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8,143,376; Filed 18-May-05; Issued 27-Mar-12; Immunocore Limited; High affinity NY-ESO T cell receptor.

8,088,379; Filed 26-Sep-07; Issued 3-Jan-12; Immunocore Limited; Modified T cell receptors and related materials and methods.

8,017,730; Filed 19-May-06; Issued 13-Sep-11; Immunocore Limited; T cell receptors which bind to antigen-HLA-A24.

7,763,718; Filed 29-Oct-07; Issued 27-Jul-10; Immunocore Limited; Soluble T cell receptors.

7,666,604; Filed 9-Jul-03; Issued 23-Feb-10; Immunocore Limited; Modified soluble T cell receptor.

7,608,410; Filed 7-Oct-08; Issued 27-Oct-09; Immunocore Limited; Method of improving T cell receptors.

7,569,664; Filed 3-Oct-03; Issued 4-Aug-09; Immunocore Limited; Single chain recombinant T cell receptors.

8,105,830; Filed 5-Nov-02; Issued 31-Jan-12; Altor Bioscience Corporation; Polyspecific binding molecules and uses thereof.

6,534,633; Filed 21-Oct-99; 18-Mar-03; Altor Bioscience Corporation; Polyspecific binding molecules and uses thereof.

~~What is claimed is:~~

CLAIMS

1. A modified T cell receptor, or antigen binding fragment thereof, comprising a Vα and a Vβ derived from a wild type T cell receptor, wherein the Vα, the Vβ, or both, comprise a mutation in one or more complementarity determining regions (CDRs) relative to the wild type T cell receptor, wherein the modified T cell receptor binds to a non-cognate peptide-MHC not bound by the wild type T cell receptor.

2. The modified T cell receptor of claim 1, wherein the wild type T cell receptor comprises the Vα amino acid sequence set forth in SEQ ID NO:1 and the Vβ amino acid sequence set forth in SEQ ID NO:2.

3. The modified T cell receptor of claim 2, comprising a modified Vα comprising an amino acid sequence having at least 80% identity to the Vα amino acid sequence set forth in SEQ ID NO:1 and a modified Vβ comprising an amino acid sequence having at least 80% identity to the Vβ amino acid sequence set forth in SEQ ID NO:2, wherein the modified T cell receptor does not bind to the cognate peptide-MHC bound by the wild type T cell receptor.

4. The modified T cell receptor of claim 2, wherein the modified T cell receptor comprises an amino acid substitution at one or more of CDR1α 31, CDR3α 98, CDR3β 99, CDR3α 97, CDR3β 102, CDR3α 99, CDR3β 100, CDR3β 101, CDR1α 32, CDR1β 30, CDR3β 98.

5. The modified T cell receptor of claim 2, wherein the modified T cell receptor comprises the wild type amino acid at position CDR2α 51.

6. The modified T cell receptor of claim 5, wherein the modified T cell receptor further comprises the wild type amino acid at position CDR1α 31.

7. The modified T cell receptor of claim 6, wherein the modified T cell receptor further comprises the wild type amino acid at position CD1α 28 and CD1α52.