Development of a Novel Platform TFF System for Insect Cell Culture Harvest

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ABSTRACT
A single-membrane system was used to clarify insect cells, diafilter the cell concentrates, mix with an elution buffer to release the target protein, and collect the released target protein in the filtrate. The one tank–one module method simplifies and improves the harvest in comparison to multiple centrifugation and filtration steps.

Expression and purification of an influenza hemagglutinin – one step closer to a recombinant protein-based influenza vaccine

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ABSTRACT
Numerous human infections with avian influenza viruses in Asia in recent years have raised the concern that the next influenza pandemic is imminent. The most effective way to combat influenza is through the vaccination of the public. However, a minimum of 3–6 months is needed to develop an influenza vaccine using the traditional egg-based vaccine approach. The influenza hemagglutinin protein (HA), the active ingredient in the current vaccine, can be expressed in insect cells using the baculovirus expression vector system and purified rapidly.
An influenza vaccine based on such a recombinant antigen allows a more timely response to a potential influenza pandemic. Here, we report an innovative monitoring assay for recombinant HA (rHA) expression and a rapid purification process. Various biochemical analyses indicate that the purified rHA is properly folded and biologically active.

Improved Purification of p55 Protein from Secreted Virus-Like Particles from Baculovirus-Infected Insect Cells by Using an Alternative Selective Precipitation Method

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ABSTRACT
The Baculovirus Expression Vector System (BEVS) is widely used for the production of a broad variety of heterologous proteins that are often secreted into the culture medium as soluble, biologically active, properly glycosylated, and correctly folded. Downstream purification of a secreted protein is considerably easier due to the absence of many contaminating cellular proteins and nucleic acids in the culture supernatant. The BEVS system has also successfully been used for the production of virus-like particles (VLPs) for a broad variety of proteins derived from many different viruses...