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(54) Title: METHODS OF PRODUCING MODIFIED NATURAL KILLER CELLS AND METHODS OF USE

(57) Abstract: Disclosed herein are method of producing NK cells that include one or more heterologous nucleic acids. The methods include culturing a population of isolated NK cells in the presence of one or more cytokines to produce a population of activated NK cells. The population of activated NK cells are transduced with a viral vector comprising the one or more heterologous nucleic acids, for example by contacting the activated NK cells with viral particles including the viral vector. The resulting transduced NK cells are then cultured in the presence of one or more cytokines, and optionally in the presence of irradiated feeder cells, to produce a population of expanded transduced NK cells. Also disclosed are methods of treating a subject with a disorder (such as a tumor or hyperproliferative disorder) by administering to the subject NK cells produced by the methods described herein.