WHAT IS CLAIMED IS:

1. Use of substantially pure menaquinone-7 (MK-7) and/or menaquinol-7 (MKH2-7) in the manufacture of a pharmaceutical composition for treating calciphylaxis in a human subject having end stage renal disease, wherein administration of the composition to the subject results in at least 10 mg of MK-7 and/or MKH2-7 being administered, per day, to the subject, and wherein said administration of the MK-7 and/or MKH2-7 increases a plasma level of Fetuin A relative to the plasma level of Fetuin A prior to administration.

2. The use of claim 1, wherein the subject has distal calciphylaxis and/or central calciphylaxis.

3. The use of claim 1 or 2, wherein the subject is undergoing hemodialysis.

4. use of any one of claims 1 to 3, wherein the subject is receiving non-warfarin-based anti-coagulant therapy.

5. The use of any one of claims 1 to 4, wherein the subject has chronic obstructive pulmonary disease (COPD).

6. The use of any one of claims 1 to 5, wherein the subject has a calciphylaxis-related dermal lesion.

7. The use of any one of claims 1 to 6, whereupon administration of the MK-7 and/or MKH2-7 to the subject increases the subject's serum T50 value relative to the subject's serum T50 value prior to administration of the MK-7 and/or MKH2-7.

8. The use of any one of claims 1 to 7, wherein administration of the MK-7 and/or MKH2-7 (a) increases a ratio of a carboxylated to a non-carboxylated of a Vitamin K dependent protein or (b) decreases an amount of a non-carboxylated Vitamin K dependent protein in plasma of the subject relative to the ratio or amount present prior to administration of the MK-7 and/or MKH2-7.

9. The use of claim 8, wherein the Vitamin K-dependent protein is selected from Matrix Gla Protein, Growth Arrest Specific Gene 6 (Gas-6) protein, PIVKA-II protein, osteocalcin, activated Protein C, or activated Protein S.

10. The use of any one of claims 1 to 9, wherein upon administration of the MK-7 and/or MKH2-7 to the subject increases a plasma level of osteoprotegerin relative to the plasma level of osteoprotegerin prior to administration of the MK-7 and/or MKH2-7.

11. The use of any one of claims 1 to 10, wherein upon administration of the MK-7 and/or MKH2-7 to the subject decreases a plasma level of D-Dimer or Highly Sensitive C Reactive Protein (hs-CRP)

relative to the plasma level of D-Dimer or Highly Sensitive C Reactive Protein (hs-CRP) prior to administration of the MK-7 and/or MKH2-7.

12. The use of any one of claims 1 to 11, wherein 10, 25, 50, 75 or 100 mg of MK-7 and/or MKH2-7 is administered to the subject per day.

13. The use of any one of claims 1 to 12, wherein the composition is administered orally.

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