Producing novel non-plant biomass feedstocks and bio-based products through upcycling and the cascading use of brewery side-streams

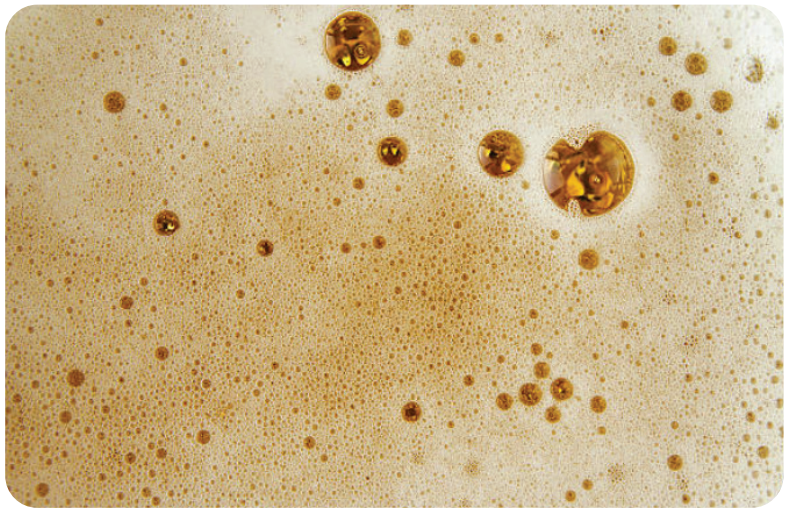
WP3 MICROBIAL PLATFORM

The microbial platform comprises the microbial conversion of CO_2 into caproic acid-rich product and hypochlorite, and of CH_4 into Single Cell Protein and ectoine.

CHEERS will also exploit the potential of microbes to produce other innovative biomass and bio-products.

The CO_2 emitted during **beer fermentation** will be elongated into caproic acid by means of an optimized anaerobic mixed culture using ethanol and wastewater in-situ produced at **Mahou San Miguel's brewery**, with a concomitant production of bioCH_4.

The **biogas generated** will be **used as feedstock** for the production of: hypochlorite, high-quality Single Cell Protein and ectoine.



PARTNERS INVOLVED

aqualia

MAHOU SANMIGUEL

genia bioenergy

ainia

ISP Institute of Sustainable Processes UVa

SYSPRO AUTOMATION BEYOND LIMITS

5 VALUABLE CIRCULAR BIO-BASED PRODUCTS FROM 2 NOVEL BIOMASS PLATFORMS

1. Insect flour from bagasse for protein enriched drinks.
2. Caproic-rich mixture of fatty acids from CO_2 and wastewater for animal feed
3. Chlorine from CO_2 for disinfectants
4. Ectoine from methane for cosmetics
5. Single Cell Protein from methane for pet food production

12 partners from 5 European countries

MAHOU SANMIGUEL · ainia · aqualia · ISP UVa · genia bioenergy · zhaw · THUNDER FOODS · proteinsecta · innovarum · earthwatch · SYSPRO · symrise

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