

# Antiviral properties of modified whey proteins.

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Radical changes of protein properties (structures, functions - specificities, immunoreactivities etc) is possible thanks to chemical, biophysical and genetic modifications.

Classic Protein Engineering is based on the rational site directed mutagenesis of genes coding the targeted protein. In this case there is eminent need of knowledge of 3D of protein, of its active center and precise knowledge of functions and activities of proteins being objects of modifications.

There is also imminent need to know the what would be the final aim of such a modifications and what functions one wants to strengthen or induce in the modified protein is expected to have.

It is necessary to be conscious why and with what aim it is done.

This „why” is often connected with biotechnological or industrial applications.

Not always site directed mutagenesis is the most efficient because of costs, time and efficacy.

Hence I will present different way of proteins transformation by chemical modification, which was carried out by my team INRA, Nantes.

It will be shown what properties could be obtained thanks to the modifications of one of the most abundant whey proteins beta-lactoglobulin:

- Simple inhibitors of viruses obtained by esterification (I)
- Amplified and differentiated peptide libraries (II)

- II. "Procédé d'obtention de populations peptidiques nouvelles. Produits obtenus." Jean-Marc Chobert, Loïc Briand et Tomasz Haertlé, Patent français N° 93 15764. Extension au pays ayant ratifié le P.C.T. N° 94 01500.