CLAIMS

1. A method of making a lymphocyte composition for administration to a recipient comprising:

a) obtaining a peripheral blood cell composition from a donor, wherein the donor is vaccinated against an antigen present in the recipient, and wherein the peripheral blood cell composition contains CD8+ T-cells, CD4+ T-cells, and natural killer cells;

b) depleting the peripheral blood cell composition of the CD8+ T-cells, wherein depleting the peripheral blood cell composition of the CD8+ T-cells is reducing the number of CD8+ T-cells in the peripheral blood cell composition by at least one order of magnitude; and

c) expanding the CD4+ T cells specific to the antigen by culturing the CD4+ T cells with the antigen present in the recipient, wherein the donor comprises at least one human leukocyte antigen (HLA) Class II allele match and at least one HLA class II allele mismatch relative to the recipient in the donor versus recipient direction (graft-versus-host direction) , thereby making a lymphocyte composition.

2. The method of claim 1, wherein the antigen is selected from the group consisting of a neoplastic antigen, a neoplastic idiotype, a viral antigen, a bacterial antigen, a fungal antigen, a parasitic antigen, a non-human animal antigen, a tumor neoantigen, and a combination thereof.

3. The method of claim 2, wherein the viral antigen is selected from the group consisting of a human papillomavirus (HPV) E6 antigen, a HPV E7 antigen and a combination thereof.

4. The method of claim 2, wherein the viral antigen is selected from the group consisting of an Epstein-Barr virus latent membrane protein 1 (LMP1), a latent membrane protein 2a (LMP 2a) and a combination thereof.

5. The method of claim 2, wherein the antigen is a neoplastic antigen or a tumor neoantigen.

6. The method of claim 5, wherein the tumor neoantigen is an antigen from a recipient’s tumor.

7. The method of claim 1, wherein the donor is a cancer-free donor.

8. The method of claim 1, wherein the HLA Class II allele match is at a gene selected from the group consisting of HLA-DRB1, HLA-DQB1, and HLA-DPB1.

9. The method of claim 1, wherein a donor vaccinated against an antigen present in the recipient is a donor having CD4+ T-cell immunity against the antigen present in the recipient.

10. The method of claim 1, wherein the recipient does not have detectable antibodies reactive against human leukocyte antigens of the donor.

11. The method of claim 1, wherein reducing the CD8+ T-cells in the peripheral blood cell composition comprises using an anti-CD8+ antibody associated with magnetic particles or an anti-CD8+ antibody plus complement.

12. The method of claim 1, wherein a subject selected from the group consisting of the recipient, the donor and a potential allogeneic donor(s) has been screened for serological reactivity to an infectious agent antigen selected from the group consisting of a Human Immunodeficiency Virus (HIV) antigen, a Hepatitis Virus antigen, Epstein-Barr virus and a Cytomegalovirus antigen.

13. The method of claim 1, wherein the number of CD4+ T-cells in the lymphocyte composition differs from the number of CD4+ T-cells in the peripheral blood cell composition by less than 50%.

14. The method of claim 1, wherein the number of donor CD4+ T-cells based on an ideal body weight of the recipient in kilograms (kg) is between $1X10^5$ CD4+ T-cells/kg and $1X10^9$ CD4+ T-cells/kg,

15. Use of a lympho-depleting chemotherapeutic agent and a lymphocyte cell composition in the manufacture of a medicament for the treatment of cancer in a subject, wherein the lymphocyte cell composition has been obtained from a peripheral blood cell composition of a donor that comprises at least one human leukocyte antigen (HLA Class II

allele match and at least one HLA class II allele mismatch relative to the recipient in the donor versus recipient direction (graft-versus-host direction), wherein the donor has been vaccinated against a viral antigen and/or a tumor neoantigen present in the subject,
wherein the composition is depleted of CD8+ T cells, and
wherein the composition comprises an expanded population of CD4+ T cells specific to the viral and/or tumor neoantigen present in the subject.

16. The use of claim 15, wherein the lympho-depleting chemotherapeutic agent is for a lympho-reductive non-lympho-ablative treatment; a treatment that induces transient lymphopenia; a treatment to deplete or inhibit myeloid-derived suppressor cells; a treatment to deplete or inhibit tumor associated macrophage cells or a treatment to deplete regulatory T cells.

17. The use of claim 15, wherein the lympho-depleting chemotherapeutic agent is selected from the group consisting of dasatinib, 5-fluorouracil, taxotere, clodronate, gemcitabine, cyclophosphamide, fludarabine, denileukin diftitox, and daclizumab.

18. The method of claim 1 or the use of claim 15, wherein the peripheral blood cell composition is a whole blood product or an apheresis product.