

## Biopharmaceuticals purification by continuous membrane-assisted crystallization achieving lower cost and intensified processes

BIOPURE project will deliver a step change in monoclonal antibodies (mAbs) purification through the implementation of radically new and disruptive membrane technology to recover mAbs-products in the solid-state directly from cell-free culture fluids.

## The objectives:

The proposed technology has already been proved at laboratory scale (TRL4) within the **H2020 FET-OPEN project AMECRYS** as a cheaper and easily scalable alternative to protein A chromatography for **Anti-CD20 mAb purification**.

**BIOPURE** will demonstrate the generalized efficiency of **the membrane-based technology** and scaling it up to **TRL6** through the design of a **fully automatized prototype** that will be operated continuously and capable of compliance with **Good Manufacturing Practice**s for biopharmaceuticals productions.

In addition to technological development, BIOPURE has an exceptional **commercialization** potential where customers could be able to finance the new equipment in months by saving costs.

The new technology will be validated with real market players, leading to verifying the planned business model, the IPR management plan, and the associated financial planning included in **the go-to-market strategy**.

**Call**: HORIZON-EIC-2022-TRANSITION-01 **Type of Action**: HORIZON EIC Grants

Acronym: BIOPURE
Duration: 36 months
Start Date: 01-06-2023

**Requested EU Contribution**: € 2,069,150.00

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## The Ambition



BIOPURE will provide a breakthrough advancement in terms of productivity efficiency via continuous manufacturing, cost reduction, process intensification, and enhanced environmental sustainability avoiding extensive use of chemicals, compared to the standard processes (i.e., chromatography-based platforms).

## The Consortium



DIPARTIMENTO DI INGEGNERIA DELL'AMBIENT









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