WHAT IS CLAIMED IS:

1. A recombinant adenovirus (Ad) comprising (a) Ad capsid polypeptides from a first Ad strain and (b) at least one hexon polypeptide from one or more different Ad strains, wherein at least one hypervariable region (HVR) of the hexon polypeptide is different from the HVRs of the first Ad strain.

2. The recombinant Ad of claim 1, wherein the first Ad strain and the one or more different Ad strains are serotypically distinct.

3. The recombinant Ad of claims 1-2, wherein the first Ad strain is a human Ad6 strain, and wherein a second Ad strain is a human Ad57 strain.

4. The recombinant Ad of any one of claims 1-3, further comprising a capsid polypeptide from one or more different Ad strains, wherein the capsid polypeptide is different from a capsid polypeptide of the first Ad strain.

5. The recombinant Ad of any one of claims 1-4, further comprising one or more targeting polypeptides, antigenic polypeptides, enzymes, receptors or ligands.

6. The recombinant Ad of claim 5, wherein the targeting polypeptide comprises an amino acid sequence selected from SEQ ID NO: 1-41 and SEQ ID NO:46-47.

7. The recombinant Ad of any one of claims 1-6, further comprising amino acid substitutions and/or amino acid modifications, wherein the amino acid substitution is to a cysteine and the amino acid modification is selected from PEGylation and BAPylation.

8. The recombinant Ad of any one of claims 1-7, wherein the recombinant Ad is a conditionally-replicating Ad (CRAd).

9. The recombinant Ad of claim 8 comprising an amino acid sequence of SEQ ID NO:43, SEQ ID NO:44 or SEQ ID NO:45.

10. A recombinant adenovirus (Ad) comprising (a) an Ad genome encoding hexon polypeptides from a first Ad strain and (b) a nucleic acid encoding at least one hexon polypeptide from one or more different Ad strains, wherein at least one hypervariable region (HVR) of the hexon polypeptide is different from the HVRs encoded by the Ad genome of the first Ad strain.

11. The recombinant Ad of claim 10, wherein the first Ad strain and the one or more different Ad strains are serotypically distinct.

12. The recombinant Ad of claims 10-11, wherein the first Ad strain is a human Ad6 strain, and wherein a second Ad strain is a human Ad57 strain.

13. The recombinant Ad of any one of claims 10-12, further comprising a capsid polypeptide from one or more different Ad strains, wherein the capsid polypeptide is different from a capsid polypeptide of the first Ad strain.

14. The recombinant Ad of any one of claims 10-13, further comprising one or more nucleic acids encoding targeting polypeptides, antigenic polypeptides, enzymes, receptors or ligands.

15. The recombinant Ad of claim 14, wherein the nucleic acid encodes a targeting polypeptide having an amino acid sequence selected from SEQ ID NO: 1-41 and SEQ ID NO:46-47.

16. The recombinant Ad of any one of claims 10-15, further comprising amino acid substitutions and/or amino acid modifications, wherein the amino acid substitution is to a cysteine and the amino acid modification is selected from PEGylation and BAPylation.

17. The recombinant Ad of any one of claims 10-16, comprising further modifications wherein the recombinant Ad is a conditionally-replicating Ad (CRAd).

18. The recombinant Ad of claim 17 comprising a nucleic acid encoding an amino acid sequence of SEQ ID NO:43, SEQ ID NO:44 or SEQ ID NO:45.

19. A method for treating a mammal having cancer, wherein said method comprises administering, to said mammal, a recombinant adenovirus (Ad) of any one of claims 1-18.

20. The method of claim 19, wherein said cancer is selected from the group consisting of prostate cancer, ovarian cancer, lung cancer, hepatocellular carcinoma, pancreatic cancer, kidney cancer, melanoma, brain cancer, colon cancer, lymphoma, myeloma, lymphocytic leukemia, and myelogenous leukemia.

21. The method of any one of claims 19-20, wherein said administering comprises systemic administration.

22. The method of claim 21, wherein in systemic administration comprises intramuscular, intranasal, or intravenous administration.

23. The method of any one of claims 19-22, wherein said administering comprises local administration.

24. The method of claim 24, wherein said local administration comprises intratumoral injection.

25. Use of the recombinant Ads of any one of claims 1-18 for the treatment of cancer.

26. Use of a recombinant adenovirus (Ad) comprising (a) Ad capsid polypeptides from a first Ad strain and (b) at least one hexon polypeptide from one or more different Ad strains, wherein at least one hypervariable region (HVR) of the hexon polypeptide is different from the HVRs of the first Ad strain, as a medicament for the treatment of cancer.

CLAIMS

1. A recombinant adenovirus (Ad) comprising (a) Ad capsid polypeptides from a human Ad6 strain and (b) at least two hexon hypervariable region (HVR) polypeptides from a human Ad57 strain, said recombinant Ad further comprising nucleic acids which encode 4-1BBL, CD40L or a combination of 4-1BBL and CD40L.

2. A recombinant adenovirus (Ad) comprising (a) Ad capsid polypeptides from a human Ad6 strain and (b) at least two hexon hypervariable region (HVR) polypeptides from a human Ad57 strain, wherein the recombinant Ad is a conditionally-replicating Ad (CRAd), said CRAd further comprising nucleic acids which encode 4-1BBL, CD40L or a combination of 4-1BBL and CD40L.

3. The recombinant Ad of claims 1 or 2, wherein the capsid hexon polypeptides of the human Ad6 strain comprise capsid hexon hypervariable region (HVR) polypeptides 1-7 from the human Ad57 strain.

4. The recombinant Ad of claims 1 or 2, wherein the capsid hexon polypeptides of the human Ad6 strain comprise capsid hexon hypervariable region (HVR) polypeptides 2-6 from the human Ad57 strain.

5. The recombinant Ad of any one of claims 1-4, further comprising a capsid polypeptide from one or more different Ad strains, wherein the capsid polypeptide is a fiber polypeptide which is different from a fiber polypeptide of the human Ad6 and human Ad57 strains.

6. The recombinant Ad of any one of claims 1-5, further comprising amino acid substitutions and/or amino acid modifications, wherein the amino acid substitution is to a cysteine in HVR polypeptides and the amino acid modification is selected from PEGylation and BAPylation of a cysteine in the HVR polypeptide.

7. The recombinant Ad of claim 2 comprising an amino acid sequence of SEQ ID NO:43, SEQ ID NO:44 or SEQ ID NO:45.

8. A recombinant adenovirus (Ad) comprising (a) an Ad genome encoding hexon polypeptides from a human Ad6 strain and (b) nucleic acids encoding at least two hexon hypervariable region (HVR) polypeptides from a human Ad57 strain, said recombinant Ad further comprising nucleic acids which encode 4-1BBL, CD40L or a combination of 4-1BBL and CD40L.

9. A recombinant adenovirus (Ad) comprising (a) an Ad genome encoding hexon polypeptides from a human Ad6 strain and (b) nucleic acids encoding at least two hexon hypervariable region (HVR) polypeptides from a human Ad57 strain, wherein the recombinant Ad is a conditionally-replicating Ad (CRAd), said CRAd further comprising nucleic acids which encode 4-1BBL, CD40L or a combination of 4-1BBL and CD40L.

10. The recombinant Ad of claims 8 or 9, wherein the capsid hexon polypeptides of the human Ad6 strain comprise capsid hexon hypervariable region (HVR) polypeptides 1-7 from the human Ad57 strain.

11. The recombinant Ad of claims 8 or 9, wherein the capsid hexon polypeptides of the human Ad6 strain comprise capsid hexon hypervariable region (HVR) polypeptides 2-6 from the human Ad57 strain.

12. The recombinant Ad of any one of claims 8-10, further comprising nucleic acids encoding a capsid polypeptide from one or more different Ad strains, wherein the capsid polypeptide is a fiber polypeptide which is different from a fiber polypeptide of the human Ad6 and human Ad57 strains.

13. The recombinant Ad of claim 9, which is modified to comprise a dl1101 deletion in nucleic acids encoding an E1 polypeptide, modified to comprise a dl1107 deletion in nucleic acids encoding an E1 polypeptide, or modified to comprise a dl1101 deletion and a dl1107 deletion in nucleic acids encoding an E1 polypeptide.

14. The recombinant Ad of claim 13 comprising a nucleic acid encoding an amino acid sequence of SEQ ID NO:43, SEQ ID NO:44 or SEQ ID NO:45.

15. Use of a recombinant adenovirus (Ad) of any one of claims 1-14, in the manufacture of a pharmaceutical composition for the treatment of cancer in a mammal, wherein said pharmaceutical composition is to be administered to said mammal.

16. The use according to claim 15, wherein said cancer is selected from the group consisting of prostate cancer, ovarian cancer, lung cancer, hepatocellular carcinoma, pancreatic cancer, kidney cancer, melanoma, brain cancer, colon cancer, lymphoma, myeloma, lymphocytic leukemia, and myelogenous leukemia.

17. The use according to any one of claims 15-16, wherein said pharmaceutical composition is to be administered systematically.

18. The use according to claim 17, wherein said pharmaceutical composition is to be administered intramuscularly, intranasally, or intravenously.

19. The use according to any one of claims 15-16, wherein said pharmaceutical composition is to be administered locally.

20. The use according to claim 19, wherein said pharmaceutical composition is to be injected intratumorally.

21. A pharmaceutical composition comprising a recombinant adenovirus (Ad) of any one of claims 1-14, for use in the treatment of cancer.