WHAT IS CLAIMED IS:

1) Use of β-hydroxy-β-methylbutyrate in the manufacture of a medicament to treat an individual having or at risk of developing an allergy characterized by an imbalance in type 1 and type 2 cytokine levels, wherein the β-hydroxy-β-methylbutyrate modulates the imbalance in type 1 and type 2 cytokine production.

2) The use of claim 1 wherein the ratio of type 1 to type 2 cytokine levels is increased by the β-hydroxy-β-methylbutyrate.

3) The use of claim 2 wherein the level of type 1 cytokines is increased by the β-hydroxy-β-methylbutyrate without an increase in type 2 cytokines.

4) The use of claim 2 wherein the amount of β-hydroxy-β-methylbutyrate ranges from 0.5 g to 10 g per day.

5) The use of claim 2 wherein the β-hydroxy-β-methylbutyrate is provided as part of a nutritional product further comprising one or more of fat, protein, and carbohydrate.

6) The use of claim 1 wherein the amount of β-hydroxy-β-methylbutyrate is effective to ameliorate allergic symptoms.

7) The use of claim 1 wherein the type 1 cytokine is interferon-γ or interleukin 2, and the type 2 cytokine is interleukin 4.

8) The use of claim 2 wherein the type 1 cytokine is interferon-γ, interleukin 2, or interleukin 12, and the type 2 cytokine is interleukin 4, interleukin 5, interleukin 13, or interleukin 10.

WHAT IS CLAIMED IS:

1. β-hydroxy-β-methylbutyrate for use in treating an individual having or at risk for developing an allergy characterized by an imbalance in type 1 and type 2 cytokine levels, wherein the β-hydroxy-β-methylbutyrate modulates the imbalance in type 1 and type 2 cytokine production.

2. The β-hydroxy-β-methylbutyrate of claim 1 wherein the ratio of type 1 to type 2 cytokine levels is increased by the β-hydroxy-β-methylbutyrate.

3. The β-hydroxy-β-methylbutyrate of claim 2 wherein the level of type 1 cytokines is
increased by the β-hydroxy-β-methylbutyrate without an increase in type 2 cytokines.

4. The β-hydroxy-β-methylbutyrate of claim 2 wherein the amount of β-hydroxy-β-methylbutyrate ranges from 0.5 g to 10 g per day.

5. The β-hydroxy-β-methylbutyrate of claim 2 wherein the β-hydroxy-β-methylbutyrate is provided as part of a nutritional product further comprising one or more of fat, protein, and carbohydrate.

6. The β-hydroxy-β-methylbutyrate of claim 1 wherein the amount of β-hydroxy-β-methylbutyrate is effective to ameliorate allergic symptoms.

7. The β-hydroxy-β-methylbutyrate of claim 1 wherein the type 1 cytokine is interferon-γ or interleukin 2, and the type 2 cytokine is interleukin 4.

8. The β-hydroxy-β-methylbutyrate of claim 2 wherein the type 1 cytokine is interferon-γ, interleukin 2, or interleukin 12, and the type 2 cytokine is interleukin 4, interleukin 5, interleukin 13, or interleukin 10.