIZONS

PRESS TOUR - 12 July 2018

INRA – French National Institute for Agricultural Research



INRA is Europe's top agricultural research institute and the world's number two centre for agricultural sciences. It brings together more than 8,478 full-time employees including 1,800 researchers in 17 Research Centers. Its ambition, in a global perspective, is to think ahead to give people freedom of choice and contribute to ensuring healthy, quality food, competitive and sustainable agriculture and a preserved and developed environment.

Programme at a Glance :

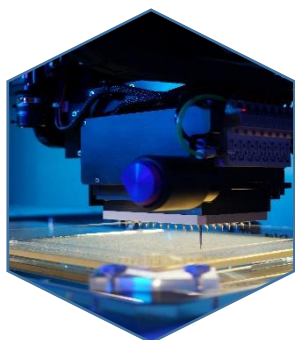
- **12.30 pm - Pick up of participants at the Centre Congrès Pierre Baudis**
Meeting Point : in front of Mercure Hotel, next to Centre Congrès Pierre Baudis
Esplanade Compans Caffarelli, Boulevard Lascrosses, 31000 Toulouse
- **1.15 pm - Country style Buffet and introductions to INRA Occitanie-Toulouse Research Center:**
- **2 pm - High Tech Platforms Tour**
- **5 pm - Transfer back to the Centre Congrès Pierre Baudis**

Press Tour organized with the support of: CNRS



With the contribution of:

- Agri Sud-Ouest Innovation
- Syngenta
- Soltis
- De Sangosse



12.30 pm - Pick up of participants at the Centre Congrès Pierre Baudis

- **Introduction to the agricultural and agribusiness sector in the South West of France:**
First socio-economic sector in Occitany before Aeronautics and space, the regional agrifood sector gathers a wide variety of agricultures and food products and is one of the most important European region for Protected Geographical Indication products. Several European agrifood leaders are situated in Occitany and the research/innovation activity between public and private organisms is creating the future agrifood businesses, in line with the European challenges: economic efficiency, environmental protection and social development.
 - Mr. Laurent Augier – Scientific manager of Agri Sud-Ouest Innovation, French agrifood chains innovation cluster

1.15 pm - Country style Buffet and introductions to INRA Occitanie-Toulouse Research Center:

INRA Occitanie-Toulouse Centre welcome speech :

With more than 1000 researchers, research engineers and technicians, the INRA Occitanie-Toulouse Centre accounts for approximately 10% of publications and almost 12% of the institut patents. The Centre is a hub of pluridisciplinary scientific activity within a rich and diversified academic partnership : more than 12 joint research unitis, sharing technological platforms and experomental units.

- Dr. Michele Marin – President of the Occitanie-Toulouse Research Center and Regional INRA Delegate

INRA: Building a future with healthy and quality food production in a competitive and eco-friendly environment

Health of plants and yields of cultures are threatened by a number of environmental variations and constraints. Conversely, modern agriculture, through the massive use of pesticides and fertilizers, is little respectful of the environment. At LIPM, researchers work with the ultimate goal to optimize agrosystems, studying interactions of plants with pathogenic microorganisms and parasitic plants, but also beneficial associations of plants with symbiotic microorganisms. The impact of stressful environments of abiotic origin (such as variations of temperature, hydric status...) on plants is also under focus.

- Dr. Claude Bruand – Microbiologist, INRA Research Director and Director of LIPM (Laboratory of Plant-Microbe Interactions)

- **Introduction to the CNRGV (French Plant Genomic Resources Center): a world rare infrastructure dedicated to plant genomics**

CNRGV is a unique center in France and very rare worldwide. It aims to generate, conserve, manage and distribute genomic collections and to provide high throughput molecular tools to the international scientific community. Genome exploration is one of the strategic approaches of choice to understand plant evolution and adaptation. By providing innovative and relevant support, CNRGV develop genomics projects with international collaborators. The infrastructure holds more than 22 Million clones coming from 450 genomic libraries of model and crop plants.

- Dr. Hélène Berges – Molecular Biologist- Genomicist, Manager and Research Program Director of CNRGV – INRA
- Dr. Jan Gielen, Syngenta Seeds Research, Syngenta Seeds

2 pm - High Tech Platforms Tour:

- **TPMP (Toulouse Plant-Microbe Phenotyping Platform):**

TPMP is a unique automated purpose-built construction with glasshouses, robots and instruments which aims to understand and predict the adaptation of plants in interactions with their biotic environment, to global changes. This can be pathogenic or beneficial interactions. Its robots Phenopsis and Phenoserre make it possible to answer to strong demand of high throughput phenotyping (observation of the whole of the characters of an organism).

- Dr Nemo Peeters, Plant Pathologist, INRA Research Director, researcher at LIPM (INRA-CNRS research unit) and director of the phenotyping facility [TPMP](#)
- Mr. Thomas Rey – Biofungicide Research Program manager at De Sangosse

- **Heliaphen Platform: scanning plants under various drought scenarios**

Heliaphen is a world unique outdoor high-throughput automated phenotyping platform of 600 m². It is design to integrate genetics and crop modeling. The discovery of the function of genes of interest to adapt agriculture relies on the genome's knowledge but first requires a precise description of its expression on the phenotype: plant characteristics.

Here is a world unique robot moving about 1300 plants, and collecting data that allow researchers to identify genes alleviating the drought impact on seed production in sunflower. Thanks to this facility, they identify how genes control plant responses to drought and estimate eco-physiological model parameters of cultivated varieties and research hybrids in order to define ideotypes adapted to different climatic scenarios at the continental scale.

- Dr. Nicolas Langlade – Biologist, INRA Research Director and Researcher at [LIPM](#) (INRA-CNRS research unit) and Director of the phenotyping facility Heliaphen
- Mr. Benoît Bley – Sunflower Breeder at SOLTIS-EURALIS

- **Agrophen: a bird-eye view over crops**

Agrophen is an open field high-throughput phenotyping platform (150-200 microplots/hour). The new robots Phenomobile and Phenodrone drive or fly over the farm with their multispectral cameras and laser LiDARs to collect data from large crop species under field conditions. This allows researchers to characterize genotypes and to define new ideotypes for agro-ecological cultural systems.

- Mr. Gilles Tison – Manager INRA Experimental Unit
- Mr. Philippe Burger – Engineer and Technical Coordinator INRA Agrophen Platform

5 pm - Transfer back to the Centre Congrès Pierre Baudis