CLAIMS

1. A virus-like particle comprising:

- an envelope consisting of a plasma membrane of which at least one portion is typical of lipid rafts; and
- at least one type I or II transmembrane fusion protein anchored in said membrane, said fusion protein comprising the following fragments, successively:

b) a protein or a peptide of interest which is not a viral protein or peptide;

c) a coiled-coil domain or oligomerization sequence, which does not originate from a virus; and

d) a domain for anchoring in the plasma membrane, consisting of a transmembrane segment and a cytosolic segment, preferably a domain for anchoring in a plasma membrane of which at least one portion is typical of lipid rafts,

fragments b) and c) being exposed at the surface of the virus-like particle,

wherein said virus-like particle does not comprise a viral matrix protein.

2. The virus-like particle according to claim 1, wherein a linker is present between fragments b) and c), and/or between fragments c) and d).

3. The virus-like particle according to claims 1 or 2, wherein:

b) the protein or peptide of interest is chosen from:

- allergens and fragments thereof,
- cell surface proteins and fragments thereof,
- proteins and peptides that are accumulated in chronic or neurodegenerative diseases,
- proteins and peptides involved in hypertension,
- immunoglobulins and fragments thereof,
- cytokines and fragments thereof, and
- hormones and fragments thereof;

c) the coiled-coil domain is chosen from SEQ ID NO: 24, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 33 and SEQ ID NO: 30; and

d) the anchoring domain is chosen from the anchoring sequence of the H5N1 influenza virus H5 hemagglutinin (SEQ ID NO: 26) and the anchoring sequence of the PDLP1 protein (SEQ ID NO: 31).

4. The virus-like particle according to any one of claims 1 to 3, wherein the protein or the peptide of interest is chosen from allergens and fragments thereof.