

WHAT IS CLAIMED IS:

1. A synthetic peptide consisting of 7 consecutive amino acid residues set forth as X₁X₂X₃X₄X₅X₆X₇ (SEQ ID NO: 1), wherein,

X₁ is alanine (A), aspartic acid (D), asparagine (N), leucine (L), phenylalanine (F), or valine (V)

X₂ is alanine (A), isoleucine (I), leucine (L), or valine (V);

X₃ is phenylalanine (F), tyrosine (Y), or tryptophan (W);

X₄ is arginine (R), or lysine (K);

X₅ is valine (V), methionine (M), isoleucine (I), leucine (L), or glutamine (Q);

X₆ is arginine (R), glutamine (Q), lysine (K), or proline (P);

X₇ is serine (S) or threonine (T); and

each X₂, X₃, X₄, X₆ and X₇ are independently L-form amino acid residues; and

the synthetic peptide has the amino acid sequence that is any of SEQ ID NOs: 3, 4, 10, 11, 12, 13, 14, 16, 18, 19, 20 or 21.

2. Use of a synthetic peptide for manufacturing a medicament for treating a disease or a condition related to angiogenesis, wherein the synthetic peptide consists of 7 consecutive amino acid residues set forth as X₁X₂X₃X₄X₅X₆X₇ (SEQ ID NO: 1), wherein,

X₁ is alanine (A), aspartic acid (D), asparagine (N), leucine (L), phenylalanine (F), or valine (V)

X₂ is alanine (A), isoleucine (I), leucine (L), or valine (V);

X₃ is phenylalanine (F), tyrosine (Y), or tryptophan (W);

X₄ is arginine (R), or lysine (K);

X₅ is valine (V), methionine (M), isoleucine (I), leucine (L), or glutamine (Q);

X₆ is arginine (R), glutamine (Q), lysine (K), or proline (P);

X₇ is serine (S) or threonine (T); and

each X₂, X₃, X₄, X₆ and X₇ are independently L-form amino acid residues;

the synthetic peptide has the amino acid sequence that is any of SEQ ID NOs: 2, 3, 4, 10, 11, 12, 13, 14, 16, 18, 19, 20 or 21;

the disease or a condition related to angiogenesis is cancer, ocular disease, vascular anomaly, cardiovascular disease or injury;

wherein, the vascular anomaly is selected from the group consisting of vascular permeability, plasma leakage, venous malformation (VM), hemangioblastoma, hemangiomas, brain arteriovenous malformations (BAVM), arteriosclerosis, thrombosis, choroidal neovascularization (CNV), and Osler-Weber syndrome; and

the ocular disease is corneal neovascularization, choroidal neovascularization (CNV), diabetic retinopathy, retinopathy of prematurity, age-related macular degeneration (AMD), juvenile macular degeneration, diabetic macular edema, retinitis pigmentosa, trachoma, glaucoma, neuro-ophthalmic disease, retinal artery occlusion, uveitis, choroiditis, central serous chorioretinopathy (CSC), central exudative chorioretinopathy (CEC), polypoidal choroidal vasculopathy (PCV), neovascular glaucoma, or neovascular maculopathy.

3. The use of claim 2, wherein the synthetic peptide has the amino acid sequence of SEQ ID NO: 2, and at least one of X_1 and X_5 is a D-form amino acid residue.

4. The use of claim 3, wherein X_1 is in D-form.

5. The use of claim 3, wherein X_5 is in D-form.

6. The use of claim 2, wherein the ocular disease is age-related macular degeneration (AMD).

7. The use of claim 2, wherein the ocular disease is diabetic retinopathy.

8. The use of claim 2, wherein the cancer is selected from the group consisting of, breast cancer, cervical cancer, ovary cancer, endometrial cancer, melanoma, bladder cancer, lung cancer, pancreatic cancer, colon cancer, prostate cancer, hematopoietic tumors of lymphoid lineage, myeloid leukemia, thyroid cancer, thyroid follicular cancer, myelodysplastic syndrome (MDS), tumor of mesenchymal origin, melanoma, uveal melanoma, teratocarcinoma,

neuroblastoma, glioma, glioblastoma, keratoacanthomas, renal cancer, analplastic large cell lymphoma, esophageal squamous cell carcinoma, hepatocellular carcinoma, follicular dentritic cell carcinoma, intestinal cancer, muscle invasive cancer, seminal vesicle tumor, epidermal carcinoma, spleen cancer, bladder cancer, head and neck cancer, stomach cancer, bone cancer, brain cancer, cancer of retina, biliary cancer, small bowel cancer, salivary gland cancer, uterine sarcoma, cancer of testicles, cancer of connective tissue, prostatic hypertrophy, myelodysplasia, Waldenstrom's macroglobulinemia, nasopharyngeal, neuroendocrine cancer, mesothelioma, angiosarcoma, Kaposi's sarcoma, oesophagogastric, fallopian tube cancer, peritoneal cancer, papillary serous mullerian cancer, malignant ascites, gastrointestinal stromal tumor (GIST), Li-Fraumeni syndrome and Von Hippel-Lindau syndrome (VHL).

9. The use of claim 8, wherein the hematopoietic tumors of lymphoid lineage is any of leukemia, acute lymphocytic leukemia, chronic lymphocytic leukemia, B-cell lymphoma, Burkitt's lymphoma, multiple myeloma, Hodgkin's lymphoma, or Non-Hodgkin's lymphoma.

10. The use of claim 8, wherein the myeloid leukemia is acute myelogenous leukemia (AML) or chronic myelogenous leukemia (CML).

11. The use of claim 8, wherein the tumor of mesenchymal origin is fibrosarcomas or rhabdomyosarcomas.

12. The use of claim 8, wherein the cancer is metastatic.

13. The use of claim 12, wherein the cancer is metastatic lung cancer.

14. The use of claim 8, wherein the cancer is uterine sarcoma.

15. The use of claim 2, wherein the cardiovascular disease is selected from the group consisting of, atherosclerosis, myocardial angiogenesis,

hyperviscosity syndromes, vein occlusion, artery occlusion, carotid obstructive disease, Osler-Weber-Rendu disease, myocarditis, cerebrovascular accident, mitral valve regurgitation, hypotension, arterial or post-transplantational arteriosclerosis, fibrosis, thrombosis, and platelet aggregation.