

SUMMARY

[0004a] In one aspect, the present disclosure refers to a use of a pharmaceutically effective amount of a composition comprising a peptide having the sequence Thr Pro His Thr His Gln Xaa Thr Pro Glu (SEQ ID NO:4) in the manufacture of a medicament for treating a retinal angiogenic disease in a subject, wherein the composition is to be administered to the subject orally, by intravenous injection, or by intravitreal injection.

[0004b] In another aspect, the present disclosure refers to a use of a composition comprising a peptide having the sequence SEQ ID NO:1 in the manufacture of a medicament for treating a retinal angiogenic disease in a subject, wherein the composition is to be administered to a subject with retinal angiogenic disease not responsive to anti-VEGF therapy, wherein the composition is formulated for intravenous or oral administration.

[0004c] In another aspect, the present disclosure refers to a use of a pharmaceutically effective amount of a composition comprising a peptide N having the sequence Thr Pro His Thr His Asn Xaa Thr Pro Glu wherein Xaa is homoarginine (SEQ ID NO:3) in the manufacture of a medicament for treating a retinal angiogenic disease, wherein the composition is to be administered to the subject orally, by intravenous injection, or by intravitreal injection.

[0004d] In another aspect, the present disclosure refers to a method of manufacturing a composition as disclosed herein, wherein the peptides are synthesized by solid phase Fmoc chemistry, solution phase synthesis and recombinant methods.

[0005] Provided herein is a method of treating a retinal angiogenic disease in a subject. The methods include administering to the subject a pharmaceutically effective amount of a composition comprising a peptide having the sequence Thr Pro His Thr His Asn Arg Thr Pro Glu (SEQ ID NO:1). The composition can be administered to the subject orally, by intravenous injection, or by intravitreal injection, or by sublingual delivery wherein administration treats the retinal angiogenic disease in the subject.

WHAT IS CLAIMED IS:

1. Use of a pharmaceutically effective amount of a composition comprising a peptide having the sequence Thr Pro His Thr His Gln Xaa Thr Pro Glu (SEQ ID NO:4) in the manufacture of a medicament for treating a retinal angiogenic disease in a subject, wherein the composition is to be administered to the subject orally, by intravenous injection, or by intravitreal injection.
2. The use of claim 1, wherein the composition comprises 2 to 50 mg/kg body weight (Bwt) of the peptide and is to be administered by intravenous injection.
3. The use of claim 1, wherein the composition comprises 0.1 µg/kg to 2 mg/kg Bwt of the peptide and is to be administered by intravitreal injection.
4. The use of claim 1, wherein the composition comprises 2 to 10 mg/kg Bwt of the peptide and is to be administered orally.
5. The use of claim 1, wherein the composition is to be administered via either intravenous (IV) or intravitreal (IVT) route at least once every 4 to 10 weeks.
6. The use of claim 1, wherein the composition is to be administered orally at least once daily for 1 to 2 weeks at intervals of 6 months.
7. The use of claim 1, wherein subject is not responsive to anti-VEGF therapy.
8. The use of claim 2, wherein the anti-VEGF therapy is an anti-VEGF antibody.
9. The use of any one of claims 1-8, wherein the subject has age-related macular degeneration, retinopathy, or vascular occlusion.
10. The use of any one of claims 1-8, wherein the subject has diabetic retinopathy, diabetic macular edema, central retinal vein occlusion, branch retinal vein occlusion, or corneal neovascularization.

11. The use of any one of claims 1-10, wherein the subject is a human.
12. Use of a composition comprising a peptide having the sequence SEQ ID NO:1 in the manufacture of a medicament for treating a retinal angiogenic disease in a subject, wherein the composition is to be administered to a subject with retinal angiogenic disease not responsive to anti-VEGF therapy, wherein the composition is formulated for intravenous or oral administration.
13. The use of claim 12, wherein the subject has age-related macular degeneration, retinopathy, or vascular occlusion.
14. The use of claim 12, wherein the subject has diabetic retinopathy, diabetic macular edema, central retinal vein occlusion, branch retinal vein occlusion, or corneal neovascularization.
15. The use of any one of claim 12, wherein the anti-VEGF therapy is an anti-VEGF antibody.
16. The use of any one of claims 12-15, wherein the subject is a human.
17. Use of a pharmaceutically effective amount of a composition comprising a peptide N having the sequence Thr Pro His Thr His Asn Xaa Thr Pro Glu wherein Xaa is homoarginine (SEQ ID NO:3) in the manufacture of a medicament for treating a retinal angiogenic disease, wherein the composition is to be administered to the subject orally, by intravenous injection, or by intravitreal injection.
18. A method of manufacturing a composition of any of the above claims, wherein the peptides are synthesized by solid phase Fmoc chemistry, solution phase synthesis and recombinant methods.