

VIRUS LIKE PARTICLES OF *ERWINIA CAROTOVORA*

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Today nonfunctional and incomplete virus particles (VLP) - phage tail sheaths, capsids and procapsids – cause the big research interest. Besides the general biological significance from practical point of view VLP are considered as structured nanoobjects. In this connection they are already successfully used in technology of materials, especially as matrixes for adjournment metals oxides. VLP-particles including phage origins, are displayed in modern biotechnology as agents with functions of protection, delivery and introduction of medical products in certain places of a human body. They are important for the decision of problems of vaccination since are capable to stimulate effectively the answer T - and B – cells, at the expense of the ordered surface, and also at the expense of the perfect size.

The aim of work is to working out the method of obtaining the pure samples of virus like particles of *Erwinia carotovora*. In our researches by a source of virus like particles with the phage nature was used phytopathogenic bacterium *Erwinia carotovora* which is the typical representative and has been chosen because of it's defective-polylysogenic systems. At lysogenic induction various prophages all basic types VLP are synthesised: capsids and procapsids which could pack and carry bacterial or phage DNA, phage tail like particles - with biological killer activity (they could kill the closely relative strains) and basal plates. As the specified components that never form complete virion, they were easily divided by means of traditional biochemical and biophysical methods.

On the basis of the approach developed in given research which is based on simultaneous concentration, clearing and division of the sample with the help of ion-exchange chromatography, has been received high pure VLP of *E. carotovora* Zm1. We managed to receive four types of tail shoots and five types capsids-procapsids structures. The quantity and cleanliness of preparations VLP is satisfactory for their practical use in nanotechnology and modern biotechnology.

On the basis of the received results it is possible to claim with confidence that the approach offered in this work has justified itself as a method of identification of a various kind of defective phage particles. The quantity and cleanliness of preparations VLP is satisfactory for their practical use in nanotechnology and modern biotechnology.