**Claims**

1. Use of virus like particles (VLP) derived from virus protein 1 of John Cunningham virus (JC-VP1) comprising a plasmid in the manufacture of a medicament for the treatment or diagnosis of a central nervous system (CNS) disease.

2. The use according to claim 1, wherein the VLP crosses the blood-brain barrier to enter the CNS together with the plasmid encapsulated by the VLP.

3. The use according to at least one of the above claims, wherein the VLP comprising the plasmid crosses the physiologically intact blood-brain barrier.

4. The use according to at least one of the above claims, wherein the CNS disease is a neurological, neuronal or neurodegenerative disorder.

5. The use according to at least one of the above claims, wherein the VLP is to be administered by a route which allows a systemic effect of the drug.

6. The use according to at least one of the above claims, wherein the VLP is to be administered intravenously.

7. The use according to at least one of the above claims, wherein the JC-VP1 comprises an amino acid sequence which is at least 80% identical to the amino acid sequence according to SEQ ID NO: 1 over its entire length.

8. The use according to at least one of the above claims, wherein the plasmid is selected from the group consisting of a cytotoxic agent, a detectable agent such as a radionuclide, a protein, a peptide and a nucleic acid, in particular selected from the group consisting of nucleic acids encoding a desired protein such as mRNA, cDNA, a plasmid or vector; inhibitory nucleic acids such as siRNA or miRNA; and nucleic acids having catalytic activity such as a ribozyme.

9. The use according to at least one of the above claims, wherein at least 95% of the total amount of plasmid is fully encapsulated in the hull of the VLP.

10. The use according to claim 9, wherein the VLP are non-aggregated.

11. The use according to at least one of the claims 9 and 10, wherein the VLP crosses the blood-brain barrier to enter the CNS together with the plasmid encapsulated by the VLP.

12. Pharmaceutical composition for use in the treatment or diagnosis of the CNS disease, wherein the pharmaceutical composition comprises the VLP according to any one of claims 1 to 8, wherein at least 95% of the total amount of plasmid is fully encapsulated in the hull of the VLP.

13. Virus like particles (VLP) derived from virus protein 1 of John Cunningham virus (JC-VP1) comprising a plasmid for use in the treatment or diagnosis of a central nervous system (CNS) disease.