WHAT IS CLAIMED IS:

1. A method of preventing, treating or ameliorating a condition susceptible to prevention, treatment or amelioration by activation of innate immunity signaling in a subject in need of such treatment, comprising administering to the subject an effective amount of at least one ginseng fraction.

2. The method of claim 1, wherein the condition is selected from the group consisting of an allergy, asthma, viral infection, microbial infection and cancer.

3. The method of claim 2, wherein the viral infection is from a respiratory or mucosally transmitted virus including influenza, corona virus, herpes, respiratory syncytial virus, Rhabdoviridae, and human immunodeficiency virus.

4. The method of claim 2, wherein the fraction is made from a ginseng selected from the group consisting of *Panax quinquefolius*, *Panax trifolia*, *Panax ginseng*, *Panax japonicus*, *Panax schinseng*, *Panax notoginseng*, *Panax pseudoginseng*, *Panax vietnamensis*, *Panax elegatior*, *Panax wangianus*, *Panax bipinratifidus*, green or fresh ginseng, white ginseng, and red ginseng.

5. The method of claim 4, wherein the fraction is a fraction of *Panax quinquefolius*.

6. The method of claim 5, wherein the fraction is selected from the group consisting of CVT-E002, PQ_2, PQ_{223} and purified fractions from CVT-E002, PQ_2 and PQ_{223}.

7. The method of claim 6, wherein the fraction is CVT-E002.

8. The method of claim 7, wherein CVT-E002 modulates signal transduction from a Toll-like receptor.

9. The method of claim 8, wherein the Toll-like receptor is Toll-like receptor 2.

10. The method of claim 8, wherein the Toll-like receptor is a heterodimer of Toll-like receptor 2 and Toll-like receptor 6.

11. The method of claim 8, wherein the Toll-like receptor is a heterodimer of Toll-like receptor 2 and Toll-like receptor 1.

12. The method of claim 8, wherein the Toll-like receptor is Toll-like receptor 4.

13. The method of claim 7, wherein CVT-E002 induces up-regulation of lymphocytes and antigen-presenting cells, cytokine secretion, secretion of anti-viral factors, or combinations thereof.

14. A fraction of ginseng for the activation of innate and adaptive immune responses to prevent, treat or ameliorate a condition.

15. The fraction of claim 14, wherein the fraction is made from a ginseng selected from the group consisting of *Panax quinquefolius*, *Panax trifolia*, *Panax ginseng*, *Panax japonicus*, *Panax schinseng*, *Panax notoginseng*, *Panax pseudoginseng*, *Panax vietnamensis*, *Panax elegatior*, *Panax wangianus*, *Panax bipinratifidus*, green or fresh ginseng, white ginseng, and red ginseng.

16. The fraction of claim 15, wherein the fraction is a fraction of *Panax quinquefolius*.

17. The fraction of claim 16, wherein the fraction is selected from the group consisting of CVT-E002, PQ_2, PQ_{223} and purified fractions from CVT-E002, PQ_2 and PQ_{223}.

18. The fraction of claim 17, wherein the fraction is CVT-E002.

19. A pharmaceutical composition comprising the fraction of claim 14 in combination with another medicament or with one or more pharmaceutically acceptable carriers including food items for the activation of innate and adaptive immune responses to prevent, treat or ameliorate a condition.

20. The composition of claim 19, wherein the fraction is made from a ginseng selected from the group consisting of *Panax quinquefolius*, *Panax trifolia*, *Panax ginseng*, *Panax japonicus*, *Panax schinseng*, *Panax notoginseng*, *Panax pseudoginseng*, *Panax vietnamensis*, *Panax elegatior*, *Panax wangianus*, *Panax bipinratifidus*, green or fresh ginseng, white ginseng, and red ginseng.

21. The composition of claim 20, wherein the fraction is a fraction of *Panax quinquefolius*.

22. The composition of claim 21, wherein the fraction is selected from the group consisting of CVT-E002, PQ_2, PQ_{223} and purified fractions from CVT-E002, PQ_2 and PQ_{223}.

23. The composition of claim 22, wherein the fraction is CVT-E002.

24. Use of the ginseng fraction of claim 14 for the preparation of a pharmaceutical composition or a food item for the activation of innate and adaptive immune responses to prevent, treat or ameliorate a condition.

25. The use of claim 24, wherein the condition is selected from the group consisting of an allergy, asthma, viral infection, microbial infection and cancer.

26. The use of claim 25, wherein the viral infection is from a respiratory or mucosally transmitted virus including influenza, corona virus, herpes, respiratory syncytial virus, Rhabdoviridae, and human immunodeficiency virus.

27. The use of claim 25, wherein the fraction is made from a ginseng selected from the group consisting of *Panax quinquefolius*, *Panax trifolia*, *Panax ginseng*, *Panax japonicus*, *Panax schinseng*, *Panax notoginseng*, *Panax pseudoginseng*, *Panax vietnamensis*, *Panax elegatior*, *Panax wangianus*, *Panax bipinratifidus*, green or fresh ginseng, white ginseng, and red ginseng.

28. The use of claim 27, wherein the fraction is a fraction of *Panax quinquefolius*.

29. The use of claim 28, wherein the fraction is selected from the group consisting of CVT- E002, PQ_2, PQ_{223} and purified fractions from CVT-E002, PQ_2 and PQ_{223}.

30. The use of claim 29, wherein the fraction is CVT-E002.

31. A method for activating innate and adaptive immune responses to prevent, treat or ameliorate a condition in a subject in need of such activation, comprising administering a ginseng fraction of claim 14 to the subject.

32. A method for preventing, treating or ameliorating a condition associated with activation of innate immunity signaling comprising modulating signal transduction from Toll-like receptors by administering a ginseng fraction of claim 14 to a subject in need of such prevention, treatment or amelioration.

CLAIMS

1. Use of a fraction of *Panax quinquefolius* for the preparation of a pharmaceutical composition or a food item to prevent, treat or ameliorate airway inflammation and/or airway hyperresponsiveness in a subject having a condition characterized by airway inflammation and/or airway hyperresponsiveness, wherein the fraction is prepared from a water soluble extract of the root portion of Panax quinquefolius, and wherein the fraction is substantially identical to a fraction selected from the group consisting of CVT-E002, PQ_2, PQ_{223}, a purified fraction from CVT-E002, a purified fraction from PQ_2 and a purified fraction from PQ_{223}, wherein CVT-E002, PQ_2 and PQ_{223} are as described in U.S. Patent Nos. 6,432,454, 7,067,160, 7,186,423 and 7,413,756.

2. The use according to claim 1, wherein the condition is an allergy.

3. The use according to claim 1, wherein the condition is asthma.

4. The use according to any one of claims 1 to 3, wherein the fraction is selected from the group consisting of CVT-E002, PQ_2, PQ_{223}, a purified fraction from CVT-E002, a purified fraction from PQ_2 and a purified fraction from PQ_{223}.

5. The use according to claim 4, wherein the fraction is CVT-E002.

6. The use according to any one of claims 1 to 5, wherein the fraction modulates signal transduction from a Toll-like receptor.

7. The use according to claim 6, wherein the Toll-like receptor is Toll-like receptor 2, a heterodimer of Toll-like receptor 2 and Toll-like receptor 6, a heterodimer of Toll-like receptor 2 and Toll-like receptor 1, or Toll-like receptor 4.

8. The use according to any one of claims 1 to 7, wherein the pharmaceutical composition or food item is for use in combination with another medicament or with one or more pharmaceutically acceptable carriers including food items.