What is claimed is:

1. A disintegrin variant, comprising a mutant RGD loop comprising the amino acid sequence selected from the group consisting of SEQ ID NOs: 329 and 331, and at least one selected from the group consisting of:
   (a) a mutant linker comprising at least one mutation at positions 1 to 5 of the amino acid sequence of SEQ ID NO: 332 (SRAGKIC); and
   (b) a mutant C-terminus comprising at least one mutation at positions 1-4 of the amino acid sequence of SEQ ID NO: 334 (PRYH),
   wherein the disintegrin variant has a reduced binding activity to αIIbβ3 integrin and an increased binding activity to at least one of αvβ1, αvβ3, αvβ5, αvβ6, αvβ8 and α5β1 integrins as compared to a disintegrin not having the mutant RGD loop and the at least one selected from the group consisting of the mutant linker and the mutant C-terminus.
2. The disintegrin variant of claim 1, wherein the disintegrin is selected from the group consisting of rhodostomin, albolabrin, applagin, basilicin, batroxostatin, bitistatin, cereberin, cerastin, crotatroxin, durissin, elegantin, flavoridin, flavostatin, halysin, halystatin, jararacin, jarastatin, kistrin, lachesin, lutosin, molossin, salmosin, saxatilin, tergeminin, trimestatin, trimucrin, trimutase, ussuristatin, and viridin.
3. The disintegrin variant of claim 1 or 2, wherein the mutant linker comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 306 to SEQ ID NO: 318.
4. The disintegrin variant of any one of claims 1 to 3, wherein the mutant C-terminus comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 319 to SEQ ID NO:328.
5. The disintegrin variant of any one of claims 1 to 4, comprising a mutant RGD loop having the amino acid sequence selected from the group consisting of SEQ ID NO: 329 and 331, and at least one of a mutant linker having the amino acid sequence

selected from the group consisting of SEQ ID NO: 306 to SEQ ID NO: 318, and a mutant C-terminus having the amino acid sequence selected from the group consisting of SEQ ID NO: 319 to SEQ ID NO: 328.

6. The disintegrin variant of claim 5, comprising the mutant RGD loop, the mutant linker and the mutant C-terminus.
7. The disintegrin variant of claim 1, comprising the amino acid sequence selected from the group consisting of SEQ ID NOs: 123, 124, 147, 149 and 171.
8. The disintegrin variant of any one of claims 1 to 7, wherein the disintegrin variant is pegylated or conjugated with albumin or Fc.
9. A polynucleotide encoding the disintegrin variant of any one of claims 1 to 8.
10. A recombinant host cell comprising a polynucleotide encoding the disintegrin variant of any one of claims 1 to 8.
11. A pharmaceutical composition comprising the disintegrin variant of any one of claims 1 to 8 and a pharmaceutically acceptable carrier.
12. The pharmaceutical composition of claim 11, which is for treating a disease associated with at least one integrin selected from the group consisting of αvβ1, αvβ3, αvβ5, αvβ6, αvβ8 and α5β1 integrins in a subject in need thereof, wherein the disease is selected from the group consisting of osteoporosis, bone tumor or cancer growth and symptoms related thereto, angiogenesis-related tumor growth and metastasis, tumor metastasis in bone, malignancy-induced hypercalcemia, angiogenesis-related eye diseases, Paget's disease, rheumatic arthritis, and osteoarthritis.
13. The pharmaceutical composition of claim 12, wherein the integrin-associated disease is an angiogenesis-related eye disease selected from the group consisting of age-related macular degeneration, diabetic retinopathy, corneal neovascularizing diseases, ischaemia-induced neovascularizing retinopathy, high myopia, and retinopathy of prematurity.
14. The pharmaceutical composition of claim 12, wherein the integrin-associated disease is a cancer selected from the group consisting of metastatic melanoma,

metastatic prostate cancer, metastatic breast cancer, colorectal carcinoma, liver cancer, ovarian cancer, cervical cancer, pancreatic cancer, non-small-cell lung cancer, and glioblastoma multiforme.

15. Use of a disintegrin variant of any one of claims 1 to 8 in the manufacture of a medicament for the treatment of a disease associated with at least one integrin selected from the group consisting of αvβ1, αvβ3, αvβ5, αvβ6, αvβ8 and α5β1 integrins in a subject in need thereof, wherein the disease is selected from the group consisting of osteoporosis, bone tumor or cancer growth and symptoms related thereto, angiogenesis-related tumor growth and metastasis, tumor metastasis in bone, malignancy-induced hypercalcemia, angiogenesis-related eye diseases, Paget's disease, rheumatic arthritis, and osteoarthritis.