

Four-year project to develop an integrated solution for the recovery and conversion of relevant fractions from wastewater to make natural additives and bioplastics

AFTERLIFE, a 4 million € EU project focused on finding an integrated solution for the recovery and conversion of relevant fractions from wastewater, was officially launched Monday September 11. Led by EggPlant Srl, the project consortium is comprised of 15 partners from 7 European countries.

On September 11th and 12th the official kick-off was held for the Afterlife project in Bari, Italy. Scientists at companies and research institutes will be cooperating for the next four years to find an integrated solution for the recovery and conversion of relevant fractions from wastewater. AFTERLIFE is a European collaborative project framed on the Bio-based Industries (BBI) call. 15 partners (Idener, Austep, BBEU, Celabor, Lurederra, Mi-Plast, nova-Institut, VTT, CSIC, CTC, Nova-id-FCT, Jake, Heritage 1466, Citromil) from 7 European countries (Belgium, Germany, Finland, Croatia, Italy, Spain and Portugal) participate in this European 4 million € project.

AFTERLIFE proposes a flexible, cost- and resource-efficient process following a holistic, circular economy approach for the recovery and valorisation of the relevant fractions from wastewater. The first step of the process consists of a cascade of membrane filtration units for the separation of solids in wastewater. Then, the concentrates, recovered in each unit, will be further treated to obtain pure extracts and metabolites. Alternatively, the recovered molecules can be converted into value-added biopolymers (PHAs = polyhydroxyalkanoates), using specialized microorganisms. Moreover, the process also provides an ultra-pure water stream, that can be reused directly.

“We from Eggplant, are very excited to be working on and coordinating AFTERLIFE looking forward to the key advances that this consortium of partners, a team of incredibly talented people, will provide to the European bio-economy ecosystem”, said Eggplant co-founder Paolo Stufano with Domenico Centrone and Vito Carofiglio.

AFTERLIFE means a significant improvement compared to the best wastewater treatment technologies available today. The main advantages of the AFTERLIFE approach are the complete recovery of the suspended and soluble matter in wastewater by up to 75% concentration of the nutrients, resulting in a reduction of the working volume and thus cost of the subsequent fermentation processes. The AFTERLIFE technologies can be applied to different industrial processes so that a wide range of products can be recovered from wastewater (from high value-added metabolites and extracts to value-added PHA biopolymers). With AFTERLIFE technology the maximisation of the cost-effectiveness of wastewater treatment will be possible.

Main outcomes of the Afterlife project shall be an integrated pilot plant, that uses real wastewater coming from three water-intensive food companies, processing fruit, cheese and sweets.

Afterlife has received funding from the Bio-Based Industries Joint Undertaking under the European Union’s Horizon 2020 research and innovation programme under grant agreement N° 745737

Further information, please visit <https://bbi-europe.eu/projects/afterlife>
http://cordis.europa.eu/project/rcn/210293_en.html

