



Revolutionising Downstream Processing of Monoclonal Antibodies by Continuous Template-Assisted Membrane Crystallization - AMECRYS

The overall objective of AMECRYS is to cutting down the costs for anticancer monoclonal antibodies by revolutionizing downstream purification processing with membrane-based technology

By a visionary and ambitious combination of the emerging Continuous Manufacturing Paradigm with innovative Membrane-Assisted Crystallization Technology and the selective nanotemplate-recognitions directly from multicomponent solutions, the AMECRYS Project aims at developing a new Continuous Template-Assisted Membrane Crystallizer for monoclonal antibodies (mAbs) purification, thus achieving unprecedented manufacturing efficiencies and generalized reduction of mAbs production costs. The fundamental idea is to replace currently used expensive and cumbersome multi-step chromatography with a single key-unit operation, to enable efficient recovery of mAbs directly from complex solutions. Scientific project outcomes will definitely revolutionize traditional purification processes in biopharmaceutical industry. From the economic side, AMECRYS will lead to a consistent reduction for both capital expenditure and O&M costs in mAbs downstream processing. On these bases, the project will contribute to the sustainability of health and care systems, mitigating the cost of anti-cancer mAbs, facilitating the access to impoverished or aged people and cost effective production of mAbs for rare diseases or orphan indications with no current treatments.

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Type of Action: Research and Innovation action
Acronym: AMECRYS
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Coordinator: Dr. Gianluca Di Profio (CNR)



Partners



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