WHAT IS CLAIMED IS:

1. A composition for use in a method of ~~preventing, slowing the progression of, arresting, and/or reversing~~treating calciphylaxis in a human subject in need thereof, wherein the ~~method comprising administering to the~~ human subject ~~an effective amount of a~~ has end stage renal disease, the composition comprising substantially pure menaquinone-7 (MK-7) and/or menaquinol-7 (MKH2-7), wherein the method comprises administering at least 10 mg of the MK-7 and/or MKH2-7 per day to the subject thereby to ~~prevent, slow the progression of, arrest, or reverse~~treat calciphylaxis, and wherein administering 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 ~~method~~composition for use of claim 1, wherein the subject has distal calciphylaxis and/or central calciphylaxis.

3. The ~~method~~composition for use of claim 1 or 2, wherein the subject ~~has diabetes, chronic kidney disease or end stage renal disease.~~

~~4. The method of claim 3, wherein the subject has stage 3 chronic kidney disease.~~

~~5. The method of claim 3, wherein the subject has stage 4 chronic kidney disease.~~

~~6. The method of claim 3, wherein the subject has stage 5 chronic kidney disease.~~

~~7. The method of any one of claims 1-6, wherein the subject~~ is undergoing hemodialysis.

~~8~~4. The ~~method~~composition for use of any one of claims 1~~-7~~ to 3, wherein the subject is receiving non-warfarin-based anti-coagulant therapy.

~~9. The method of claim 8, wherein the anti-coagulant therapy is oral anti-coagulation therapy.~~

~~10. The method of claim 8, wherein the anti-coagulation therapy comprises an inhibitor of Factor Xa activity (*e.g.*, apixaban, rivaroxaban, betrixaban, edoxaban, otamixaban, letaxaban, eribaxaban or fondaparinux) or Factor IIa activity (*e.g.*, dabigratran or argatroban).~~

~~11~~5. The ~~method~~composition for use of any one of claims 1~~-10~~ to 4, wherein the subject has chronic obstructive pulmonary disease (COPD).

~~12~~6. The ~~method~~composition for use of any one of claims 1~~-11~~ to 5, wherein the subject has a calciphylaxis-related dermal lesion.

~~13. The method of claim 12, wherein administration of the composition reduces the size of the dermal lesion.~~

~~14. The method of claim 13, wherein administration of the composition reduces the total surface area of the dermal lesion by at least 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45% 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, or 100%.~~

~~15~~7. The ~~method~~composition for use of any one of claims 1~~–14~~ to 6, whereupon administration of the MK-7 and/or MKH2-7 to the subject increases the subject's serum T50 value ~~(*e.g.*, by at least 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45% 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, or 100%)~~ relative to the subject's serum T50 value prior to administration of the MK-7 and/or MKH2-7.

~~16~~8. The ~~method~~composition for use of any one of claims 1~~–15~~ 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.

~~17~~9. The ~~method~~composition for use of claim ~~16~~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.

~~18~~10. The ~~method~~composition for use of any one of claims 1~~–17~~ to 9, wherein upon administration of the MK-7 and/or MKH2-7 to the subject increases a plasma level of osteoprotegerin ~~or Fetuin A~~ relative to the plasma level of osteoprotegerin ~~or Fetuin A~~ prior to administration of the MK-7 and/or MKH2-7.

~~19~~11. The ~~method~~composition for use of any one of claims 1~~–18~~ 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.

~~20. The method of any one of claims 1-19, wherein, prior to administration of the composition, the subject has a uremic oxidative blockade.~~

~~21. A method of preventing, slowing the progression of, and/or reversing one or more symptoms of chronic obstructive pulmonary disease (COPD) in a subject in need thereof, the method comprising administering to the subject at least 2 mg of substantially pure menaquinone-7 (MK-7) and/or menaquinol-7 (MKH2-7) per day, thereby to prevent, or slow the progression of, or reverse the one or more symptoms of COPD, wherein the MK7 and/or MKH2-7 is administered in a pharmaceutical composition.~~

~~22. The method of claim 21, wherein the one or more symptoms is selected from the group consisting of breathing difficulty, cough, mucus production, wheezing, and elastinolysis.~~

~~23. A method of preventing calciphylaxis in a subject in need thereof or slowing the progression of, arresting, and/or reversing tissue calcification in a subject with calciphylaxis, the method comprising administering to the subject~~

~~(a) at least 2 mg of substantially pure menaquinone-7 (MK-7) and/or menaquinol-7 (MKH2-7) per day; and~~

~~(b) a statin.~~

~~24. The method of claim 23, wherein the statin is selected from simvastatin, lovastatin, atorvastatin, pravastatin, pitavastatin, rosuvastatin, and fluvastatin.~~

~~25. The method of claim 23 or 24, wherein the MK-7 and/or MKH2-7 is administered in the same dosage form as the statin.~~

~~26. The method of claim 23 or 24, wherein the MK-7 and/or MKH2-7 is administered in a separate dosage form from the statin.~~

~~27. The method of any one of claims 1-26, wherein at least 2 mg of MK-7 and/or MKH2-7 is administered to the subject per day.~~

~~28. The method of any one of claims 1-27, wherein from about 5 mg to about 100 mg of MK-7 and/or MKH2-7 is administered to the subject per day.~~

~~29. The method of any one of claims 1-28, wherein from about 10 mg to about 50 mg of MK-7 and/or MKH2-7 is administered to the subject per day.~~

~~30~~12. The ~~method~~composition for use of any one of claims 1-~~29~~11, wherein 10, 25, 50, 75 or 100 mg of MK-7 and/or MKH2-7 is administered to the subject per day.

~~31. The method of any of claims 1-30, wherein the composition is administered to the subject for at least 2 weeks.~~

~~32. The method of any one of claims 1-31, wherein the composition is administered to the subject for at least 6 weeks.~~

~~33. The method of any one of claims 7-32, wherein the composition is administered to the subject for a period that includes the duration of hemodialysis.~~

~~34. The method of any one of claims 1-33, wherein the composition is administered daily.~~

~~35~~13. The ~~method~~ composition for use of any one of claims 1~~-34~~ to 12, wherein the composition is administered orally.

~~36. The method of any one of claims 1-35, wherein the composition is disposed within a tablet, caplet, or capsule.~~

~~37. The method of any one of claims 1-36, wherein the composition comprises MK-7 and/or MKH2-7 and a pharmaceutically acceptable excipient.~~

~~38. A method for preventing calciphylaxis in a subject or slowing the progression of, arresting, and/or reversing tissue calcification in a subject with calciphylaxis, the method comprising administering to the subject at least 2 mg of substantially pure menaquinone-7 (MK-7) and/or menaquinol-7 (MKH2-7) per day, wherein the subject is taking calcium-based phosphate binders and/or vitamin D analogs.~~

~~39. The method of claim 38, wherein the subject has hyperparathyroidism.~~

~~40. The method of claim 38 or 39, wherein at least 2 mg of MK-7 and/or MKH2-7 is administered to the subject per day.~~

~~41. The method of any one of claims 38-40, wherein from about 5 mg to about 100 mg of MK-7 and/or MKH2-7 is administered to the subject per day.~~

~~42. The method of any one of claims 38-41, wherein from about 10 mg to about 50 mg of MK-7 and/or MKH2-7 is administered to the subject per day.~~

~~43. The method of any one of claims 38-41, wherein 10, 25, 50, 75 or 100 mg of MK-7 and/or MKH2-7 is administered to the subject per day.~~

~~44. The method of any of claims 38-43, wherein the composition is administered to the subject for at least 2 weeks.~~

~~45. The method of any one of claims 38-44, wherein the composition is administered to the subject for at least 6 weeks.~~

~~46. The method of any one of claims 38-45, wherein the composition is administered daily.~~

~~47. The method of any one of claims 38-46, wherein the composition is administered orally.~~

~~48. The method of any one of claims 38-47, wherein the composition is disposed within a tablet, caplet, or capsule.~~

~~49. The method of any one of claims 38-48, wherein the composition comprises MK-7 and/or MKH2-7 and a pharmaceutically acceptable excipient.~~