WHAT IS CLAIMED:

1. Use of an effective amount of mammalian pluripotent stem cells in the manufacture of a vaccine for treating cancer in a patient in need thereof, where the stem cells are induced pluripotent stem cells (iPSCs) obtained by reprogramming of somatic cells from the patient and the stem cells are undifferentiated iPSCs, wherein the vaccine further comprises an adjuvant that is an immunological agent that acts on the patient's immune system to boost the immune response towards the vaccine.

2. The use of Claim 1, wherein the pluripotent stem cells are generated using a mini-intronic plasmid containing four reprogramming factors comprising Oct4, c-Myc, KLF-4 and Sox2.

3. The use of Claim 1 or Claim 2, wherein the somatic cells are selected from the group consisting of fibroblast, keratinocytes, peripheral blood cells and renal epithelial cells.

4. The use of any one of Claims 1 to 3, wherein the vaccine is to be administered according to at least one of the following methods: a) as a standalone vaccination; b) as an adjuvant therapy before tumor resection; c) as an adjuvant therapy after tumor resection, d) in a metastatic setting; e) as a preventative setting in the absence of tumor or cancer; and f) in combination with chemotherapy, immunotherapy, targeted therapies, using biologic agents, using small molecule agents, with nanoparticles comprising the biologic or small molecule agents, or a combination thereof.

5. The use of any one of Claims 1 to 4, wherein the cancer is selected from the group consisting of breast cancer, melanoma and mesothelioma.

6. The use of any one of Claims 1 to 4, wherein the cancer is selected from the group consisting of leukemia, multiple myeloma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, lymphoma, myeloproliferative disorders, squamous cell cancer, adenocarcinoma, sarcoma, neuroendocrine carcinoma, bladder cancer, skin cancer, brain and spinal cord cancers, head and neck cancer, thyroid, bone cancer, breast cancer, cervical cancer, colorectal cancer, endometrial cancer, gastrointestinal cancers, (hypo)laryngeal cancer, esophageal cancer, liver cancer, lung cancer, pancreatic cancer, prostate cancer, eye cancer, renal cell cancer, kidney, hepatic, ovarian cancer, gastric cancer, testicular cancer, thyroid and thymus cancer.

7. The use of Claim 6, wherein the vaccine is irradiated prior to vaccination.

8. A thermally stable vaccine composition comprising an effective amount of mammalian pluripotent stem cells, where the stem cells are induced pluripotent stem cells (iPSCs) obtained by reprogramming of somatic cells from a patient and the stem cells are undifferentiated iPSCs, and an adjuvant or an immunological agent that acts on the patient's immune system to boost the immune response towards the vaccine.

9. The vaccine composition of Claim 8, wherein the somatic cells are selected from the group consisting of fibroblast, keratinocytes, peripheral blood cells and renal epithelial cells.

10. The vaccine composition of Claim 8 or Claim 9, wherein the adjuvant is selected from the group consisting of CpG,QS21, poly(di(carboxylatophenoxy)phosphazene; derivatives of lipopolysaccharides such as monophosphoryl lipid A, muramyl dipeptide (MDP; Ribi), threonyl-muramyl dipeptide (t-MDP; Ribi); OM-174; cholera toxin (CT), and Leishmania elongation factor.