CLAIMS

1. Use of a compound comprising the formula:

Ac-c(C)arrrar-NH_2 (SEQ ID NO:3)

in the manufacture of a medicament for treating chronic kidney disease-mineral and bone disorder (CKD-MBD) in a patient receiving hemodialysis,

wherein the medicament is to be administered within the period beginning about 15 minutes prior to completion of hemodialysis and ending about 3 hours after completion of hemodialysis, and wherein said administration is effective to maintain a post-hemodialysis serum phosphorus level that is lower than a pre-hemodialysis serum phosphorus level for a period of at least about 6 hours after dialysis.

2. The use according to claim 1, wherein the compound comprises a pharmaceutically acceptable salt of SEQ ID NO:3.

3. The use according to claim 2, wherein the salt is a hydrochloride salt.

4. The use according to any of one of claims 1 to 3, wherein the medicament is to be administered within the period beginning about 15 minutes prior to completion of hemodialysis and ending about 1 hour after hemodialysis.

5. The use according to any one of claims 1 to 3, wherein the medicament is to be administered during the rinse back procedure at the end of dialysis.

6. The use according to any one of claims 1 to 5, wherein the patient is being treated with a phosphate binding agent.

7. The use according to any one of claims 1 to 5, wherein said administration is effective to maintain a post-hemodialysis serum phosphorus level that is

at least about 10% lower than a pre-hemodialysis serum phosphorus level for an inter dialytic period.

8. The use according to any one of claims 1 to 5, wherein patient is being treated for secondary hyperparathyroidism or primary hyperparathyroidism.

CLAIMS

1. A composition for use in treating chronic kidney disease-mineral and bone disorder (CKD-MBD) in a patient receiving hemodialysis, the composition comprising a compound comprising the formula:

$$X_1 - X_2 - X_3 - X_4 - X_5 - X_6 - X_7$$

wherein

X_1 is a subunit comprising a thiol-containing group;

X_5 is a cationic subunit;

X_6 is a non-cationic subunit;

X_7 is a cationic a subunit; and

at least two of X_2, X_3 and X_4 are independently a cationic subunit;

wherein the composition is administered within the period beginning about 15 minutes prior to completion of hemodialysis and ending about 3 hours after completion of hemodialysis, and wherein said administering is effective to maintain a post-hemodialysis serum phosphorus level that is lower than a pre-hemodialysis serum phosphorus level for a period of at least about 6 hours after dialysis.

2. The composition according to claim 1, wherein the compound comprises Ac-c(C)arrrar-NH_2 (SEQ ID NO:3).

3. The composition according to claim 2, wherein the compound comprises a a pharmaceutically acceptable salt of SEQ ID NO:3.

4. The composition according to claim 3, wherein the salt is a hydrochloride salt.

5. The composition according to any one of claims 1-4, wherein the compound is administered within the period beginning about 15 minutes prior to completion of hemodialysis and ending about 1 hour after hemodialysis.

6. The composition according to any one of claims 1-4, wherein the compound is administered during the rinse back procedure at the end of dialysis.

7. The composition according to any one of claims 1-6, wherein the patient is being treated with a phosphate binding agent.

8. The composition according to any one of claims 1-6, wherein said administering is effective to maintain a post-hemodialysis serum phosphorus level that is at least about 10% lower than a pre-hemodialysis serum phosphorus level for an inter dialytic period.

9. The composition according to any one of claims 1-6, wherein patient is being treated for secondary hyperparathyroidism or primary hyperparathyroidism.

10. A dosing regimen for administration of a compound for treating CKD-MBD in a patient undergoing hemodialysis, the dosing regimen comprising:

administering to the patient an oral calcium sensing receptor agonist, wherein the agonist is administered within the period beginning about 6 hours prior to completion of hemodialysis and ending about 1 hour after completion of hemodialysis, and wherein said administering is effective to maintain a post-hemodialysis serum phosphorus level that is lower than a pre-hemodialysis serum phosphorus level for a period of at least about 6 hours after completion of dialysis.

11. The dosing regimen according to claim 14, wherein the calcimimetic is cinacalcet hydrochloride ($C_{22}H_{22}F_3N \cdot HCl$).

12. The dosing regimen according to claim 10 or 11, wherein the patient is being treated with a phosphate binding agent.

13. The dosing regimen according to claim 10 or 11, wherein the patient is being treated for secondary hyperparathyroidism or primary hyperparathyroidism.

14. The dosing regimen according to claim 10 or 11, wherein said administering is effective to maintain a post-hemodialysis serum phosphorous level that is at least about 10% lower than a pre-hemodialysis serum phosphorus level for an inter-dialytic period.

15. Use of a compound comprising the formula:

$$X_1 - X_2 - X_3 - X_4 - X_5 - X_6 - X_7$$

wherein

X_1 is a subunit comprising a thiol-containing group;

X_5 is a cationic subunit;

X_6 is a non-cationic subunit;

X_7 is a cationic a subunit; and

at least two of X_2, X_3 and X_4 are independently a cationic subunit;

in the manufacture of a composition for treating chronic kidney disease-mineral and bone disorder (CKD-MBD) in a patient receiving hemodialysis,

wherein the composition is to be administered within the period beginning about 15 minutes prior to completion of hemodialysis and ending about 3 hours after completion of hemodialysis, and wherein said administration is effective to maintain a post-hemodialysis serum phosphorus level that is lower than a pre-hemodialysis serum phosphorus level for a period of at least about 6 hours after dialysis.

16. The use according to claim 15, wherein the compound comprises Ac-c(C)arrrar-NH_2 (SEQ ID NO:3).

17. The use according to claim 16, wherein the compound comprises a a pharmaceutically acceptable salt of SEQ ID NO:3.

18. The use according to claim 17, wherein the salt is a hydrochloride salt.

19. The use according to any one of claims 15-18, wherein the composition is to be administered within the period beginning about 15 minutes prior to completion of hemodialysis and ending about 1 hour after hemodialysis.

20. The use according to any one of claims 15-18, wherein the compound is to be administered during the rinse back procedure at the end of dialysis.

21. The use according to any one of claims 15-20, wherein the patient is being treated with a phosphate binding agent.

22. The use according to any one of claims 15-20, wherein said administration is effective to maintain a post-hemodialysis serum phosphorus level that is at least about 10% lower than a pre-hemodialysis serum phosphorus level for an inter dialytic period.

23. The use according to any one of claims 15-20, wherein patient is being treated for secondary hyperparathyroidism or primary hyperparathyroidism.

24. Use of an oral calcium sensing receptor agonist in the manufacture of a medicament for treating CKD-MBD in a patient undergoing hemodialysis, wherein the agonist is to be administered within the period beginning about 6 hours prior to completion of hemodialysis and ending about 1 hour after completion of hemodialysis, and wherein said administration is effective to maintain a post-hemodialysis serum phosphorus level that is lower than a pre-hemodialysis serum phosphorus level for a period of at least about 6 hours after completion of dialysis.

25. The use according to claim 24, wherein the calcimimetic is cinacalcet hydrochloride ($C_{22}H_{22}F_3N \cdot HCl$).

26. The use according to claim 24 or 25, wherein the patient is being treated with a phosphate binding agent.

27. The use according to claim 24 or 25, wherein the patient is being treated for secondary hyperparathyroidism or primary hyperparathyroidism.

28. The use according to claim 24 or 25, wherein said administration is effective to maintain a post-hemodialysis serum phosphorous level that is at least about 10% lower than a pre-hemodialysis serum phosphorus level for an inter-dialytic period.