Exploration of biological resources

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The Bioresources Unit at the AIT Austrian Institute of Technology focuses on developing technologies and tools to improve the use of plant and microbial resources, as well as enhance the detection of airborne and environmental pathogens. This talk will provide an overview of current research aimed at supporting sustainable crop production, improving pest control, and advancing microbe-based approaches for food and environmental quality. Several ongoing projects will be presented to illustrate the Unit's approach and recent progress in these areas.

- Microbes-4-Climate (<u>https://microbes4climate.eu/</u>) aims to deepen the comprehension of the complex relationships among microorganisms, plants, and soil within the framework of climate change.
- CoE Microbiomes Drive Planetary Health (<u>https://www.microplanet.at/</u>) aims to revolutionise microbiome research by bridging the gap between environmental and medical microbiome research to improve planetary health.
- WheatVIZ (<u>https://www.d4agrotech.at/projekte-partnernetzwerk</u>) uses state-ofthe-art technologies and machine learning methods for phenotyping and genotyping to support the breeding process of drought-tolerant winter wheat.
- Microbiomes4Soy (<u>https://microbiomes4soy.eu/</u>) aims to improve the environmental impact of soya bean production, explore the effects of soya bean consumption on the human gut microbiome and contribute to the development of novel fish feeds for the aquaculture sector.
- DOMINO (<u>https://www.domino-euproject.eu/</u>) aims to attribute health benefits to traditional fermented foods, and to develop novel plant-based fermented foods which address the changing societal demands for healthier and more sustainable nourishment.
- Biovexo (<u>https://biovexo.eu/</u>) explores innovative biopesticides, which target the Xylella bacterium.
- MIBIREM (<u>https://mibirem.eu/</u>) develops a unique toolbox for microbiomebased bioremediation.