CLAIMS

1. A combination comprising:

- one or more mRNA molecules encoding for a functional immunostimulatory protein selected from the list comprising CD40L, constitutively active TLR4 (caTLR4) and CD70; and

- one or more mRNA molecules encoding a bacterial, viral or fungal antigen; wherein said combination is in the form of an intranasal formulation.

2. The combination of claim 1, wherein said one or more mRNA molecules encode for all of said functional immunostimulatory proteins CD40L, caTLR4 and CD70.

3. The combination as defined in any one of claims 1 or 2; wherein said antigen is an antigen from a respiratory tract pathogen.

4. The combination as defined in any one of claims 1 to 3; wherein said antigen is an M (matrix), N (nucleocapid) or S (spike) antigen, an artificial antigen designed to contains T cell stimulatory epitopes and suppress T regulatory epitopes or a surface antigen designed to elicit antibody responses.

5. The combination as defined in claim 3; wherein said respiratory tract pathogen is a coronavirus.

6. The combination as defined in any one of claims 1 to 5, wherein said mRNA molecules are formulated in the form of nanoparticles, such as lipid-based nanoparticles.

7. The combination as defined in any one of claims 1 to 5; wherein said mRNA molecules are formulated in the form of lipoplexes, dendrimers, polyplexes or hybrid lipopolyplexes.

8. The combination as defined in claim 7, wherein said mRNA molecules are formulated in the form of a polyplex using polyethyleimine.

9. The combination as defined in any one of claims 1 to 8, wherein one or more of said mRNA molecules comprise a 5’ CAP-1 structure.

10. The combination as defined in any one of claims 1 to 9; wherein one or more of said mRNA molecules comprise one or more modified nucleosides, in particular N1 -methyl-pseudouridine.

11. The combination as defined in any one of claims 1 to 10 for use in human or veterinary medicine.

12. The combination as defined in any one of claims 1 to 10 for use in the prevention and/or treatment of an infectious disease.

13. Use of a combination as defined in anyone of claims 1 to 10 in the manufacture of a medicament for the prevention or treatment of an infectious disease, the medicament is to be administered to a subject in need thereof.