

Supplementary material:

Table 1: siRNA result for Haemagglutinin for Asia

| S# | SiRNA target sites + 2 Nucleotides overhang | % conservation |
|----|---|-----------------|
| 1 | CAGCAACTGTTACCCTTATGAtg | 82.9 (834/1006) |
| 2 | AAGCATCTATTGGACAATAGTaa | 81.6 (821/1006) |
| 3 | TACGGTTTCAGGCATCAAAAATtc | 81.2 (817/1006) |
| 4 | ACGGTTTCAGGCATCAAAAATct | 81.2(817/1006) |
| 5 | ATGGAAGCATTCCCAATGACAaa | 80.8 (813/1006) |
| 6 | TGGAAGCATTCCCAATGACAaac | 80.8 (813/1006) |
| 7 | CAGCAACTGTTACCCTTATGAtg | 72.2 (86/119) |
| 8 | TACGGTTTCAGGCATCAAAAATtc | 72.2 (86/119) |
| 9 | ACGGTTTCAGGCATCAAAAATct | 72.2 (86/119) |
| 10 | GGCAACATTAGGTGCAACATTtg | 69.7 (83/119) |
| 11 | AGGTGCAACATTTCGATTGAgT | 68 (81/119) |
| 12 | ATGGAAGCATTCCCAATGACAaa | 67.2 (80/119) |
| 13 | TGGAAGCATTCCCAATGACAaac | 67.2 (80/119) |

Table 2: siRNA result for Neuraminidase for Asia

| S# | SiRNA target sites + 2 Nucleotides overhang | % conservation |
|----|---|------------------|
| 1 | TAGCATGGTCCAGCTCAAGTTgt | 85 (1112/1307) |
| 2 | CTCAAGTTGTACGATGGAAAag | 84.1 (1100/1307) |
| 3 | TGCAACTGCTAGCTTCATTTAtg | 83.3 (1090/1307) |
| 4 | ATGCAACTGCTAGCTTCATTTat | 83.3 (1089/1307) |
| 5 | GTGCTTTTATGTGGAGTTGATaa | 82 (1073/1307) |
| 6 | ATCCAAAATCAAAAAGATAATAAca | 81.4 (1064/1307) |
| 7 | ATGAATCCAAATCAAAAAGATAat | 74 (120/162) |
| 8 | ATCCAAAATCAAAAAGATAATAAca | 74 (120/162) |
| 9 | TAGCATGGTCCAGCTCAAGTTgt | 72.8 (118/162) |
| 10 | CTCAAGTTGTACGATGGAAAag | 72.2 (117/162) |
| 11 | TGCAACTGCTAGCTTCATTTAtg | 71.6 (116/162) |
| 12 | ATGCAACTGCTAGCTTCATTTat | 70.9 (115/162) |
| 13 | TTGCACCTTTTCTAAGGACAat | 70.3 (114/162) |

Table 3: Haemagglutinin sequences used for BLAST and multiple sequence alignment.

| S# | Influenza A | Accession Number | Country of Origin |
|----|-------------|------------------|-------------------|
| 1 | H1 | 33622380 | Beijing |
| 2 | H1 | 33622384 | Shenzhen |
| 3 | H1 | 221340 | A/Suita/ Japan |
| 4 | H1 | 554652 | USSR |
| 5 | H2 | 305115 | Japan |
| 6 | H2 | 408525 | Krasnodar |
| 7 | H3 | 49339089 | Hong kong |
| 8 | H3 | 77861715 | Hong Kong |
| 9 | H3 | 18615859 | Udorn |
| 10 | H3 | 71558927 | Moscow |
| 11 | H5 | 71013498 | Hong Kong |
| 12 | H5 | 2865380 | Hong Kong |
| 13 | H5 | 2833657 | Hong Kong |
| 14 | H5 | 3421252 | Hong Kong |
| 15 | H9 | 8894694 | Hong Kong |

Table 4: Neuraminidase sequences used for BLAST and multiple sequence alignment.

| S# | Influenza A | Accession Number | Country of Origin |
|----|-------------|------------------|-------------------|
| 1 | N1 | 31096405 | China |
| 2 | N1 | 31096413 | Hong Kong |
| 3 | N1 | 31096415 | Hong Kong |
| 4 | N1 | 2833659 | Hong Kong |
| 5 | N1 | 3335423 | Hong Kong |
| 6 | N1 | 47834892 | Hong Kong |
| 7 | N1 | 47834894 | Hong Kong |
| 8 | N1 | 324578 | Russia |
| 9 | N2 | 38524538 | Japan |
| 10 | N2 | 49473497 | Japan |
| 11 | N2 | 418078 | China |
| 12 | N2 | 8894698 | Hong Kong |
| 13 | N2 | 21632606 | China |
| 14 | N2 | 21632610 | China |
| 15 | N2 | 81174818 | Hong Kong |
| 16 | N2 | 8250669 | Russia |
| 17 | N2 | 71553740 | Russia |