

WHAT IS CLAIMED IS:

1. A method for increasing T cell effector function in a T cell population, the method
5 comprising inhibiting the expression or function of the SAGA (Spt-Ada-Gcn5-acetyltransferase) gene regulation complex in T cells of the T cell population.
2. A method for increasing T cell effector function in a T cell population, the method comprising inhibiting one or more genetic subunits of the SAGA (Spt-Ada-Gcn5-acetyltransferase) gene regulation complex in T cells of the T cell population.
- 10 3. The method of claim 2, wherein the one or more genetic subunits are selected from ADA2B, CCDC101, TADA1, TAF5L, TAF6L, TAF10, SUPT7L, and TRRAP.
4. A method for increasing T cell effector function in a subject, the method comprising: contacting a T cell population with a composition comprising an inhibitor of the SAGA gene regulation complex *ex vivo*; and administering a therapeutically effective amount
15 of the T cell population to the subject.
5. The method of claim 4, wherein the subject is a patient diagnosed with cancer.
6. The method of claim 5, wherein the method further comprises administering a cancer therapy to the subject.
7. The method of claim 6, wherein the cancer therapy is an immunotherapy.
- 20 8. The method of claim 7, comprising administering to the subject an immune checkpoint inhibitor.
9. The method of any one of claims 1 to 8, wherein the T cells are activated CD8⁺ T cells.
10. The method of any one of claims 1 to 9, wherein the method reduces the activity of the SAGA gene regulation complex in the T cells by at least 70%, at least 80%, at least
25 90% or at least 99%, relative to a population of T cells wherein the SAGA gene regulation complex is uninhibited.

11. The method of any one of claims 1 to 10, wherein the T cell expresses a Chimeric Antigen Receptor (CAR).
12. The method of any one of claims 1 to 11, wherein the inhibitor is a small molecule.
13. The method of any one of claims 1 to 11, wherein the inhibitor comprises a nucleic acid capable of hybridizing with a nucleic acid encoding a genetic subunit of the SAGA gene regulation complex to inhibit the expression of the subunit.
14. The method of any one of claims 1 to 11, wherein the inhibitor comprises a Cas9 protein or a polynucleotide encoding said Cas9 protein and a CRISPR-cas system guide RNA polynucleotide.
15. A modified T cell that expresses a Chimeric Antigen Receptor (CAR) and wherein the expression or function of one or more of the subunits of the SAGA (Spt-Ada-Gcn5-acetyltransferase) gene regulation complex is inhibited.
16. A population of cells comprising a plurality of the modified T cells of claim 15.
17. A population of cells for use in a method of cancer treatment comprising a population of T cells, wherein one or more genetic subunits of the SAGA (Spt-Ada-Gcn5-acetyltransferase) gene regulation complex are inhibited in the T cell population.
18. The population of cells of any one of claims 16 or 17, wherein the T cells are activated CD8⁺ T cells.
19. The population of cells of any one of claims 16 to 18, wherein the one or more genetic subunits are selected from ADA2B, CCDC101, TADA1, TAF5L, TAF6L, TAF10, SUPT7L, and TRRAP.
20. The population of cells of any one of claims 16 to 19, wherein the activity of the SAGA gene regulation complex in the T cells is inhibited by at least 70%, at least 80%, at least 90% or at least 99%.
21. The population of any one of claims 16 to 20, wherein the inhibitor comprises a nucleic acid capable of hybridizing with a nucleic acid encoding a genetic subunit of the SAGA gene regulation complex to inhibit the expression of the subunit or a Cas9 protein or a

polynucleotide encoding said Cas9 protein and a CRISPR-cas9 system guide RNA polynucleotide.