CLAIMS

1. A pharmaceutical composition for immunomodulation of the immune response in cancer patients comprising nano-particles formed by hydrophobic conjugation of the outer membrane protein complex (OMPC) of the *Neisseria meningitidis* bacterium to the GM3 ganglioside, where the protein-ganglioside conjugation ratio ranges from 1.5: 1 to 10: 1.
2. The composition of claim 1 characterized by a monomodal distribution of volume in a range from 15 to 25 nm particle size, polydispersity index of 0.230, negative Z potential with nominal value in the range from 25 to 45 mV.
3. Use of the pharmaceutical composition of claims 1-2 in the manufacture of a medicament for the treatment of cancer.
4. Use of the pharmaceutical composition of claims 1-2 in the manufacture of a medicament wherein the medicament is an immunomodulator of Myeloid-derived suppressor cells (MDSCs) in patients with cancer.
5. Use of the pharmaceutical composition according to claims 1-2 in the manufacture of a medicament for treating cancer patients wherein the medicament is to be administered by SC, intradermal, intramuscular, intratumoral routes or by direct application to mucosal surfaces with a weekly frequency for at least a total of four doses and subsequently fortnightly or monthly in maintenance doses for at least six months.

6. A method of selecting patients with cancer as candidates for receiving treatment with the pharmaceutical composition of claims 1-2 which involves:

- extraction of a sample of blood and/or tumor tissue from the patient and
- determination of the levels of MDSCs in said sample of blood and/or tumor tissue.

7. The method according to claim 6 wherein the selected patients are those that have a high frequency or absolute number of MDSCs in blood.
8. The method according to claim 6 wherein the selected patients are those that are positive in terms of their degree of infiltration of MDSCs.