WHAT IS CLAIMED IS:

1. A method of generating an isolated population of cells comprising non-graft versus host (GVHD) inducing anti-third party cells having a central memory T-lymphocyte (Tcm) phenotype, said central memory T-lymphocyte (Tcm) phenotype comprising a CD8+/CD62L+/CD45RO+ signature and wherein at least 50 % of the isolated population of cells have said signature, said cells being tolerance-inducing cells and capable of homing to the lymph nodes following transplantation, the method comprising:

(a) contacting peripheral blood mononuclear cells (PBMC) with a third party antigen or antigens in the presence of IL-21 under conditions which allow elimination of GVH reactive cells; and

(b) culturing said cells resulting from step (a) in the presence of IL-15 in an antigen free environment under conditions which allow proliferation of cells comprising said central memory T-lymphocyte (Tcm) phenotype, thereby generating the isolated population of cells.

~~1~~2. Use of an isolated population of cells comprising non-graft versus host (GVHD) inducing anti-third party cells having a central memory T-lymphocyte (Tcm) phenotype, said central memory T-lymphocyte (Tcm) phenotype comprising a $CD8^+/CD62L^+$/CD45RO+ signature and wherein at least 50 % of the isolated population of cells have said signature, said cells being tolerance-inducing cells and capable of homing to the lymph nodes following transplantation, for the manufacture of a medicament identified for eradication of a disease in a subject who has been transplanted with a non-syngeneic cell or tissue graft, wherein said cells are either:

(i) non-syngeneic with both the subject and said graft; or

(ii) non-syngeneic with said graft and syngeneic with the subject.

~~2~~3. The use of claim ~~1~~2, wherein said non-syngeneic cell or tissue graft is derived from a donor selected from the group consisting of an HLA identical donor and an HLA non-identical donor.

~~3~~4. The use of claim ~~2~~3, wherein said subject and said donor are both humans.

~~4~~5. The use of claim ~~1~~2, where said subject is a human subject.

~~5~~6. The use of claim ~~1~~2, wherein said cell or tissue graft is non-autologous and said isolated population of cells are autologous.

~~6~~7. The use of claim ~~1~~2, wherein said cell or tissue graft and said isolated population of cells are from different donors.

~~7~~8. The use of claim ~~1~~2, wherein said disease comprises a malignancy.

~~8~~9. The use of claim ~~7~~8, wherein said malignancy comprises a B cell malignancy.

~~9~~10. The use of claims ~~7~~8 or ~~8~~9, wherein said malignancy comprises a leukemia.

~~10~~11. The use of claims ~~7~~8 or ~~8~~9, wherein said malignancy comprises a lymphoma.

~~11~~12. The use of claim ~~1~~2, where said graft comprises bone marrow cells.

~~12~~13. The use of claim ~~11~~12, wherein said bone marrow cells comprise immature hematopoietic cells.

~~13~~14. The use of claim ~~12~~13, wherein when said immature hematopoietic cells are non-syngeneic with the subject, said isolated population of cells are syngeneic with the subject.

~~14~~15. The use of claim ~~13~~14, wherein said immature hematopoietic cells are non-autologous and said isolated population of cells are autologous.

~~15~~16. The use of claim ~~12~~13, wherein when said immature hematopoietic cells are non-syngeneic with the subject, said isolated population of cells are non-syngeneic with both the subject and with said graft.

~~16~~17. The use of claim ~~15~~14, wherein said immature hematopoietic cells and said isolated population of cells are from different donors.

~~17~~18. The use of claim ~~1~~2, further comprising the use of at least one immunosuppressant drug.

~~18~~19. The use of claim ~~1~~2, further comprising the use of a sublethal, lethal or supralethal conditioning.

~~19. The use of claim 1, wherein said central memory T-lymphocyte (Tcm) phenotype comprises a $CD8^+/CD62L^+$ signature.~~

~~20. The use of claim 19, wherein at least 50 % of the isolated population of cells have said signature.~~

~~21~~20. The method of claim 1, or use of claim ~~1~~2, wherein said lymph nodes comprise peripheral lymph nodes.

~~22~~21. The method of claim 1, or use of claim ~~1~~2, wherein said lymph nodes comprise mesenteric lymph nodes.

~~23~~22. The use of claim ~~1~~2, where said cells non-syngeneic with said graft and syngeneic with the subject comprise autologous cells.

~~24. An isolated population of cells comprising non-GVHD inducing anti-third party cells having a central memory T-lymphocyte (Tcm) phenotype, said cells being tolerance-inducing cells and capable of homing to the lymph nodes following transplantation, and further wherein said cells are either:~~

~~(i) non-syngeneic with both a host subject and a graft, wherein said subject and said graft are non-syngeneic; or~~

~~(ii) non-syngeneic with a graft and syngeneic with a host subject, wherein said subject and said graft are non-syngeneic.~~

~~25. The isolated population of cells of claim 24, wherein said cells non-syngeneic with said graft and syngeneic with said host subject are autologous.~~

~~26~~23. Use of a therapeutically effective amount of an isolated population of cells comprising non-graft versus host (GVHD) inducing anti-third party cells having a central memory T-lymphocyte (Tcm) phenotype, said central memory T-lymphocyte (Tcm) phenotype comprising a $CD8^+/CD62L^+/CD45RO+$ signature and wherein at least 50 % of the isolated population of cells have said signature, said cells being tolerance-inducing cells and capable of homing to the lymph nodes following transplantation, for the manufacture of a medicament identified for treating a disease in a subject who has been transplanted with immature hematopoietic cells, and further wherein when said immature hematopoietic cells are syngeneic with the subject, said isolated population of cells are selected syngeneic with the subject or non-syngeneic with the subject.

~~27~~24. The use of claim ~~26~~23, wherein said immature hematopoietic cells and said isolated population of cells are autologous.

~~28~~25. The use of claim ~~26~~23, wherein said immature hematopoietic cells are autologous and said isolated population of cells are non-autologous.

~~29~~26. Use of a therapeutically effective amount of an isolated population of cells comprising non-graft versus host (GVHD) inducing anti-third party cells having a central memory T-lymphocyte (Tcm) phenotype, said central memory T-lymphocyte (Tcm) phenotype comprising a CD8+/CD62L+/CD45RO+ signature and wherein at least 50 % of the isolated population of cells have said signature, said cells being tolerance-inducing cells and capable of homing to the lymph nodes following transplantation for the manufacture of a medicament identified for treating a disease in a subject who has been transplanted with immature hematopoietic cells, wherein when said immature hematopoietic cells are non-syngeneic with the subject, said isolated population of cells are selected syngeneic with the subject or non-syngeneic with both the subject and said immature hematopoietic cells.

~~30~~27. The use of claim ~~29~~26, wherein said immature hematopoietic cells are non-autologous and said isolated population of cells are autologous.

~~31~~28. The use of claim ~~29~~26, wherein said immature hematopoietic cells and said isolated population of cells are from different donors.

~~32~~29. The use of claim ~~1~~2, ~~26~~ 23 or ~~29~~ 26~~or isolated population of cells of claim 24~~, wherein said anti-third party cells having a central memory T-lymphocyte (Tcm) phenotype, said cells being tolerance-inducing cells and capable of homing to the lymph nodes following transplantation are ~~generated~~ obtained by:

(a) contacting peripheral blood mononuclear cells (PBMC) with a third party antigen or antigens in the presence ~~or absence~~ of IL-21 under conditions which allow elimination of GVH reactive cells; and

(b) culturing said cells resulting from step (a) in the presence of IL-15 in an antigen free environment under conditions which allow proliferation of cells comprising said central memory T-lymphocyte (Tcm) phenotype, thereby generating the isolated population of cells.

~~33~~30. The method of claim 1, or use ~~or isolated population of cells~~ of claim ~~32~~29, wherein said conditions which allow elimination of GVH reactive cells comprise culturing for 1-5 days.

~~34. The use or isolated population of cells of claim 32, wherein said conditions which allow elimination of GVH reactive cells comprise 1-5 days in a culture deprived of cytokines.~~

~~35~~31. The method of claim 1, or use ~~or isolated population of cells~~ of claim ~~32~~29, wherein said third party antigen or antigens comprise dendritic cells.

~~36~~32. The method of claim 1, or use ~~or isolated population of cells~~ of claim ~~32~~29, wherein said third party antigen or antigens is selected from the group consisting of third party cells, a cell antigen, a viral antigen, a bacterial antigen, a protein extract, a purified protein and a synthetic peptide presented by autologous presenting cells, non-autologous presenting cells or on an artificial vehicle or artificial antigen presenting cell.

~~37~~33. The method of claim 1, or use ~~or isolated population of cells~~ of claim 29~~32~~, wherein said conditions which allow proliferation of cells further comprise IL-7 and/or IL-21.

~~38~~34. The method of claim 1, or use ~~or isolated population of cells~~ of claim 29~~32~~, wherein said culturing in the presence of IL-15 is effected for 3-30 days.

~~39~~35. The method of claim 1, or use ~~or isolated population of cells~~ of claim 29~~32~~, wherein said culturing in the presence of IL-15 is effected for 6-30 days.

~~40~~36. The method of claim 1, or use ~~or isolated population of cells~~ of claim 29~~32~~, wherein said culturing in the presence of IL-15 is effected for 3-20 days.

~~41. The use or isolated population of cells of claim 32, wherein said conditions which allow proliferation of cells comprise culturing for 3-10 days.~~

~~42. The use or isolated population of cells of claim 32, wherein said conditions which allow proliferation of cells comprise culturing for 3-7 days.~~

37. The use of claim 23 or 26, wherein said disease comprises leukemia or lymphoma.