CLAIMS

1. A chimeric polypeptide comprising:

i) an amino acid sequence of a protein of interest, wherein said protein of interest is selected from a type II transmembrane protein, a protein from the TNF or TNFR superfamily, a protein from the TGF-β superfamily, a protein from the neurotrophin family, and a protein from the CTRP family selected from the group consisting of: CTRP1, CTRP2, CTRP3, CTRP4, CTRP5, CTRP6, CTRP7, CTRP8, CTRP9, CTRP10, CTRP11, CTRP12, CTRP13, CTRP14 and CTRP15; and

ii) an amino acid sequence of a pilot peptide interacting with the Endosomal Sorting Complexes Required for Transport (ESCRT) cellular machinery and/or an amino acid sequence of a sub-membrane targeting domain;

wherein the components i) and ii) are organized in the chimeric polypeptide from C-terminal to N-terminal.

2. The chimeric polypeptide according to claim **1**, further comprising iii) an amino acid sequence of a transmembrane domain of a transmembrane protein wherein the component iii) is organized between component i) and ii) in the chimeric polypeptide from C-terminal to N-terminal.

3. The chimeric polypeptide according to claim **1** or **2,** wherein the protein of interest is selected from the group consisting of: CD137L, OX40L, neuraminidase N2, TRAIL, TNFα, CD30L, TGF-β1, BMP7, BMP9, GDNF, BDNF and CTRP3.

4. The chimeric polypeptide according to any one of claims **1** to **3**, wherein the sub-membrane targeting domain is linked to an anchoring molecule, and wherein said anchoring molecule is located at the N-terminal position of the chimeric polypeptide.

5. The chimeric polypeptide according to any one of claims **1** to **4**, further comprising at least one linker between the amino acid sequence of the protein of interest and the amino acid sequence of the transmembrane domain and/or between the amino

acid sequence of the transmembrane domain or of the amino acid sequence of the pilot peptide and the amino acid sequence of the sub-membrane targeting domain.

6. The chimeric polypeptide according to any one of claims **1** to **5**, wherein the transmembrane domain is selected from the transmembrane domain of a type II transmembrane protein, the transmembrane domain of influenza virus neuraminidase transmembrane protein, the transmembrane domain of CD40L, and the transmembrane domain of CD8.

7. The chimeric polypeptide according to any one of claims **1** to **6**, wherein the pilot peptide comprises at least one YxxL motif or DYxxL motif, and at least one PxxP motif or PPxY motif, in which "x" represents any amino acid residue.

8. The chimeric polypeptide according to any one of claims **1** to **7**, wherein the pilot peptide comprises an amino acid sequence with SEQ ID NO: 47 or a variant thereof, wherein the variant of SEQ ID NO: 47 retains at least three YxxL and/or DYxxL motifs; and at least four PxxP motifs; wherein "x" represents any amino acid residue.

9. A nucleic acid encoding the chimeric polypeptide according to any one of claims **1** to **8**.

10. An extracellular vesicle comprising the chimeric polypeptide according to any one of claims **1** to **8**, and/or the nucleic acid according to claim **9**.

11. The extracellular vesicle according to claim **10**, wherein the extracellular vesicle is an exosome.

12. A population of extracellular vesicles according to claim **10** or **11**.

13. The extracellular vesicle according to claim **10** or **11** or the population of extracellular vesicles according to claim **12**, being purified.

14. Use of the nucleic acid according to claim **9**, the extracellular vesicle according to claim **10**, **11** or **13**, or the population of extracellular vesicles according to claim **12** or **13**, for the manufacture of a medicament.

15. Use of the nucleic acid according to claim **9**, the extracellular vesicle according to claim **10**, **11** or **13**, or the population of extracellular vesicles according to claim **12** or **13**, for the manufacture of a medicament for the treatment of a disease, disorder or condition selected from the group consisting of: neurodegenerative diseases, auto-immune diseases, viral infections, T-cell immune responses, NK-cell immune responses, homeostatic imbalance associated diseases, diabetes, obesity and associated metabolic disease, insulin resistance, cardiovascular diseases, inflammatory conditions, hormonal cancers and cancer progression.