CLAIMS

We claim the following:

1. ~~A method for inducing an immune response in a subject, the method comprising~~ Use of (a) ~~administering to the subject~~ at least one dose of a first immunogenic composition comprising at least a first immunogen, wherein the at least one immunogen is capable of inducing an immune response specific for a first designated antigen; and (b) ~~administering to the subject~~ at least one dose second immunogenic composition comprising a recombinant expression vector comprising a nucleotide sequence that encodes the first immunogen, in the manufacture of a medicament for inducing an immune response in a subject, wherein the medicament is to be administered into the subject to thereby ~~inducing~~ induce an immune response specific for the first designated antigen.

2. The ~~method~~ use of claim 1, wherein the first immunogen is a first polypeptide, and said nucleotide sequence encodes a second polypeptide that is different from the first polypeptide.

3. The ~~method~~ use of claim 1, wherein (i) the first immunogenic composition further comprises an adjuvant; (ii) the second composition further comprises an adjuvant; or (iii) each of the first composition and the second composition further comprises an adjuvant.

4. The ~~method~~ use of either claim 1 or claim 3, wherein the second immunogenic composition is to be administered subsequent to administration of the first immunogenic composition.

5. The ~~method~~ use of either claim 1 or claim 3, wherein the second immunogenic composition is to be administered prior to administration of the first immunogenic composition.

6. The ~~method~~ use of either claim 1 or claim 3, wherein the first immunogenic composition and the second immunogenic composition are to be administered concurrently.

7. The ~~method~~ use of any one of claims 1-5, wherein at least two doses of the first immunogenic composition are administered or wherein at least two doses of the second immunogenic composition are administered.

8. The ~~method~~ use of claim 1 or claim 3, wherein (a) two doses; (b) three doses; (c) four doses; or (d) five doses of the first immunogenic composition are to be administered.

9. The ~~method~~ use of claim 8, wherein (a) each dose of the first immunogenic composition is to be administered prior to administration of the second immunogenic composition; (b) at least one dose of the first immunogenic composition is to be administered subsequent to administration of the second immunogenic composition; (c) at least one dose of the first immunogenic composition is to be administered concurrently with administration of the second immunogenic composition; (d) at least one dose of the first immunogenic composition is to be administered prior to administration of the second immunogenic composition and each of any remaining doses of the first immunogenic composition is to be administered subsequent to administration of the second immunogenic composition; or (e) each dose of the first composition is to be administered concurrently with the second composition.

10. The ~~method~~ use of any one of claims 1-9, wherein the immune response induced by the first immunogen comprises a CD4 T cell immune response specific for the first designated antigen.

11. The ~~method~~ use of any one of claims 1-10, wherein the immune response induced by the first immunogen comprises a CD8 T cell immune response specific for the first designated antigen.

12. The ~~method~~ use of any one of claims 1-11, wherein the first immunogenic composition further comprises a second immunogen, and wherein the recombinant expression vector further comprises a nucleotide sequence that encodes the second immunogen, wherein the second immunogen induces an immune response specific for a second designated antigen.

13. The ~~method~~ use of claim 12, wherein the first designated antigen and the second designated antigen are the same.

14. The ~~method~~ use of claim 12, wherein the first designated antigen and the second designated antigen are different.

15. The ~~method~~ use of any one of claims 1-11, wherein the recombinant expression vector further comprises a nucleotide sequence that encodes a second immunogen capable of inducing an immune response specific for a second designated antigen.

16. The ~~method~~ use of claim 15, wherein the first designated antigen and the second designated antigen are the same.

17. The ~~method~~ use of claim 15, wherein the first designated antigen and the second designated antigen are different.

18. The ~~method~~ use of any one of claims 12-17, wherein the immune response induced by the first immunogen comprises a CD4 T cell response specific for the first designated antigen.

19. The ~~method~~ use of any one of claims 12-17, wherein the immune response induced by the second immunogen comprises a CD8 T cell response specific for the second designated antigen.

20. The ~~method~~ use of any one of claims 3-19, wherein the adjuvant is a non-toxic lipid A-related adjuvant.

21. The ~~method~~ use of claim 20, wherein the non-toxic lipid A-related adjuvant is glucopyranosyl lipid A (GLA).

22. The ~~method~~ use of claim 21, wherein GLA is formulated in a stable oil-in-water emulsion.

23. The ~~method~~ use of any one of claims 1-22, wherein the first designated antigen is (a) a tumor-associated antigen or (b) from an infectious microorganism selected from a virus, a bacterium, a fungus, and a parasite.

24. The ~~method~~ use of claim 23, wherein the first designated antigen is a tumor-associated antigen selected from a renal cell carcinoma antigen, a prostate cancer antigen, a mesothelioma antigen, a pancreatic cancer antigen, a melanoma antigen, a breast cancer antigen, a lung cancer antigen, and an ovarian cancer antigen.

25. The ~~method~~ use of claim 24, wherein the prostate cancer antigen is prostatic acid phosphatase, prostate specific antigen, NKX3.1, or prostate specific membrane antigen.

26. The ~~method~~ use of claim 23, wherein the first designated antigen is from a virus.

27. The ~~method~~ use of claim 26, wherein the virus is Herpes Simplex Virus-2 (HSV-2).

28. The ~~method~~ use of claim 27, wherein the first designated antigen is HSV-2 UL19 polypeptide or HSV-2 gD polypeptide.

29. The ~~method~~ use of any one of claims 12-22, wherein each of the first designated antigen and the second designated antigen is a tumor-associated antigen.

30. The ~~method~~ use of claim 29, wherein each of the first designated antigen and the second designated antigen is selected from a renal cell carcinoma antigen, a prostate cancer antigen, a mesothelioma antigen, a pancreatic cancer antigen, a melanoma antigen, a breast cancer antigen, a lung cancer antigen, and an ovarian cancer antigen.

31. The use ~~method~~ according to claim 30, wherein each of the first designated antigen and the second designated antigen is a prostate cancer antigen selected from prostatic acid phosphatase, prostate specific antigen, NKX3.1, or prostate specific membrane antigen.

32. The use ~~method~~ of any one of claims 12-22, wherein each of the first designated antigen and the second designated antigen is an antigen from an infectious microorganism selected from a virus, a bacterium, a fungus, and a parasite.

33. The use ~~method~~ of claim 32, wherein the infectious disease organism is a virus.

34. The use ~~method~~ of claim 33, wherein the virus is Herpes Simplex Virus-2 (HSV-2).

35. The use ~~method~~ of claim 34, wherein at least one of the first designated antigen and the second designated antigen is HSV-2 UL19 polypeptide and the other of the first designated antigen and the second designated antigen is HSV-2 gD polypeptide.

36. The use ~~method~~ of any one of claims 1-35, wherein the recombinant expression vector is selected from a lentiviral vector genome, poxvirus vector genome, vaccinia virus vector genome, adenovirus vector genome, adenovirus-associated virus vector genome, herpes virus vector genome, and an alpha virus vector genome.

37. The use ~~method~~ of claim 36, wherein the recombinant expression vector is incorporated into a vector particle.

38. The use ~~method~~ of claim 37, wherein the vector particle preferentially delivers the recombinant expression vector to an antigen-presenting cell.

39. The use ~~method~~ of claim 38, wherein the antigen-presenting cell is a dendritic cell, preferably a dendritic cell expressing DC-SIGN.

40. The use ~~method~~ of any one of claims 37-39, wherein the vector particle is a lentiviral vector particle that comprises the lentiviral vector genome; a poxvirus vector particle that comprises the poxvirus vector genome; a vaccinia virus vector particle that comprises the vaccinia virus vector genome; an adenovirus vector particle that comprises the adenovirus vector genome; an adenovirus-associated virus vector particle that comprises the adenovirus-associated virus vector genome; a herpes virus vector particle that comprises the herpes virus vector genome; or an alpha virus vector particle that comprises the alpha virus vector genome.

41. The use ~~method~~ of claim 40, wherein the vector particle is a lentiviral vector particle that comprises the lentiviral vector genome, and an envelope that preferentially delivers the lentiviral vector particle to a dendritic cell expressing DC-SIGN, optionally an envelope that is a variant of an Arbovirus envelope, or an alphavirus envelope.

42. The use ~~method~~ of claim 41, wherein the vector particle is an alphavirus vector particle comprising an envelope that preferentially delivers the alphavirus vector particle to a dendritic cell expressing DC-SIGN.

43. The use ~~method~~ of claim 42, wherein the lentiviral vector particle further comprises an envelope comprising a Sindbis virus E2 glycoprotein comprising an amino acid sequence having at least one amino acid change compared to SEQ ID NO:1, wherein residue 160 of SEQ ID NO:1 is either absent or an amino acid other than glutamic acid, and wherein the E2 glycoprotein is not a moiety of a fusion protein that comprises Sindbis virus E3 protein.

44. The use ~~method~~ of claim 43, wherein the E2 glycoprotein binds to dendritic cell-specific intercellular adhesion molecule-3-grabbing non-integrin (DC-SIGN).

45. A preparation comprising (a) a first immunogenic composition that comprises at least a first immunogen capable of inducing an immune response specific for a first designated antigen; and (b) a second immunogenic composition that comprises a