CLAIMS

What is claimed is:

1. An immunogenic composition comprising:

(a) a coronavirus S (CoV S) glycoprotein in the form of a detergent-core nanoparticle, wherein the detergent is a non-ionic detergent;

(b) at least three hemagglutinin (HA) glycoproteins, wherein each HA glycoprotein is from a different influenza strain; and

(c) a pharmaceutically acceptable buffer.

2. The immunogenic composition of claim 1, wherein the CoV S glycoprotein comprises or consists of an amino acid sequence with at least 90 %, at least 91 %, at least 92 %, at least 93 %, at least 94 %, at least 95 %, at least 96 %, at least 97 %, at least 98 %, at least 99 %, or 100 % identity to any one of SEQ ID NOS: 86-89, 105, 106, 112-115, 174, 175, 176, 181-184, 186, 188, 190, 195, 217-228 233-236, 243, 255-264, 273-280, and 298-302.

3. The immunogenic composition of claim 1 or 2, comprising from about 20 µg to about 50 µg of CoV S glycoprotein and from about 24 µg to about 40 µg of hemagglutinin per strain.

4. The immunogenic composition of any one of claims 1-3, wherein a ratio of the amount of hemagglutinin per strain to the amount of CoV S glycoprotein in the immunogenic composition is from about 1:1 to about 5:1.

5. The immunogenic composition of any one of claims 1, 2, or 4, comprising from about 30 µg to about 54 µg of hemagglutinin per strain.

6. The immunogenic composition of any one of claims 1-5, comprising from about 25 µg to about 35 µg of CoV S glycoprotein.

7. An immunogenic composition, comprising:

(a) at least three hemagglutinin (HA) glycoproteins, wherein each HA glycoprotein is from a different influenza strain, wherein from 30 to 60 µg of HA per strain is present in the composition; and

(b) a pharmaceutically acceptable buffer.

8. The immunogenic composition of claim 7, further comprising a coronavirus S (CoV S) glycoprotein in the form of a detergent-core nanoparticle, wherein the detergent is a non-ionic detergent.

9. The immunogenic composition of any one of claims 7-8, wherein about 30 µg, about 45 µg, or about 60 µg of HA per strain is present in the composition.

10. The immunogenic composition of any one of claims 7-8, further comprising an adjuvant.

11. The immunogenic composition of claim 10, wherein the adjuvant is a saponin adjuvant.

12. The immunogenic composition of claim 11, wherein the saponin adjuvant comprises at least two iscom particles, wherein:

a first iscom particle comprises fraction A of *Quillaja Saponaria* Molina and not fraction C of *Quillaja Saponaria* Molina; and

a second iscom particle comprises fraction C of *Quillaja Saponaria* Molina and not fraction A of *Quillaja Saponaria* Molina.

13. The immunogenic composition of claim 12, comprising about 50 µg or about 75 µg adjuvant.

14. Use of the immunogenic composition of any one of claims 1-13 in the manufacture of a medicament for stimulating an immune response against SARS-CoV-2, a heterogeneous SARS-CoV-2 strain, an influenza virus, or a combination thereof in a subject.

15. The use of claim 14, wherein the heterogenous SARS-CoV-2 strain is selected from the group consisting of Cal.20C SARS-CoV-2 strain, P.1 SARS-CoV-2 strain, B.1.351 SARS-CoV-2 strain, B.1.1.7 SARS-CoV-2 strain, SARS-CoV-2 B.1.617.2 strain, B.1.525 strain, B. 1.526 strain, B.1.617.1 strain, C.37 strain, B.1.621 strain, or the SARS-CoV-2 omicron strain.

16. A prefilled syringe comprising the immunogenic composition of any one of claims 1-15.