CLAIMS

1. Use of a gene therapy composition in the manufacture of a medicament for cancer prevention and/or therapy, wherein the gene therapy composition comprises apoptosis-inducing genes as anti-tumor genes, wherein the gene therapy composition is characterized in that the apoptosis-inducing genes comprise p53 genes, FUS-1 genes, TRAIL genes and IL-24 genes, and in order to inhibit proliferation of cancer cells through MAPK pathway, amounts among the apoptosis-inducing genes of p53 genes, TRAIL genes and IL-24 genes are equal in weight, and amount among the apoptosis-inducing genes of FUS-1 genes is double amounts of p53 genes, TRAIL genes and IL-24 genes in weight, and wherein the gene therapy composition is encapsulated by a cationic lipid and helper lipid liposome-based vector for gene therapy that targets cancer cells;

the liposome is composed of monolayer membrane having an internal cavity, and the membrane is composed of a monolayer thin membrane compound comprising a capsule-like vector with attached ligand and containing dioleoylphosphatidylethanolamine and dimethylaminoethancarbamoylcholesterol.

2. The use of claim 1, characterized in that the gene therapy composition additionally contains p16 genes and/or p21 genes.

3. The use of claim 1 or claim 2, characterized in that the gene therapy composition further comprises genes as plasmid vectors containing proto-oncogenes and cytokine genes, and said cytokine genes comprise IL-12 genes or IL-18 genes.

4. The use of any one of the preceding claims, characterized in that the cancer cells include melanoma, breast cancer and/or lung cancer.