

WHAT IS CLAIMED IS:

1. An isolated VGLL1 peptide of 35 amino acids in length or less comprising an amino acid sequence having at least 90%, preferably at least 95%, sequence identity to SEQ ID NO: 1, wherein the peptide is capable of inducing cytotoxic T lymphocytes (CTLs).
- 5 2. The peptide of claim 1, wherein the peptide comprises an amino acid sequence of SEQ ID NO:1.
3. The peptide of claim 1 or claim 2, wherein the peptide binds to a human class I HLA protein.
4. The peptide of claim 3, wherein the human class I HLA protein is from the HLA-A1
10 family, the HLA-A29 family, the HLA-A30 family, the HLA-B18 family, or the HLA-B44 family.
5. The peptide of claim 4, wherein the human class I HLA protein is HLA-A*0101, HLA-A*0102, HLA-A*0103, HLA-A*2902, HLA-A*3002, HLA-B*1801, or HLA-B*4403, preferably HLA-A*0101.
- 15 6. The peptide of any one of claims 1-4, wherein the peptide is 30, 25, 20, or 15 amino acids in length or less.
7. The peptide of claim 1, wherein the peptide consists of SEQ ID NO:1 and wherein the peptide selectively binds HLA-A*0101.
8. A pharmaceutical composition comprising the isolated peptide of any one of claims 1-
20 7 and a pharmaceutical carrier.
9. The composition of claim 8, wherein the pharmaceutical composition is formulated for parenteral administration, intravenous injection, intramuscular injection, inhalation, or subcutaneous injection.
10. The composition of claim 8, wherein the peptide is comprised in a liposome, lipid-
25 containing nanoparticle, or in a lipid-based carrier.

11. An isolated nucleic acid encoding the VGLL1 peptide of any one of claims 1-7.
12. A vector comprising a contiguous sequence consisting of the nucleic acid of claim 11.
13. An *in vitro* or *ex vivo* method of producing VGLL1-specific T cells comprising:
 - (a) obtaining a starting population of T cells; and
 - 5 (b) contacting the starting population of T cells with the VGLL1 peptide of any one of claims 1-7, thereby generating VGLL1-specific T cells.
14. The method of claim 13, wherein contacting is further defined as co-culturing the starting population of T cells with antigen presenting cells (APCs), wherein the APCs present the VGLL1 peptide of claim 1 on their surface.
- 10 15. The method of claim 14, wherein the APCs are dendritic cells.
16. The method of claim 13, wherein obtaining comprises isolating the starting population of T cells, preferably CD8⁺ T cells, from peripheral blood mononuclear cells (PBMCs).
17. A pharmaceutical composition comprising the VGLL1-specific T cells produced according to any one of claims 13-16.
- 15 18. A pharmaceutical composition according to any one of claims 8-10 and 17 for use in therapy.
19. Use of a pharmaceutical composition according to any one of claims 8-10 and 17 in the manufacture of a medicament for the treatment of cancer.