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HEK293-DERIVED ADENO ASSOCIATED VIRUS (AAV) PURIFICATION: COMPARISON OF SMALL-SCALE LABORATORY PRODUCTION TOWARDS INDUSTRIAL FORMAT USING MONOLITHS

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During Recombinant Adeno Associated Virus (rAAV) downstream processing, a large amount of host-cell and product related impurities needs to be removed from the product. Successful process on laboratory scale such as Caesium chloride purification lacks scalability when the process is due to transferred to larger industrial scale. The aim of the study was to develop robust, fast and effective rAAV virus purification platform, which can be used for several AAV serotypes with various inserts. Lysed harvest and supernatant of rAAV9 were first captured and concentrated on CIMmultus™ OH column, followed by intermediate step on CIMmultus™ SO3 column and further polishing on CIMmultus™ QA column. Derived purity of industrial scale monolith purification product was compared to laboratory scale purification.

BIOGRAPHY

Ales Strancar is the CEO of BIA Separations and one of the main inventors of the CIM Convective Interaction Media® monolithic columns (new generation of chromatographic support). He is author or co-author of more than 90 scientific papers dealing with separation and purification technologies and is now one of top Slovenian Scientists. He is a co-author of five granted USA patents and their foreign equivalents, more pending, in the field of biomolecule separations and purification. As well he is a co-author of several book chapters dealing with novel chromatography technologies for biomolecule separation. He co-developed a number of industrial scale purification processes among them for Octapharma, Vienna and for Boehringer Ingelheim, Vienna.

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