2023 ERIAFF ANNUAL CONFERENCE

Green and Climate Transition Plans in agriculture and in agroforestry systems

Group Food (& Wine) – *Study Visit Programme*

NOI Techpark

Monday, 22/05/2023

14:00-16:00

Main contacts: Matteo Scampicchio and Emanuele Boselli, Free University of Bozen-Bolzano, Peter Robatscher and Alberto Ceccon, Laimburg Research Centre

Food Lab (Matteo Scampicchio, Free University of Bozen-Bolzano)
The main focus is the extraction, formulation and testing of natural antioxidants ingredients in food formulations. The visit will show you several pilot plants, like supercritical carbon dioxide extraction, hot melt extrusion, high-pressure microfluidics, and many analytical systems, like chromatography, spectroscopy, calorimetry, and NMR.

OenoLab (Emanuele Boselli, Free University of Bozen-Bolzano)
OenoLab is the research laboratory in oenology and technologies for the production of alcoholic beverages (grapes, musts, wines, spirits, ingredients, materials and packaging solutions) at unibz (head Prof. Emanuele Boselli). In addition to the basic analysis of wines and beverages, the team has at its disposal high-resolution analytical techniques and sensory tests to assess the effects of new technologies on the quality of finished products, aspects of typicality and authenticity, including their safety of use (stability of products during storage or transport).

The Micro4Food platform (Marco Gobbetti and Raffaella Di Cagno, Free University of Bozen-Bolzano)
Micro4Food is a platform that joins different research fields related to food sciences: microbiology, food processing, biotechnology and omics technologies.
The platform covers two-research areas: (i) diet – human axis; and (ii) food fermentations.
The research on "diet – human axis" aims at shaping and assembly the human gut microbiome in response to dietary habits and specifically tailored fermented functional foods. The research on "food fermentations" aims at shaping and assembly of the food microbiomes for innovative fermentation processes focused on the development of new functional food with improved nutritional properties, on the preservation of food matrices, and on recycling of food by-products.
Our facilities include 6 labs and three pilot plants specifically tailored for dairy, baked good and plant fermentation, located at the NOI Techpark.

Laboratory for Flavours and Metabolites (Peter Robatscher, Laimburg Research Centre)
Using modern chemical methods, the experts analyse the naturally occurring substances present in agricultural products (apples, apple juices, grapes, wines, cheese, milk) and plant organs (leaves, roots, wood) to determine their quality, characteristics, and purity. The lab is equipped with state-of-the-art laboratory instruments, such as GC-MS (Gas Chromatography coupled with Mass Spectrometry) and LC-MS (Liquid Chromatography coupled with Mass Spectrometry) and uses common analytical techniques. It also has so-called high-resolution mass spectrometers to identify new, unknown substances as well as a Near Infrared device suitable for destruction-free analysis.

Laboratory of NMR Spectroscopy (Alberto Ceccon, Laimburg Research Centre)
Research activities of the Laboratory of NMR Spectroscopy are mainly focused on the qualitatively and quantitatively characterization of a variety of molecules (from small molecules to large proteins present in food and biological matrices) using high-resolution NMR methods. NMR Spectroscopy provides a fast and extremely powerful method for "fingerprint" identification of compounds in complex matrices as well as a tool for determining structure and dynamics of low-, intermediate-molecular weight biomolecules. Our research is primarily focused on the field of food chemistry and natural products of our territory, by exploiting NMR spectroscopy as a powerful method in the field of food quality, authenticity and typicity purposes, and determination of origin of agricultural products.
The Laboratory of NMR Spectroscopy hosts a 400 MHz and a 600 MHz Managed together with Free University of Bozen-Bolzano, the laboratory is located at NOI Techpark Südtirol/Alto Adige at Bolzano.

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Tuesday, 23/05/2023

14:30 - 17:30

Forst Company

https://www.forst.it/en/forst-world/

Main contact: Matteo Scampicchio, Free University of Bozen-Bolzano

Company visit:

FORST: 20 people max (2 groups of 20 people: 14:30 – 14:30 and 15:30-16:30)

For generations, FORST beer has been committed to preserving the pleasure of the art of brewing with passion and skill, offering FORST specialties which have always maintained the highest standards of quality.
A company with close links to its local area, to its values and to its traditions, keeping a deep respect for nature and the environment.
The wish to preserve brewing culture and the attention to detail that can be sensed throughout the company are also evident in the numerous FORST pubs, where beer enthusiasts can experience them in a convivial atmosphere.
With close links to the territory and its people, FORST beer is committed to the community with a strong sense of social responsibility, which takes shape in its support of numerous organisations and associations throughout Italy.