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(54) **Title:** ANTI-TUMOR VACCINE DERIVED FROM NORMAL CHEMICALLY MODIFIED CELLS

(57) **Abstract:** A composition for inducing an immune response in a mammal, comprises lymphoid cells in which expression of tumor antigens has been chemically induced. The tumor antigens are induced in proliferating normal lymphoid cells, especially during the log phase of proliferation. The proliferation of the normal lymphoid cells is stimulated by normal mature dendritic cells. Most conveniently, the lymphoid cells are lymphocytes, especially peripheral blood lymphocytes. The tumor antigens are typically cancer/testis antigens, which may be chemically induced by DNA demethylation. Cancer/testis antigens are expressed in a wide range of tumors, so the composition is able to raise an immune response that is effective against a wide range of tumors, despite the fact that it is derived from normal cells. The composition may be used for preparation of an anti-tumor vaccine for prophylactic or therapeutic use. The composition may also be used for ex vivo activation of cytotoxic T lymphocytes, followed by expansionof the cytotoxic T lymphocyte population by normal dendritic cells, for cancer treatment by adoptive T cell immunotherapy.