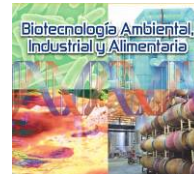


Poster

A new biological entity with antitumor activity produced by using the baculovirus expression system.



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ABSTRACT

Cancer is one of the diseases with the greatest impact in today's society, being the second cause of death in the world. Current treatments have many effects for the patient since they are not specific for tumor cells, so new strategies are being sought to develop more specific drugs.

This project aims to develop a new biological entity with antitumor activity. We have engineered an antagonist of a cellular target involved in progression of 90% of cancers. The design is based on the fusion of selected peptidic sequences with improved antagonistic properties to sequences that directs the drug to the cellular compartment where the target is located. The final goal is to develop a molecule more powerful than the common antagonists currently used (e.g. monoclonal antibodies).

The expression of the recombinant protein has been carried out in Bionaturis' FLYLIFE platform, which is based on the use of recombinant baculoviruses as vectors for the expression of the protein of interest in insect larvae. Different recombinant baculoviruses were generated, including different designs for the purification of the protein of interest by affinity chromatography. The candidates were expressed, recovered, and characterized either using insect cells or larvae as biofactories..

Results showed that the proteins of interest were expressed successfully in both insect cells and larvae, although they were highly insoluble. We have developed a specific solubilization protocol and analyzed the conditions for obtaining purified proteins to perform activity tests.

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