

CLAIMS

1. A method of preventing a viral infection or the reactivation of a latent virus via a third-party allogeneic T cell therapy, the method comprising prophylactically administering to a patient a first antigen- specific T cell line that is a polyclonal third party T cell line, said T cell line comprising antigen specificity for one or more viral antigen and said T cell line comprising an HLA type that matches the patient's HLA type on 2 or more HLA alleles.
2. A method of controlling a viral infection or the reactivation of a latent virus via a third-party allogeneic T cell therapy, the method comprising prophylactically administering to a patient a first antigen- specific T cell line that is a polyclonal third party T cell line, said T cell line comprising antigen specificity for one or more viral antigen and said T cell line comprising an HLA type that matches the patient's HLA type on 2 or more HLA alleles.
3. The method of claim 1 or claim 2, wherein the patient is at a higher risk than an average person in the general population of contracting a viral infection or of having a latent virus reactivate.
4. The method of any one of claims 1-3, wherein the viral infection poses a greater risk to the patient's health or life than such an infection would pose to an average person in the general population.
5. The method of any one of claims 1-4, wherein the patient does not show evidence of an active viral infection or of reactivation of the latent virus when the T cell line is administered.
6. The method of any one of claims 1-5, wherein the patient has no detectable viremia or viruria when the T cell line is administered.
7. The method of any one of claims 1-6, wherein the patient has an absolute

lymphocyte count of less than 800 lymphocytes per μL blood.

8. The method of any one of claims 1-7, wherein the patient lacks endogenous T cells.
9. The method of any one of claims 1-8, wherein the patient is seropositive for any one or more of AdV, BKV, CMV, EBV, HHV6, HHV8, RSV, influenza, PIV, hMPV HBV, and SARS-CoV-2.
10. The method of any one of claims 1-9, wherein the first antigen-specific T cell line is administered to the patient a plurality of times.
11. The method of any one of claims 1-10, wherein the first antigen-specific T cell line is administered to the patient in a second administration about 4-12 weeks after a first administration.
12. The method of any one of claims 1-11, wherein the first antigen-specific T cell line is administered to the patient about every 4-12 weeks.
13. The method of claim 12, wherein the patient is immunocompromised, and wherein the first antigen-specific T cell line is administered to the patient about every 4-12 weeks until the patient is no longer immunocompromised.
14. The method of any one of claims 1-13, wherein the patient is administered a composition comprising a peptide or whole antigen that corresponds to the antigen for which the first antigen-specific T cell line is specific, and wherein the peptide or whole antigen is administered to the subject about 4-12 weeks after administration of the first antigen-specific T cell line.
15. The method of claim 14, wherein the composition further comprises an adjuvant.
16. The method of any one of claims 1-15,

- (a) further comprising administering to the patient one or more second antigen-specific T cell lines; or
 - (b) further comprising administering to the patient 2, 3, 4, 5, 6, 7, 8, 9, or 10 more second antigen-specific T cell lines.
17. The method of claim 16, wherein the first and the second antigen-specific T cell lines are administered to the patient concurrently.
18. The method of claim 16, wherein the first and the second antigen-specific T cell lines are administered to the patient sequentially.
19. The method of any one of claims 16-18, wherein the one or more second antigen-specific T cell lines are administered to the patient a plurality of times.
20. The method of claim 19, wherein the patient is immunocompromised, and wherein the one or more second antigen-specific T cell lines are administered to the patient about every 6-12 weeks until the patient is no longer immunocompromised.
21. The method of any one of claims 16-20, wherein at least one, and optionally each, second antigen-specific T cell line comprises the same antigen specificity as the first antigen-specific T cell line, but is generated from a different donor.
22. The method of any one of claims 1-21, wherein the 2 or more HLA alleles that are matched between the patient and the first antigen-specific T cell line and/or any second antigen-specific T cell line if one was administered comprises at least 2 HLA Class I alleles; at least 2 HLA Class II alleles; or at least 1 HLA Class I allele and at least 1 HLA Class II allele.
23. The method of any one of claims 1-22, wherein the viral infection is from a virus selected from EBV, CMV, Adenovirus, BK, JC virus, HHV6, RSV, Influenza, Parainfluenza, Bocavirus, Coronavirus, LCMV, Mumps, Measles, human

Metapneumovirus, Parvovirus B, Rotavirus, merkel cell virus, herpes simplex virus, HPV, HIV, HTLV1, HHV8, HBV, West Nile Virus, Zika virus, and Ebola virus.

24. The method of any one of claims 1-23, wherein the first and/or second antigen-specific T cell line comprises antigen specificity for at least one antigen or a portion thereof from a single virus.

25. The method of claim 24, wherein the single virus is selected from EBV, CMV, Adenovirus, BK, JC virus, HHV6, RSV, Influenza, Parainfluenza, Bocavirus, Coronavirus, LCMV, Mumps, Measles, human Metapneumovirus, Parvovirus B, Rotavirus, merkel cell virus, herpes simplex virus, HPV, HIV, HTLV1, HHV8, HBV, West Nile Virus, Zika virus, and Ebola virus.

26. The method of claim 25, wherein the single virus is HBV or HHV8.

27. The method of any one of claims 24-26, wherein the first antigen-specific T cell line comprises specificity for two or more antigens or a portion thereof from the single virus.

28. The method of any one of claims 1-23, wherein the first antigen-specific T cell line comprises antigen specificity for at least one antigen or a portion thereof, from at least two different viruses.

29. The method of any one of claims 1-23, wherein the first antigen-specific T cell line comprises antigen specificity for at least one antigen or a portion thereof, from 1-10 different viruses.

30. The method of any one of claims 1-23, wherein the first antigen-specific T cell line comprises antigen specificity for 2-5 antigens from each of at least two different viruses or at least a portion of 2-5 antigens from each of at least two different viruses.

31. The method of any one of claims 13-30, wherein the second antigen-specific T cell

line comprises antigen specificity for at least one antigen or a portion thereof, from 1-10 different viruses.

32. The method of any one of claims 13-31, wherein the second antigen-specific T cell line comprises antigen specificity for 2-5 antigens from each of at least two different viruses or at least a portion of 2-5 antigens from each of at least two different viruses.

33. The method of any one of claims 1-32, wherein the antigen is a viral antigen from a virus selected from EBV, CMV, Adenovirus, BK, JC virus, HHV6, RSV, Influenza, Parainfluenza, Bocavirus, Coronavirus, LCMV, Mumps, Measles, human Metapneumovirus (HMPV), Parvovirus B, Rotavirus, merkel cell virus, herpes simplex virus, HPV, HIV, HTLV1, HHV8, HBV, West Nile Virus, Zika virus, and Ebola virus.

34. The method of any one of claims 1-23, wherein the first and/or the second antigen-specific T cell comprises specificity for at least one antigen from each of the following viruses: RSV, Influenza, Parainfluenza, and HMPV.

35. The method of claim 34, wherein the Influenza antigens are selected from influenza A antigens NP1, MP1, and a combination thereof; the RSV antigens are selected from N, F, and a combination thereof; the hMPV antigens are selected from F, N, M2-1, M, and a combination thereof; and the PIV antigens are selected from M, HN, N, F, and a combination thereof.

36. The method of any one of claims 1-23, wherein the first and/or the second antigen-specific T cell comprises specificity for at least one antigen from each of the following viruses: EBV, CMV, adenovirus, BK, HHV6.

37. The method of claim 36, wherein the EBV antigens are selected from LMP2, EBNA1, BZLF1, and a combination thereof; the CMV antigens are selected from IE1, pp65, and a combination thereof; the adenovirus antigens are selected from Hexon, Penton, and a combination thereof; the BK virus antigens are selected from VP1, large T, and a combination thereof; and the HHV6 antigens are selected from U90, U11, U14, and a combination thereof.

38. The method of any one of claims 1-33, wherein the first and/or the second antigen-specific T cell comprises specificity for at least one antigen from HBV.
39. The method of any one of claims 1-33, wherein the first and/or the second antigen-specific T cell comprises specificity for at least one antigen from HHV8.
40. The method of any one of the preceding claims, wherein the antigen-specific T cells are produced by culturing, in the presence of the antigens or a portion thereof, mononuclear cells from a suitable donor having an HLA type that matches the patient's HLA type on 2 or more HLA alleles.
41. The method of any one of the preceding claims, wherein the antigen-specific T cells are produced by culturing, in the presence of pepmixes spanning the antigens, or a portion thereof, mononuclear cells from a suitable donor having an HLA type that matches the patient's HLA type on 2 or more HLA alleles.
42. The method of claim 40 or 41, wherein the culturing is in the presence of IL4 and IL7.
43. The method of claim 42, wherein the pepmix comprises 15 mer peptides.
44. The method of any one of claims 41-43, wherein the peptides in the pepmix that span the antigen overlap in sequence by 11 amino acids.
45. The method of any one of the preceding claims, wherein the patient is immunocompromised.
46. The method of any one of the preceding claims, wherein the patient is immunocompromised due to a treatment the patient received to treat a disease or condition.
47. The method of claim 46, wherein the treatment is a hematopoietic stem cell transplant, solid organ transplant, or anti-cancer agent.
48. The method of claim 46, wherein the treatment the patient received to treat a disease or

condition is selected from the group consisting of reduced intensity conditioning, myeloablative conditioning, non-myeloablative conditioning, chemotherapy, and immunosuppressive drugs.

49. The method of claim 45, wherein the patient is immunocompromised due to age.
50. The method of claim 49, wherein the patient is less than 1 year of age.
51. The method of claim 49, wherein the patient is more than 65 years of age.
52. The method of claim 45, wherein the subject has an immune deficiency condition.
53. The method of claim 45, wherein the immune deficiency is primary immune deficiency.
54. The method of claim 45, wherein the subject has an HIV infection.
55. The method of any one of the preceding claims, wherein the patient is in need of a transplant therapy.
56. The method of claim 45, wherein the patient has a leukemia, myeloma, or lymphoma and is in need of a hematopoietic stem cell transplant therapy.
57. The method of any one of the preceding claims, wherein the first and /or one or more of each second T cell lines persist in vivo for at least 12 weeks.
58. The method of any one of the preceding claims, wherein the first and /or one or more of each second T cell lines persist in vivo for at least 12 weeks absent any active infection in the patient.