

CLAIMS

1. A cell which comprises;
 - (i) a chimeric antigen receptor (CAR) or a transgenic T-cell receptor (TCR); and
 - (ii) an engineered beta-2 microglobulin which comprises an endodomain comprising
5 an intracellular signalling domain.
2. A cell according to Claim 1, in which the engineered beta-2 microglobulin further comprises a transmembrane domain between the beta-2 microglobulin polypeptide and the endodomain comprising an intracellular signalling domain.
3. A cell according to Claim 1 or 2, in which the intracellular T-cell signalling domain
10 comprises the CD3 zeta endodomain.
4. A nucleic acid construct which comprises:
 - (i) a first nucleic acid sequence which encodes a chimeric antigen receptor (CAR) or a transgenic TCR; and
 - (ii) a second nucleic acid sequence which encodes an engineered beta-2 microglobulin
15 as defined in Claim 1, 2 or 3.
5. A kit of nucleic acid sequences comprising:
 - (i) a first nucleic acid sequence which encodes a chimeric antigen receptor (CAR) or a transgenic TCR; and
 - (ii) a second nucleic acid sequence which encodes an engineered beta-2 microglobulin
20 as defined in any of Claims 1 to 3.
6. A vector which comprises a nucleic acid construct according to Claim 4.
7. A kit of vectors which comprises:
 - (i) a first vector which comprises a nucleic acid sequence which encodes a chimeric antigen receptor (CAR) or a transgenic TCR; and
 - (ii) a second vector which comprises a nucleic acid sequence which encodes an
25 engineered beta-2 microglobulin as defined in any of Claims 1 to 3.

8. A pharmaceutical composition which comprises a plurality of cells according to any of Claims 1 to 3.
9. A pharmaceutical composition according to Claim 8 for use in treating and/or preventing a disease.
- 5 10. A pharmaceutical composition according to Claim 8 for use in treating cancer.
11. A pharmaceutical composition for use according to Claim 9, in which the disease is immune rejection of the cell which comprises (i) a chimeric antigen receptor (CAR) or a transgenic TCR; and (ii) an engineered beta-2 microglobulin.
- 10 12. A method for making a cell according to any of Claims 1 to 3, which comprises the step of introducing: a nucleic acid construct according to Claim 4, a first nucleic acid sequence and a second nucleic acid sequence as defined in Claim 5, a vector according to Claim 6 or a first and a second vector as defined in Claim 7 into a cell *ex vivo*.
13. An engineered polypeptide comprising a beta-2 microglobulin component of a MHC class I molecule linked to the CD3 zeta endodomain.
- 15 14. A pharmaceutical composition according to Claim 8 for use in a method for deleting T cells *in vivo* in a subject which recognise a peptide presented by the MHC class I molecule of a cell according to any of Claims 1 to 3, in which the pharmaceutical composition is to be administered to the subject, such that T cells in the subject which recognise such a peptide/MHC are deleted by negative selection.
- 20 15. A pharmaceutical composition according to Claim 8 for use in a method for preventing immune rejection of a cell according to any of Claims 1 to 3 in a subject, which method comprises the step of deleting T cells *in vivo* which recognise a peptide presented by the MHC class I molecule of the cell by a method according to Claim 14.