What is claimed is:

1. A chimeric dengue virus E glycoprotein comprising a dengue virus E glycoprotein backbone that comprises amino acid substitutions that introduce an epitope that is recognized by an antibody that is reactive with a dengue virus serotype that is different from the dengue virus serotype of the dengue virus E glycoprotein backbone,

wherein the chimeric dengue virus E glycoprotein comprises one of the following amino acid sequences:

MRCVGIGNRDFVEGLSGATWVDVVLEHGSCVTTMAKDKPTLDIELLKTE**A**T**QL**A**T**LRKLC
IEAKISNTTTDSRCPTQGEATLVEEQDTNFVCRRTFVDRGWGNGCGLFGKGSLITCAKFK
CVTK**I**EGK**V**VQYENLKYSVIVTVHTGDQHQVGNETTEHGT**I**ATITPQAPTSEIQLTDYGA
LTLDCSPRTGLDFNEM**I**LLTM**KN**K**A**W**M**VHRQWFLDLPLPWTSGASTSQETWNRQDLLVTF
KTAHAKKQEVVVLGSQEGAMHTALTGATEIQ**N**SG**G**T**S**IFAGHLKCRLKMDKLTLKGMSYV
MCTGSFKLEKEVAETQHGTVLVQVKYEGTDAPCKIPFSSQDEKGVTQNGRLITANPIVTD
KEKPVNIEAEPPFGESYIVVGAGEKALKLSWFKKG; or

MRCVGIGNRDFVEGLSGATWVDVVLEHGGCVTTMAKNKPTLDIEL**F**KTE**V**T**NP**A**V**LRKLCIEGK
ITNITTDSRCPTQGEAVLPEEQDQNYVCKHTYVDRGWGNGCGLFGKGSLVTCAKFQCLEPIEGK
VVQYENLKY**S**VI**V**TVHTGDQHQVGNET**TEH**G**TI**A**T**ITPQA**P**TSE**IQ**L**TD**YG**A**LGLECSPRTGLD
FNEMILLTMKNKAWMVHRQWFFDLPLPWTSGATTETPTWNRKELLVTFKNAHAKKQEVVVLGSQ
EGAMHTALTGATEIQ**T**SG**T**T**T**IFAGHLKCRLKMDKLELKGMSYAMCTNTFVLKKEVSETQHGTI
LIKVEYKGEDAPCKIPFSTEDGQGKAHNGRLITANPVVTKKEEPVNIEAEPPFGESNIVIGIGD
NALKINWYKKG.

2. The chimeric dengue virus E glycoprotein of claim 1, wherein the amino acid sequence is:

MRCVGIGNRDFVEGLSGATWVDVVLEHGSCVTTMAKDKPTLDIELLKTE**A**T**QL**A**T**LRKLC
IEAKISNTTTDSRCPTQGEATLVEEQDTNFVCRRTFVDRGWGNGCGLFGKGSLITCAKFK
CVTK**I**EGK**V**VQYENLKYSVIVTVHTGDQHQVGNETTEHGT**I**ATITPQAPTSEIQLTDYGA
LTLDCSPRTGLDFNEM**I**LLTM**KN**K**A**W**M**VHRQWFLDLPLPWTSGASTSQETWNRQDLLVTF
KTAHAKKQEVVVLGSQEGAMHTALTGATEIQ**N**SG**G**T**S**IFAGHLKCRLKMDKLTLKGMSYV
MCTGSFKLEKEVAETQHGTVLVQVKYEGTDAPCKIPFSSQDEKGVTQNGRLITANPIVTD
KEKPVNIEAEPPFGESYIVVGAGEKALKLSWFKKG

3. The chimeric dengue virus E glycoprotein of claim 1, wherein the amino acid sequence is:

MRCVGIGNRDFVEGLSGATWVDVVLEHGGCVTTMAKNKPTLDIEL**F**KTE**V**T**NP**A**V**LRKLCIEGK
ITNITTDSRCPTQGEAVLPEEQDQNYVCKHTYVDRGWGNGCGLFGKGSLVTCAKFQCLEPIEGK
VVQYENLKY**S**VI**V**TVHTGDQHQVGNET**TEH**G**TI**A**T**ITPQA**P**TSE**IQ**L**TD**YG**A**LGLECSPRTGLD
FNEMILLTMKNKAWMVHRQWFFDLPLPWTSGATTETPTWNRKELLVTFKNAHAKKQEVVVLGSQ
EGAMHTALTGATEIQ**T**SG**T**T**T**IFAGHLKCRLKMDKLELKGMSYAMCTNTFVLKKEVSETQHGTI
LIKVEYKGEDAPCKIPFSTEDGQGKAHNGRLITANPVVTKKEEPVNIEAEPPFGESNIVIGIGD
NALKINWYKKG

4. A flavivirus particle or virus like particle (VLP) comprising the E glycoprotein of any of claims 1-3.

5. An isolated nucleic acid molecule encoding the E glycoprotein of any of claims 1-3.

6. An isolated nucleic acid molecule encoding the flavivirus particle or VLP of claim 4.

7. A composition comprising the E glycoprotein of any of claims 1-3 in a pharmaceutically acceptable carrier.

8. A composition comprising the nucleic acid molecule of claim 5 or 6 in a pharmaceutically acceptable carrier.

9. Use of an effective amount of the E glycoprotein of any of claims 1-3, the flavivirus particle of claim 4, the nucleic acid molecule of any of claims 5-6 and/or the composition of any of claims 7-8 and any combination thereof in the manufacture of a medicament for use in producing an immune response to a dengue virus in a subject.

10. Use of an effective amount of the E glycoprotein of any of claims 1-3, the flavivirus particle of claim 4, the nucleic acid molecule of any of claims 5-6 and/or the composition of any of claims 7-8 and any combination thereof in the manufacture of a medicament for the treatment of a dengue virus infection in a subject.

11. Use of an effective amount of the E glycoprotein of any of claims 1-3, the flavivirus particle of claim 4, the nucleic acid molecule of any of claims 5-6 and/or the composition of any of claims 7-8 and any combination thereof in the manufacture of a medicament for preventing a dengue virus infection in a subject.

12. Use of an effective amount of the E glycoprotein of any of claims 1-3, the flavivirus particle of claim 4, the nucleic acid molecule of any of claims 5-6 and/or the composition of any of claims 7-8 and any combination thereof in the manufacture of a medicament for protecting a subject from the effects of dengue virus infection.