Claims:

1. A use of an effective amount of a progenitor T cell having a phenotype $CD34^+CD7^+CD5^+CD1a^-$ in the manufacture of a medicament for treating a condition requiring an increase in the number of T cells in an animal in need thereof.

2. The use according to claim 1 wherein the condition is cancer.

3. The use according to claim 1 wherein the condition is HIV/AIDS.

4. The use according to claim 1 wherein the condition is an autoimmune disease.

5. A use according to claim 1 wherein the progenitor T cell has been transfected with a heterologous gene.

6. The use according to claim 5 for treating a condition requiring the heterologous gene in an animal in need thereof.

7. An isolated progenitor T cell having a phenotype $CD34^+CD7^+CD5^+CD1a^-\underline{CD2^-}$.

8. An isolated progenitor T cell having a phenotype $CD34^+CD7^+CD5^+CD1a^-\underline{CD2^-}$ for treating a condition requiring an increase in the number of T cells in an animal in need thereof.

9. A pharmaceutical composition comprising an isolated progenitor T cell according to claim 7 or 8 and a pharmaceutically acceptable diluent or carrier.

10. A method of generating a pro-T cell having a phenotype $CD34^+CD7^+CD5^+CD1a^-$ comprising (a) culturing a sample comprising stem cells or progenitor cells with cells that express a Notch ligand and (b) isolating pro-T cells and (c) fractionating said progenitor T cells to obtain said progenitor T cell having the phenotype $CD34^+$ $CD7^+$ $CD5^+$ $CD1a^-$.

11. The method of claim 10 wherein the stem cells are selected from hematopoietic stem cells, embryonic stem cells or induced pluripotent stem cells.

12. The method according to claim 10 or 11 wherein the Notch ligand is DL1 or DL4.

13. The method of claim 12 wherein the cell expressing the Notch ligand is an OP-9 cell.

~~14. A method of generating natural killer (NK) cells comprising a) culturing an isolated T progenitor cell having a phenotype $CD34^+CD7^+CD5^+CD1a^-$ with IL-15 or IL-2 and b) isolating NK cells.~~