Claims

1. A vaccine/inhibitor combination comprising:

   (i) as vaccine an RNA vaccine comprising at least one RNA, wherein said at least one RNA is an mRNA, comprising at least one open reading frame (ORF) coding for at least one antigen and

   (ii) as inhibitor a composition comprising a PD-1 pathway inhibitor, wherein the PD-1 pathway inhibitor is an antagonistic antibody directed against PD-L1.

2. The combination according to claim 1, wherein the antibody directed against PD-L1 is MDX-1105/BMS-936559, MPDL3280A/RG7446 (atezolizumab), or *MEDI4736 (durvalumab).*

3. The combination according to any one of claims 1-2, wherein the at least one RNA of the RNA vaccine is an isolated RNA.

4. The combination according to any one of claims 1- 3, wherein the at least one RNA of the RNA vaccine is a stabilized RNA.

5. The combination according to any one of claims 1-4, wherein the at least one RNA of the RNA vaccine is at least partially G/C modified.

6. The combination according to claim 5, wherein the G/C content of the at least one open reading frame of the at least one RNA of the RNA vaccine is increased compared to the wild type open reading frame.

7. The combination according to any one of claims 1-6, wherein the at least one RNA of the RNA vaccine comprises a codon-optimized region.

8. The combination according to claim 7, wherein the at least one open reading frame of the at least one RNA of the RNA vaccine is codon-optimized

9. The combination according to any one of claims 1-8, wherein the at least one RNA of the RNA vaccine is complexed with a carrier.

10. The combination according to claim 9, wherein the carrier is a cationic or polycationic compound or a polymeric carrier.

11. The combination according to claim 10, wherein the carrier is protamine.

12. A pharmaceutical composition comprising:
    (i) an RNA vaccine comprising at least one RNA comprising at least one open reading frame coding for at least one antigen as defined in any one of the preceding claims and
    (ii) a PD-1 pathway inhibitor as defined in any one of the preceding claims.

13. A kit of parts comprising:
    (i) an RNA vaccine comprising an at least one RNA comprising at least one open reading frame coding for at least one antigen as defined in any one of the preceding claims
    and
    (ii) a composition comprising a PD-1 pathway inhibitor as defined in any one of the preceding claims.

14. The combination according to any one of claims 1-11, the pharmaceutical composition according to claim 12, the kit of parts according to claim 13 for medical use.

15. Use of the combination according to claim 14 in the manufacture of a medicament for preventing or treating a tumor or cancer disease or an infectious disease.

16. The combination or kit of parts for medical use according to claim 14 or 15, wherein the PD-1 pathway inhibitor and the RNA vaccine are to be administered to a patient in need thereof sequentially or concurrently.

17. The combination or kit of parts for use according to claim 16, wherein the PD-1 pathway inhibitor and the RNA vaccine are to be administered via different administration routes.

18. A PD-1 pathway inhibitor as defined in any one of the preceding claims for use in therapy in combination with an RNA vaccine as defined in any one of the preceding claims.

19. An RNA vaccine as defined in any one of the preceding claims for use in therapy in combination with a PD-1 pathway inhibitor as defined in any one of the preceding claims.