CLAIMS

1. A polypeptide construct comprising:

   (a) a first polypeptide comprising an amino acid sequence that is at least 80% identical to an amino acid sequence selected from any one of SEQ ID NO: 1-40; and

   (b) a second polypeptide, wherein the second polypeptide is heterologous to the first polypeptide.

2. The polypeptide construct of claim 1, wherein the first polypeptide comprises an amino acid sequence that is at least 90%, at least 95% or is 100% identical to an amino acid sequence selected from SEQ ID NO: 1-40.

3. The polypeptide construct of claim 1 or 2, wherein the first polypeptide comprises an amino acid sequence that is at least 90%, at least 95% or is 100% identical to SEQ ID NO:1 or 21.

4. The polypeptide construct of any one of claims 1-3, wherein the first polypeptide and the second polypeptide are linked through a linker.

5. The polypeptide construct of claim 4, wherein:

   (a) the N-terminus of the second polypeptide is linked to the C-terminus of the first polypeptide; or

   (b) the N-terminus of the first polypeptide is linked to the C-terminus of the second polypeptide.

6. The polypeptide construct of any one of the preceding claims, wherein the polypeptide construct further comprises a third polypeptide comprising an amino acid sequence that is at least 80%, at least 90%, at least 95% or is 100% identical to an amino acid sequence selected from any one of SEQ ID NO: 1-40.

7. The polypeptide construct of any one of claims 1-3 and 5-6, wherein the first polypeptide and the second polypeptide linked through a covalent bond or an ionic bond or a non-covalent bond; and/or

   the third polypeptide is linked to the first or the second polypeptide through an ionic bond or a covalent bond.

8. The polypeptide construct of claim 7, wherein:

   (a) the N-terminus of the second polypeptide is linked to the C-terminus of the first polypeptide; and

   (b) the C-terminus of the second polypeptide is linked to the N-terminus of the third polypeptide.

9. The polypeptide construct of claim 7 or 8, wherein the covalent bond linking the first polypeptide and the second polypeptide is an amide bond; and/or

   the covalent bond linking the third polypeptide to the first or the second polypeptide.

10. The polypeptide construct of any one of claims 7-9, wherein the first polypeptide and the second polypeptide are linked through a polypeptide linker; and/or

    the first polypeptide and the second polypeptide are linked through a polypeptide linker third polypeptide is linked to the first or the second polypeptide through a polypeptide linker.

11. The polypeptide construct of claim 10, wherein the polypeptide linker is a flexible linker or a rigid linker, preferably wherein the flexible linker comprises a plurality of glycines and serines.

12. The polypeptide construct of any one of claims 7-9, wherein the first polypeptide and the second polypeptide have been linked through click chemistry; and/or

third polypeptide has been linked to the first or the second polypeptide through click chemistry.

13. The polypeptide construct of any one of the preceding claims, wherein the second polypeptide is or comprises a therapeutic protein.
14. The polypeptide construct of claim 13, wherein the therapeutic protein is a hormone, interferon, interleukin, growth factor, tumor necrosis factor, thrombolytic, enzyme, antibody, Fc fusion protein, anticoagulant, blood factor, bone morphogenetic protein, engineered protein scaffold.
15. The polypeptide construct of claim 14, wherein the hormone is an erythropoietin.
16. The polypeptide construct of claim 15, wherein the erythropoietin is epoetin alfa or a pegylated epoetin.
17. The polypeptide construct of claim 14, wherein the hormone is:

    (i) a glucagon-like peptide 1 (GLP-1) agonist, preferably semaglutide, exenatide or liraglutide; or

    (ii) insulin, preferably insulin aspart, insulin lispro, insulin glulisine, insulin detemir, degludec insulin, or glargine insulin.
18. The polypeptide construct of claim 14, wherein the therapeutic protein is somatostatin, a somatostatin analog, glucagon, galsulfase, nesiritide, or taliglucerase alfa.
19. The polypeptide construct of any one of the preceding claims, wherein the polypeptide construct comprises an amino acid sequence that is at least 80%, at least 90%, at least 95% or is 100% identical to any one of SEQ ID NOs: 41, and 44 – 52.

20. The polypeptide construct of any one of the preceding claims, wherein the polypeptide construct is conjugated to one or more of a cytotoxin, a fluorescent label and an imaging agent.
21. A pharmaceutical composition comprising the polypeptide construct of any one of claims 1-20 and optionally a pharmaceutically acceptable excipient.
22. The pharmaceutical composition of claim 21, wherein the pharmaceutical composition further comprises an additive, a stabilizer, a permeability enhancer, a protease inhibitor, or any combination thereof; and/or

    wherein the pharmaceutical composition is formulated for oral administration.
23. Use of the polypeptide construct of any one of claims 1-20, or the pharmaceutical composition of claim 21 or 22 in the manufacture of a medicament for treating anemia in a subject in need thereof.
24. The use of claim 23, wherein the second polypeptide is or comprises erythropoietin, epoetin alfa or pegylated epoetin.
25. The use of claim 23 or 24, wherein the polypeptide construct comprises SEQ ID NO: 41 or the pharmaceutical composition comprising a polypeptide construct comprising comprises SEQ ID NO: 41.