

## **Abstract**

The tobacco mosaic virus (TMV) is one of the most studied virus. Its properties (simplicity, self assembly of viral capsid, the ability to proliferate in a large variety of hosts) offers a lot of applications in various scientific or biological fields. Gene vectors based on the tobacco mosaic virus represent a very good way for expressing proteins in plants. Because the tobacco mosaic virus is well researched and a large number of his properties have already been discovered, it is used for nanotechnologic sectors in this period. Not only for the formation of nanoparticles, but also for example for a potential production of vaccines in plants. In this paper I summarize the known information about the process of self assembly of tobacco mosaic virus and the possibility of using this virus in the emerging fields of biology.

## **Key words**

Tobacco mosaic virus, self assembly, viral vector, nanotechnology