CLAIMS

We claim:

1. Punicalagin, or a pharmaceutically acceptable salt, hydrate, enantiomer or stereoisomer thereof, for use in therapy.
2. The compound for use of claim 1, wherein the punicalagin is pure and isolated.
3. The compound for use of claim 1, wherein the punicalagin is part of a nutraceutical composition.
4. The compound for use of claim 1, wherein the punicalagin is part of a pharmaceutical composition.
5. The compound for use of claim 1, wherein the punicalagin is part of a functional food or functional nutrition product.
6. The compound for use of claim 1, wherein the punicalagin is part of a medical food or medical nutrition product.
7. The compound for use of claim 1, wherein the punicalagin is part of a dietary supplement.
8. The compound for use of claim 1, wherein the punicalagin is part of a botanical drug.
9. The compound for use of claim 1, wherein the subject of the therapy is a mammal.
10. The compound for use of claim 1, wherein the subject of the therapy is a human.
11. The compound for use of claim 1, wherein the subject of the therapy is a veterinary animal.
12. The compound for use of claim 1, wherein the therapy is to improve general cognition.
13. The compound for use of claim 1, wherein the therapy is to improve memory.
14. The compound for use of claim 1, wherein the therapy is to maintain general cognition.
15. The compound for use of claim 1, wherein the therapy is to maintain memory.
16. The compound for use of claim 1, wherein the therapy is treatment of dementia.
17. The compound for use of claim 16, wherein said dementia is age-related.

18. The compound for use of claim 1, wherein the therapy protects neurons.

19. The compound for use of claim 1, wherein the therapy treats or prevents a cognitive disorder.

20. The compound for use of claim 1, wherein the therapy treats or prevents a neurodegenerative disorder.

21. The compound for use of claim 1, wherein the therapy treats or prevents metabolic syndrome, type-II diabetes, dislipidemia, or obesity.

22. The compound for use of claim 1, wherein the therapy treats or prevents an amyloidosis-related condition.

23. The compound for use of claim 22, wherein the the amyloidosis-related condition is MCI or AAMI.

24. The compound for use of claim 1, wherein the therapy treats or prevents ALS, Huntington's disease, Parkinson's disease, or Down syndrome.

25. The compound for use of claim 1, wherein the therapy treats or prevents Alzheimer's disease.

26. The compound for use of claim 1, wherein the therapy treats a cognitive impairment in a human.

27. The compound for use of claim 26, wherein the therapy improves memory.

28. The compound for use of claim 27, wherein the improvement in memory is an improvement in at least one measure selected from the group consisting of an improvement in short-term memory, long-term memory, memory consolidation, procedural memory and declarative memory.

29. The compound for use of claim 26, wherein the therapy improves attention.

30. The compound for use of claim 26, wherein the therapy improves reaction time.

31. The compound for use of claim 26, wherein the therapy improves learning.

32. Use of *punicalagin*, or a pharmaceutically acceptable salt, hydrate, enantiomer or stereoisomer thereof, for inhibiting aggregation of a peptide or protein.

33. Use of punicalagin, or a pharmaceutically acceptable salt, hydrate, enantiomer or stereoisomer thereof, in the manufacture of a medicament for administering to a subject.

34. The use of claim 33, wherein the compound is pure and isolated.

35. The use of claim 33, wherein the medicament is a nutraceutical composition.

36. The use of claim 33, wherein the medicament is a pharmaceutical composition.

37. The use of claim 33, wherein the medicament is a functional food or functional nutrition product.

38. The use of claim 33, wherein the medicament is a medical food or medical nutrition product.

39. The use of claim 33, wherein the medicament is a dietary supplement.

40. The use of claim 33, wherein the medicament is a botanical drug.

41. The use of claim 33, wherein the subject is a mammal.

42. The use of claim 33, wherein the subject is a human.

43. The use of claim 33, wherein the subject is a veterinary animal.

44. The use of claim 33, wherein the general cognition of the subject is improved.

45. The use of claim 33, wherein the memory of the subject is improved.

46. The use of claim 33, wherein the general cognition of the subject is maintained.

47. The use of claim 33, wherein the memory of the subject is maintained.

48. The use of claim 33, wherein the medicament treats or prevents dementia.

49. The use of claim 48, wherein said dementia is age-related.

50. The use of claim 33, wherein neurons in said subject are protected.

51. The use of claim 33, wherein the medicament treats or prevents a cognitive disorder.

52. The use of claim 33, wherein the medicament treats or prevents a neurodegenerative disorder.

53. The use of claim 33, wherein the medicament treats or prevents metabolic syndrome, type-II diabetes, dislipidemia, or obesity.

54. The use of claim 33, wherein the medicament treats or prevents an amyloidosis-related condition in said subject.

55. The use of claim 54, wherein the the amyloidosis-related condition is MCI or AAMI.

56. The use of claim 33, wherein the medicament treats or prevents ALS, Huntington's disease, Parkinson's disease, or Down syndrome.

57. The use of claim 33, wherein the medicament treats or prevents Alzheimer's disease.

58. The use of claim 33, wherein the medicament treats a cognitive impairment in a human.

59. The use of claim 58, wherein memory is improved in the human following said administration.

60. The use of claim 59, wherein the improvement in memory is an improvement in at least one measure selected from the group consisting of an improvement in short-term memory, long-term memory, memory consolidation, procedural memory and declarative memory.

61. The use of claim 58, wherein attention is improved in the human following said administration.

62. The use of claim 58, wherein reaction time is improved in the human following said administration.

63. The use of claim 58, wherein learning is improved in the human following said administration.

64. A method of inhibiting aggregation of a peptide or protein in vitro, comprising the step of contacting the peptide or protein with an effective amount of punicalagin or a pharmaceutically acceptable salt, hydrate, enantiomer or stereoisomer thereof.

CLAIMS

1. Use of punicalagin, or a pharmaceutically acceptable salt, solvate, or hydrate, thereof, in the manufacture of a medicament for the treatment of a cognitive disorder, a neurodegenerative disorder, an amyloidosis-related condition, Alzheimer's disease, dementia, ALS, Huntington's disease, Parkinson's disease, or Down syndrome, wherein the medicament is to be administered to a human.

2. The use of claim 1, wherein the medicament treats or prevents Alzheimer's disease.

3. The use of claim 1, wherein the medicament treats or prevents a cognitive disorder.

4. The use of claim 1, wherein the medicament treats or prevents a neurodegenerative disorder.

5. The use of claim 1, wherein the medicament treats or prevents an amyloidosis-related condition.

6. The use of claim 1, wherein the medicament treats or prevents dementia.

7. The use of claim 1, wherein the medicament treats or prevents ALS.

8. The use of claim 1, wherein the medicament treats or prevents Huntington's disease.

9. The use of claim 1, wherein the medicament treats or prevents Parkinson's disease.

10. The use of claim 1, wherein the medicament treats or prevents Down syndrome.

11. The use of claim 2, wherein the medicament treats Alzheimer's disease.

12. The use of claim 1, wherein the medicament treats a cognitive disorder.

13. The use of claim 1, wherein the medicament treats a neurodegenerative disorder.

14. The use of claim 1, wherein the medicament treats an amyloidosis-related condition.

15. The use of claim 1, wherein the medicament treats dementia.

16. The use of claim 1, wherein the medicament treats ALS.

17. The use of claim 1, wherein the medicament treats Huntington's disease.

18. The use of claim 1, wherein the medicament treats Parkinson's disease.

19. The use of claim 1, wherein the medicament treats Down syndrome.

20. The use of claim 3, wherein the medicament prevents Alzheimer's disease.

21. The use of claim 1, wherein the medicament prevents a cognitive disorder.

22. The use of claim 1, wherein the medicament prevents a neurodegenerative disorder.

23. The use of claim 1, wherein the medicament prevents an amyloidosis-related condition.

24. The use of claim 1, wherein the medicament prevents dementia.

25. The use of claim 1, wherein the medicament prevents ALS.

26. The use of claim 1, wherein the medicament prevents Huntington's disease.

27. The use of claim 1, wherein the medicament prevents Parkinson's disease.

28. The use of claim 1, wherein the medicament prevents Down syndrome.

29. The use of claim 6, wherein said dementia is age-related.

30. The use of claim 1, wherein the memory of the human is improved.

31. The use of claim 29, wherein the improvement in memory is an improvement in at least one measure selected from the group consisting of an improvement in short-term memory, long-term memory, memory consolidation, procedural memory and declarative memory.

32. The use of claim 29, wherein the memory is long-term memory.

33. The use of claim 29, wherein the memory is short-term memory.

34. The use of claim 1, wherein the memory of the human is maintained.

35. The use of claim 33, wherein the memory is long-term memory.

36. The use of claim 33, wherein the memory is short-term memory.

37. The use of claim 1, wherein a neuron or plurality of neurons in said human are protected.

38. The use of claim 1, wherein the general cognition of the human is improved.

39. The use of claim 1, wherein the general cognition of the human is maintained.

40. The use of claim 1, wherein the therapeutically effective amount is between about 250 mg and about 1,000 mg per day.

41. The use of claim 1, wherein the therapeutically effective amount is between about 50 mg and about 250 mg per day.

42. The use of claim 1, wherein the therapeutically effective amount is between about 250 mg and about 500 mg per day.

43. The use of claim 1, wherein the therapeutically effective amount is between about 500 mg and about 750 mg per day.