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(54) Title: A COMBINATION THERAPY FOR A STABLE AND LONG TERM ENGRAFTMENT USING SPECIFIC PROTOCOLS FOR T/B CELL DEPLETION

(57) Abstract: A method of treating a subject in need of a non-syngeneic cell or tissue graft is disclosed. The method comprising: (a) transplanting into a subject a dose of T cell depleted immature hematopoietic cells, wherein the T cell depleted immature hematopoietic cells comprise less than 5 x 105 CD3+ T cells per kilogram body weight of the subject, and wherein the dose comprises at least about 5 x 106 CD34+ cells per kilogram body weight of the subject, and wherein the T cell depleted immature hematopoietic cells are obtained by separating the T cells from the immature hematopoietic cells, by a method comprising: (i) adding an antibody to the immature hematopoietic cells that specifically binds to a surface marker, wherein the antibody is labeled with a magnetically responsive agent; (ii) immobilizing the immature hematopoietic cells specifically bound to the antibody labeled with the magnetically responsive agent in a matrix through a magnetic field; (iii) washing the matrix to remove unbound cells; and (iv) removing the magnetic field to elute bound cells from the matrix; and subsequently (b) administering to the subject a therapeutically effective amount of cyclophosphamide, wherein the therapeutically effective amount comprises 25-200 mg per kilogram body weight, thereby treating the subject.