High recovery purification of viruses by immunoaffinity chromatography

Market sectors

- Pharmaceuticals & Biotechnology

Solution

High purity virus particles are a prerequisite for efficient and safe viral biomedicines. Removal of impurities while preserving delicate macromolecular virus particle structure is a challenging task. Scientists from the University of Zagreb, Centre for Research and Knowledge Transfer in Biotechnology developed an efficient elution procedure using native conditions in immunoaffinity chromatography. The novel procedure results in pure virus particles with preserved structural integrity and infectivity.

Benefits

- Pure viral particles
- Highly concentrated virus particles
- Possibility of scale-up

Applications

- Viral vaccines
- Oncolytic virotherapeutics
- Fundamental virus research

Opportunity

We are looking for companies who operate in this market with the view of cooperation in development, intellectual property protection, and bringing the technology to market.

Stage of development

Concept of native elution in immunoaffinity chromatography has been developed at the University of Zagreb, Centre for Research and Knowledge Transfer in Biotechnology.
Our scientists achieved up to 70% yield in immunoaffinity chromatography purification of mumps virus and showed that virus suspension has become enriched in infective virus particles, while the contribution of non-infective particles was reduced.

IP status

National patent application in Croatia and PCT application filed.
Details can be found here.

Additional information

An application note from BIA separations is available here.

Publications

- **Title:** Nonspecific native elution of proteins and mumps virus inimmunoaffinity chromatography
  Authors: Marija Brgles, Dora Sviben, Dubravko Forčić, Beata Halassy
  Journal: Journal of Chromatography A
  Year: 2016
  Link: https://www.sciencedirect.com/science/article/pii/S0021967316304289