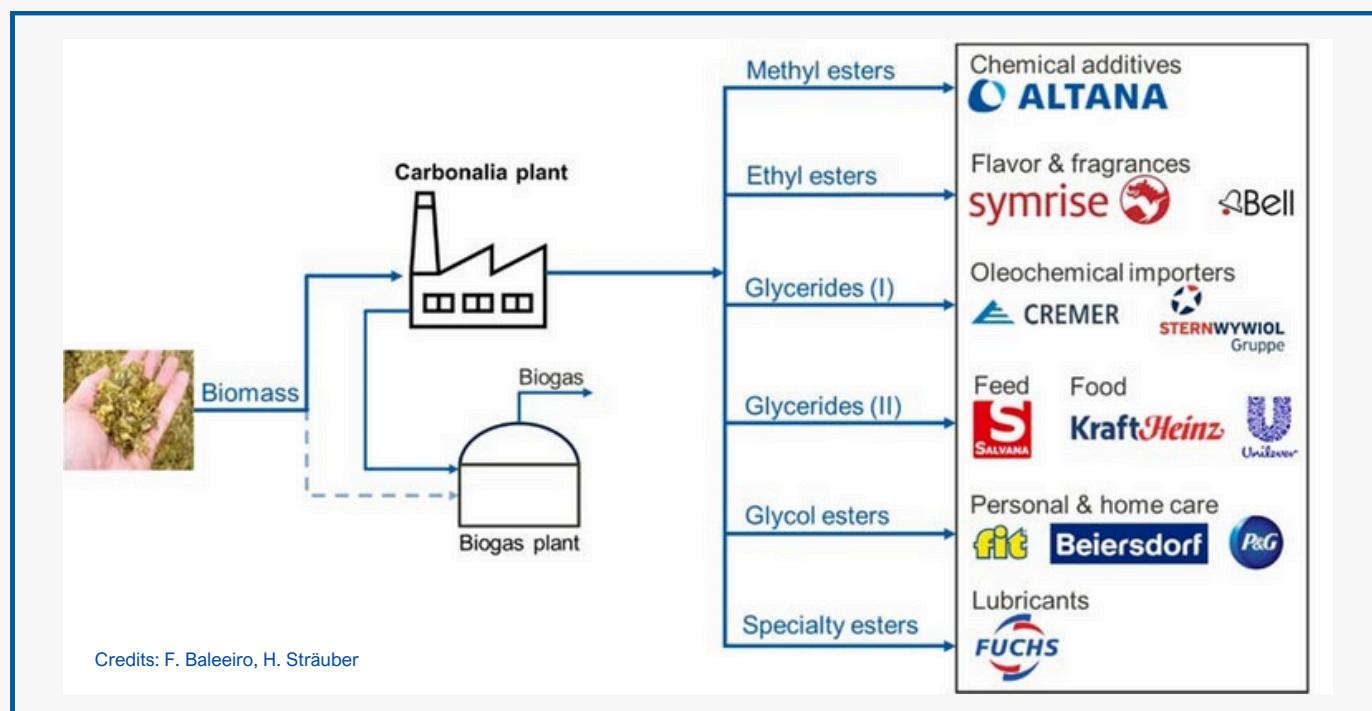


GearCarb

Gear Up: The Carbonalia Spin-off Initiative



Project:

The GearCarb project prepares a spin-off called Carbonalia that will revolutionise the production of medium-chain triglycerides (MCTs) using residual biomass. Through an innovative three-step process, combining fermentation, novel extraction, and carbon fixation, Carbonalia seeks to establish local biorefineries integrated with existing biogas facilities to convert residues into valuable chemicals with a significantly lower CO₂ footprint compared to current palm oil or fossil-based processes.

Financial volume/ term:

250,000€ / 24 months

Team:

Project leader: Flávio Baleeiro, Heike Sträuber
Partner: Jenny Stukenbrock (Cosun Beet Company GmbH & Co. KG (CBC))
Mentor: Gudrun Mernitz (WITENO GmbH)

Status Quo:

Currently, MCTs cost €3.80 kg in Europe, limiting feed adoption despite EU antibiotic ban. Their proven ability to boost immune function and improve nutrient absorption makes them valuable feed additives.

Challenge:

Develop a sustainable and cost-effective process for MCTs from biomass while protecting intellectual property rights and preparing for market entry.

Solution:

Carbonalia will build and operate integrated biorefineries at existing biogas facilities, leveraging three key technologies: the Capraferm® process - a UFZ-developed fermentation using natural microbiomes to produce fatty acids, innovative extraction technology and a carbon fixation process. This integrated approach enables local MCT production with lower costs and reduced CO₂ footprint. The technology platform allows for flexible adaptation to different feedstocks.

Partners: