CLAIMS:

1. A recombinant modified Vaccinia virus Ankara (MVA) comprising:

(a) a nucleic acid encoding HERV-K-env/MEL;

(b) a nucleic acid encoding HERV-K-gag;

(c) a nucleic acid encoding FOLR1 and PRAME; and

(d) a nucleic acid encoding 4-1BB ligand (4-1BBL).

2. The recombinant MVA according to claim 1, wherein said nucleic acid of (c) encodes FOLR1 and PRAME as a fusion protein.

3. The recombinant MVA according to claim 1 or 2, further comprising a nucleic acid encoding a CD40 ligand (CD40L).

4. A recombinant modified Vaccinia virus Ankara (MVA) comprising:

(i) a nucleic acid encoding HERV-K-env/MEL;

(ii) a nucleic acid encoding HERV-K gag;

(iii) a nucleic acid encoding FOLR1 and PRAME as a fusion protein having the sequence set forth in SEQ ID NO:9; and

(iv) a nucleic acid encoding 4-1BBL.

5. The recombinant MVA according to claim 4 further comprising:

(v) a nucleic acid encoding CD40L.

6. The recombinant MVA according to any of claims 1 to 5, wherein the recombinant MVA is MVA-BN.

7. A pharmaceutical preparation or composition comprising a recombinant MVA according to claim 6.

8. The pharmaceutical preparation or composition according to claim 7 which is adapted to intratumoral administration.

9. A recombinant MVA according to any of claims 1 to 8 for use as a medicament or a vaccine for use in the treatment of cancer.

10. A recombinant MVA according to any of claims 1 to 8 for use in the treatment of cancer, preferably melanoma, breast cancer, colon cancer, or ovarian cancer.

11. A recombinant MVA according to any of claims 1 to 8 for use in enhancing an inflammatory response in a cancerous tumor, reducing the size of a cancerous tumor, retarding or arresting the growth of a cancerous tumor and/or increasing the overall survival of a subject, preferably a human.

12. The recombinant MVA for use according to claim 9, wherein the recombinant MVA is administered intratumorally and/or intravenously.

13. The recombinant MVA for use according to claim 9, wherein the recombinant MVA is used in combination with a TAA specific antibody.

14. The recombinant MVA for use according to claim 9, wherein the recombinant MVA is used in combination with an immune checkpoint molecule antagonist.

15. Use of a recombinant MVA according to any of claims 1 to 8 in the manufacture of a medicament or a vaccine for the treatment of cancer.

16. Use of a recombinant MVA according to any of claims 1 to 8 in the manufacture of a medicament or a vaccine for the treatment of melanoma, breast cancer, colon cancer, or ovarian cancer.

17. Use of a recombinant MVA according to any of claims 1 to 8 in the manufacture of a medicament or a vaccine for the enhancement of an inflammatory response in a cancerous tumor, reducing the size of a cancerous tumor, retarding or arresting the growth of a cancerous tumor and/or increasing the overall survival of a subject, preferably a human.

18. The use according to claim 9, wherein the recombinant MVA is to be administered intratumorally and/or intravenously.

19. The use according to claim 9, wherein the recombinant MVA is to be used in combination with a TAA specific antibody.

20. The use according to claim 9, wherein the recombinant MVA is to be used in combination with an immune checkpoint molecule antagonist.