



Keynote Session	Leading Pilot Facilities for the Bioeconomy (Pilots4U)
Title	CLAMBER R&D Biorefinery as a partner for bioprocess scale-up
Company	CLAMBER R&D Biorefinery
Speaker	Javier Mena Sanz
Keywords feedstock (max 2)	Lignocellulose, wastes
Keywords technology (max 2)	2 nd -generation biorefinery
Keywords End-Product (max 2)	Bioproducts, biofuels
Abstract:	
CLAMBER R&D Biorefinery is a public research centre that hosts a demo-scale second-generation biorefinery located at the centre of Spain and available to any entity interested in scaling up processes related to biomass valorization. This facility is owned by the Regional Institute for Agri-Food and Forestry Research and Development of Castilla-La Mancha (IRIAF), which operates under the Regional Government's Department of Agriculture. The main research topics at CLAMBER are focused on the valorization of agri-food and forestry byproducts: Extraction of high value-added products, 2nd-generation biorefinery: valorization of lignocellulosic byproducts, Bioplastic production, Biogas production, Agricultural biostimulant production. Main CLAMBER equipment includes: • Biomass extraction units with water (1.5m³), organic solvents (2×500L) and supercritical fluid (2×50L) • Steam explosion reactor (400L) • Hydrolyser (2m³) • Fermentation train (4×3L, 2×30L, 1×300L, 1×3,000L, and 1×20,000L) • Downstream units: microfiltration (1m³/h), disc stack centrifuge (1.5m³/h), bead mill (200kg/h), UF/NF/RO/high-pressure RO (5m³/h), filter press (1.2m³/h), basket filter (0.2µm), rotary evaporator (100L) • Anaerobic digestion unit with an 11m³ digester Main funded projects: URBIOFIN, PROMOFER, SUSVALEN Main bioproducts obtained at CLAMBER includes: polyphenols, bioplastics (PHA), proteins, plant biostimulants (essential amino acids), bioethanol, biosurfactants, biogas, bioactive compounds, enzymes, among others.	