

Cobra Biologics, GE and CPI team up to advance Gene Therapy

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Innovate UK funded project supports development of scalable, cost effective production of regenerative medicines



Cobra Biologics (Cobra), an international contract development and manufacturing organisation (CDMO) of biologics and pharmaceuticals, announced collaboration with the Centre for Process Innovation (CPI), a UK-based technology innovation centre and GE Healthcare Life Sciences.

The three-way partnership, funded by a £570K Innovate UK grant, aims to increase the robustness and reduce costs for the manufacturing of adeno-associated virus (AAV) vectors, a delivery vehicle used for emerging gene therapy treatments.

The gene therapy area has been developing rapidly and while only a small number of treatments are already approved for use, more than 200 clinical trials are underway.

AAV vectors are effective and versatile, but their use in clinical trials is hampered by complicated production processes. Without improvements to manufacturing approaches and better process understanding, there is the risk of gene therapies being launched commercially at prices unaffordable to healthcare payers, such as the NHS.

GE Healthcare's Puridify fibre-based chromatography technology platform, can achieve high purification productivity of protein biopharmaceuticals, such as monoclonal antibodies.

The collaboration with CPI and Cobra Biologics will help demonstrate the application of the purification platform to gene therapy, helping to provide more efficient and scalable gene therapy manufacturing and more affordable therapies.

The project will extend the advantages of GE Healthcare's technology and develop a multistep fibre-based chromatography purification process for AAV.

These viral vectors will be produced in-house by Cobra Biologics and CPI using a system developed via an ongoing Innovate UK grant.

The developed fibre-based technology will then be transferred to CPI, where entire process flowsheets incorporating the

technology will be run to demonstrate suitability for AAV manufacture.