DEEP PURPLE PROJECT

This project has received funding from the Bio-Based Industries Joint Undertaking under the European Union's Horizon 2020 Research and Innovation Programme under grant agreement nº 837998.

Project description

Up to 138 million tons of bio-waste are annually generated in Europe. It is estimated that almost 75% of this waste is sent to incineration or landfilling, which carries a huge environmental and economic cost. The current European bio-waste management is not yet aligned with the circular economy roadmap proposed by the European Commission. This leads to a great loss of resources that can be recovered for the production of high added value products products.

The DEEP PURPLE project proposes a synergistic and integrated treatment for three types of bio-waste: the organic fraction of municipal solid waste (OFMSW), sewage sludge and domestic wastewater by means of a multiplatform photobiorefinery based on Phototrophic Purple Bacteria (PPB). This new concept will allow for the generation of five new bio-products with commercial application in the cosmetics, plastics, construction and fertilizers sectors.

AQUALIA is the project coordinator and responsible for the up-scaling of the Advansist technology at demonstrative scale for the treatment of domestic wastewater.

Advansist technology is based on the use of PPB in anaerobic raceways with a double purpose: wastewater treatment and use of an enriched biomass as feedstock for novel bio-products. AQUALIA currently operates the largest PPB photobioreactors in the world, located at the wastewater treatment plant (WWTP) Estiviel (Toledo). The DEEP PURPLE project envisages the construction and operation of two photobiorefineries at the WWTP Estiviel (Toledo) and in Czech Republic in 2021.

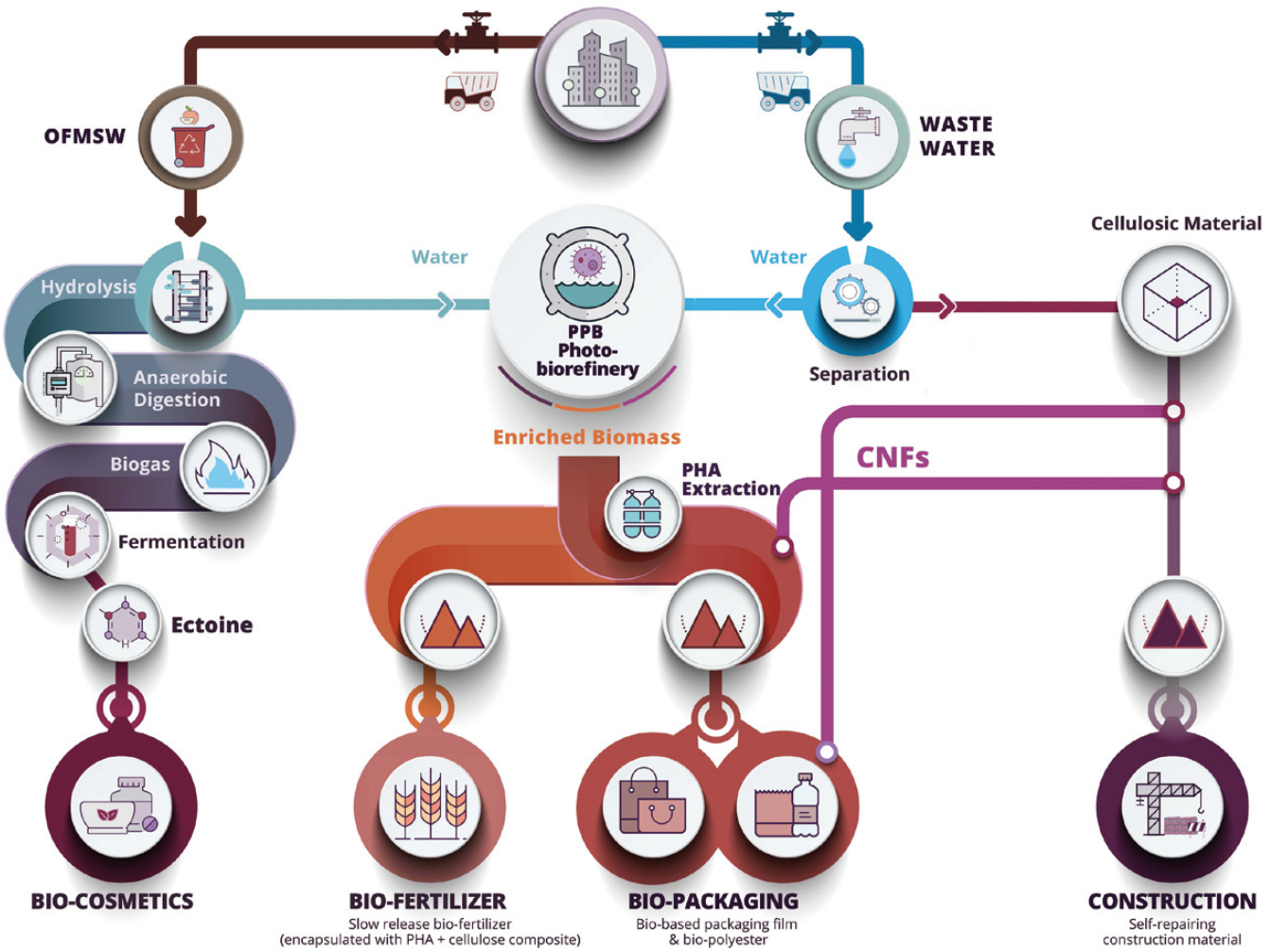
The DEEP PURPLE project also comprises cellulose recovery for its use in bio-fertilizers coatings and additives for construction materials, as well as biogas as feedstock for the recovery and use of ectoine in cosmetics.

Location: Estiviel (Toledo), Las Dehesas (Madrid) and Moravia-Silesia (Czech Republic)

Duration: from 1st May 2019 to 30th April 2023

Total budget: 9,527,581.25 € **Aqualia:** 2,385,820.94 €

PROJECT FLOW CHART



PARTNERS

- AQUALIA
- ACTIVATEC
- RNB
- FCC MA
- ITENE
- UNIV. VALLADOLID
- UNE
- ROULLIER GROUP
- NATUREPLAST
- UNIV. BRUNEL
- NOVAMONT
- ALCHEMIA NOVA
- GATE2GROWTH
- UNIV. REY JUAN CARLOS

FUNDING

Programme: European Union`s Horizon 2020.

Entity: Bio-based Industries Joint Undertaking.

Grant agreement: n° 837998.

Funding rate: 70%.

Max grant amount

Total: 6,983,049.99 €

Aqualia: 1,524,142.91 €

Contact: innovacion@aqualia.es

www.deep-purple.eu