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(54) **Title**: ANTI THIRD PARTY CENTRAL MEMORY T CELLS, METHODS OF PRODUCING SAME AND USE OF SAME IN TRANSPLANTATION AND DISEASE TREATMENT

(57) **Abstract**: A method of generating an isolated population of cells comprising anti-third party cells having a central memory T-lymphocyte (Tcm) phenotype, the cells being tolerance-inducing cells and/or endowed with anti-disease activity, and capable of homing to the lymph nodes following transplantation is disclosed. The method comprising: (a) contacting peripheral blood mononuclear cells (PBMC) with a third party antigen or antigens in the presence of IL-21 so as to allow enrichment of antigen reactive cells; and (b) culturing the cells resulting from step (a) in the presence of IL- 21, IL-15 and IL-7 in an antigen free environment so as to allow proliferation of cells comprising the central memory T-lymphocyte (Tcm) phenotype.