CLAIMS

What is claimed is:

1. An *in vitro* method of determining whether a subject in need thereof has a Dengue virus infection that is likely to develop into a life-threatening Dengue disease, comprising:

   (a) detecting in a sample from the subject expression levels of alpha-2 macroglobulin protein (SEQ ID NO:3) and at least one protein selected from the group consisting of vascular endothelial growth factor protein (SEQ ID NO: l) and chymase-1 protein (SEQ ID NO:2);

   (b) comparing the expression level of each protein detected in (a) to a corresponding expression level for each protein in a control; and

   (c) determining that the patient has a Dengue virus infection that is likely to develop into a life-threatening Dengue disease when the expression level of each protein detected in the sample in (a) is significantly greater than the corresponding expression level for each protein in the control.

2. An *in vitro* method of determining whether a subject in need thereof has a Dengue virus infection that is likely to develop into a life-threatening Dengue disease, comprising:

   (a) detecting in a sample from the subject expression levels of alpha-2 macroglobulin protein (SEQ ID NO:3) and at least one protein selected from the group consisting of vascular endothelial growth factor protein (SEQ ID NO: l) and chymase-1 protein (SEQ ID NO:2);

   (b) comparing the expression level of each protein detected in (a) to a corresponding expression level for each protein in a control; and

   (c) determining that the patient has a Dengue virus infection that is likely to develop into a life-threatening Dengue disease when the expression level of each protein detected in the sample in (a) is significantly greater than the corresponding expression level for each protein in the control; and

(d) upon determining that the patient has a Dengue virus infection that is likely to develop into a life -threatening Dengue disease, a treatment regimen is to be administered to the subject.

3. The method of Claim 2, wherein the treatment regimen is to be administered to the subject before the onset of symptoms of life-threatening Dengue disease.

4. The method of Claim 2, wherein the treatment regimen is to be administered to the subject after the onset of symptoms of life-threatening Dengue disease.

5. A method of selecting a treatment regimen for a subject in need thereof who has been infected with a Dengue virus, comprising:

(a) detecting in a sample from the subject expression levels of alpha-2 macroglobulin protein (SEQ ID NO:3) and at least one protein selected from the group consisting of vascular endothelial growth factor protein (SEQ ID NO: l) and chymase-1 protein (SEQ ID NO:2);

(b) comparing the expression level of each protein detected in (a) to a corresponding expression level for each protein in a control; and

(c) selecting either:

(1) a regimen for treating a life-threatening Dengue disease when the expression level of each protein detected in the sample in (a) is significantly greater than the corresponding expression level for each protein in the control; or

(2) a regimen for treating a mild Dengue disease when the expression level of each protein detected in the sample in (a) is not significantly greater than the corresponding expression level for each protein in the control.

6. The method of Claim 5, wherein the regimen selected in (c) is to be administered to the subject.

7. The method of any one of the preceding claims, wherein expression levels of vascular endothelial growth factor protein (SEQ ID NO: l), chymase-1 protein (SEQ ID NO:2) and alpha-2 macroglobulin protein (SEQ ID NO:3) are detected in the sample in (a).

8. The method of any one of the preceding claims, wherein expression levels of vascular endothelial growth factor protein (SEQ ID NO: l) and alpha-2 macroglobulin protein (SEQ ID NO:3) are detected in the sample in (a).

9. The method of any one of the preceding claims, wherein expression levels of alpha-2 macroglobulin protein (SEQ ID NO:3) and chymase-1 protein (SEQ ID NO:2) are detected in the sample in (a).

10. The method of any one of the preceding claims, wherein the expression level of each protein detected in (a) is determined using an immunoassay.

11. The method of any one of the preceding claims, wherein the expression level of each protein detected in (a) is determined by detecting antibodies to each protein in the sample from the subject.

12. The method of any one of the preceding claims, wherein the sample is whole blood, serum, plasma, urine, saliva, tissue biopsy or a combination thereof.

13. The method of any one of the preceding claims, wherein the life-threatening Dengue disease is Dengue hemorrhagic fever, Dengue shock syndrome, severe Dengue disease, or Dengue disease with warning signs.

14. The method of any one of the preceding claims, wherein the subject is known to have a Dengue virus infection.

15. The method of any one of the preceding claims, wherein the subject is determined to have a Dengue virus infection that is likely to develop into a life-

threatening Dengue disease before the onset of symptoms of a life -threatening Dengue disease.

16. The method of any one of the preceding claims, wherein the subject is determined to have a Dengue virus infection that is likely to develop into a life-threatening Dengue disease after the onset of symptoms of a life-threatening Dengue disease.

17. A prognostic kit for distinguishing a subject who is likely to develop a mild Dengue disease from a subject who is likely to develop a life -threatening Dengue disease when used in the method of any one of claims 1 to 16, comprising at least two of:

(a) one or more reagents for detecting an expression level of:
    (1) a vascular endothelial growth factor protein,
    (2) an antibody to a vascular endothelial growth factor protein, or
    (3) a combination thereof;

(b) one or more reagents for detecting an expression level of:
    (1) a chymase-1 protein,
    (2) an antibody to a chymase-1 protein, or
    (3) a combination thereof; or

(c) one or more reagents for detecting an expression level of:
    (1) an alpha-2 macroglobulin protein,
    (2) an antibody to an alpha-2 macroglobulin protein, or
    (3) a combination thereof.

18. The kit of Claim 17, wherein the kit comprises one or more reagents that are antibodies.

19. The kit of Claim 18, wherein the antibodies are immobilized.

20. The kit of any one of Claims 17-19, wherein the kit comprises one or more reagents that are immobilized proteins.

21. The kit of any one of Claims 17-20, wherein the kit comprises one or more reagents that comprise a detectable label.

22. The kit of any one of Claims 17-21, wherein the kit further comprises components for performing an immunoassay.

23. The kit of Claim 22, wherein the immunoassay is an enzyme-linked immunosorbent assay (ELISA) or a lateral flow immunoassay.

24. The kit of any one of Claims 17-23, wherein the kit comprises one or more reagents of (a), one or more reagents of (b) and one or more reagents of (c).