We claim:

1. A polypeptide comprising a fibronectin type III tenth domain (^{10}Fn3) wherein the ^{10}Fn3 domain comprises a) AB, BC, CD, DE, EF, and FG loops, b) a CD loop with an altered amino acid sequence relative to the sequence of the corresponding CD loop of the human ^{10}Fn3 domain, c) wherein the polypeptide binds to human serum albumin with a K_D of less than 500 nM, and d) wherein the ^{10}Fn3 domain further binds to one or more of rhesus serum albumin, cynomolgus serum albumin, mouse serum albumin, and rat serum albumin with a K_D of less than 500 nM, for example, less than 100 nM, or less than 10 nM.

2. The polypeptide of claim 1, wherein the ^{10}Fn3 domain binds to:

a) rhesus serum albumin and cynomolgus serum albumin,

b) mouse serum albumin and rat serum albumin, or

c) rhesus serum albumin, cynomolgus serum albumin, mouse serum albumin, and rat serum albumin.

3. The polypeptide of any one of the preceding claims, wherein the ^{10}Fn3 domain binds to serum albumin at a pH range of 5.5 to 7.4.

4. The polypeptide of any one of the preceding claims, wherein the ^{10}Fn3 domain binds to domain I-II of HSA.

5. The polypeptide of any one of the preceding claims, wherein the CD loop comprises an amino acid sequence according to the formula G-X_1-X_2-V-X_3-X_4-X_5-S-X_6-X_7-G-X_8-X_9-Y-X_{10}-X_{11}-X_{12}-E, wherein,

(a) X_1 is selected from the group consisting of R or W;

(b) X_2 is selected from the group consisting of H, E, D, Y, or Q;

(c) X_3 is selected from the group consisting of Q or H;

(d) X_4 is selected from the group consisting of I, K, M, Q, L, or V;

(e) X_5 is selected from the group consisting of Y, F, or N;

(f) X_6 is selected from the group consisting of D, V, or E;
(g) X_7 is selected from the group consisting of L, W, or F;
(h) X_8 is selected from the group consisting of P or T;
(i) X_9 is selected from the group consisting of L or M;
(j) X_{10} is selected from the group consisting of I or V;
(k) X_{11} is selected from the group consisting of Y or F; and
(l) X_{12} is selected from the group consisting of T, S, Q, N, or A.

6. The polypeptide of claim 5, wherein the CD loop comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 106, 113, 101-105, 107-112, and 114-125.

7. A polypeptide of any one of the preceding claims, wherein the polypeptide comprises an amino acid sequence at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to the non-CD loop regions of SEQ ID NOs: 81, 88, 23-80, 82-87, 89-100, 184-209 and 235-260.

8. The polypeptide of any one of the preceding claims, wherein the polypeptide comprises an amino acid sequence that is at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to any one of SEQ ID NOs: : 81, 88, 23-80, 82-87, 89-100, 184-209 and 235-260.

9. A fusion polypeptide comprising a fibronectin type III tenth (^{10}Fn3) domain and a heterologous protein, wherein the ^{10}Fn3 domain comprises a) AB, BC, CD, DE, EF, and FG loops, b) a CD loop with an altered amino acid sequence relative to the sequence of the corresponding loop of the human ^{10}Fn3 domain, c) wherein the polypeptide binds to human serum albumin with a K_D of less than 500 nM, and wherein the ^{10}Fn3 domain further binds to one or more of rhesus serum albumin, cynomolgus serum albumin, mouse serum albumin, and rat serum albumin with a K_D of less than 500 nM, for example, less than 100 nM, or less than 10 nM.

10. The fusion polypeptide of claim 9, wherein the heterologous protein is a therapeutic moiety.

11. The fusion polypeptide of claim 9, wherein the heterologous protein is a polypeptide comprising a ^{10}Fn3 domain.

12. The fusion polypeptide of claim 11, wherein the ^{10}Fn3 domain binds to a target protein other than serum albumin, such as PCSK9.

13. The fusion polypeptide of claim 9, wherein the ^{10}Fn3 domain comprises an amino acid sequence at least 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to SEQ ID NO: 81, 88, 23-80, 82-87, 89-100, 184-209 and 235-260.

14. A polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 81, 88, 23-80, 82-87, 89-100, 168-169, 184-209 and 235-261.

15. A composition comprising a polypeptide of any one of the preceding claims and a carrier.

16. An isolated nucleic acid molecule encoding the polypeptide of any one of claims 1-14.

17. The isolated nucleic acid molecule of claim 16, wherein the nucleic acid molecule has a sequence selected from the group consisting of SEQ ID NOs: 126-151 and 172 or a sequence that is at least 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical thereto.

18. An expression vector comprising the nucleotide sequence encoding the polypeptide of any one of claims 1-14.

19. A cell comprising a nucleic acid molecule of claim 16 or 17 or expression vector of claim 18.

20. A method of producing the polypeptides of any one of claims 1-14 comprising culturing the cell of claim 19 under conditions suitable for expressing the polypeptide, and purifying the polypeptide.

CLAIMS

1. A fusion polypeptide comprising two fibronectin type III tenth (^{10}Fn3) domains,

wherein the first ^{10}Fn3 domain comprises a) AB, BC, CD, DE, EF, and FG loops, b) a CD loop with an altered amino acid sequence relative to the sequence of the corresponding loop of the human ^{10}Fn3 domain, c) wherein the polypeptide binds to human serum albumin with a K_D of less than 500 nM, and wherein the ^{10}Fn3 domain further binds to one or more of rhesus serum albumin, cynomolgus serum albumin, mouse serum albumin, and rat serum albumin with a K_D of less than 500 nM; and

wherein the second ^{10}Fn3 domain binds to Proprotein Convertase Subtilisin Kexin type 9 (PCSK9).

2. The fusion polypeptide of claim 1, wherein the first ^{10}Fn3 domain comprises an amino acid sequence that is at least 80%identical to SEQ ID NOs: 81, 88, 23-80, 82-87, 89-100, 184-209 and 235-260.

3. The fusion polypeptide of claim 1, wherein the second ^{10}Fn3 domain comprises an amino acid sequence that is at least 90% identical to SEQ ID NOs: 167-169.

4. A composition comprising a fusion polypeptide of any one of the preceding claims and a carrier.

5. An isolated nucleic acid molecule encoding the fusion polypeptide of any one of claims 1 to 3.

6. The isolated nucleic acid molecule of claim 5, wherein the nucleic acid molecule comprises a sequence selected from the group consisting of SEQ ID NOs: 126-151 and 172 or a sequence that is at least 70%identical thereto.

7. An expression vector comprising the nucleotide sequence encoding the fusion polypeptide of any one of claims 1 to 3.

8. A cell comprising a nucleic acid molecule of claim 5 or 6 or expression vector of claim 7.

9. A method of producing the fusion polypeptides of any one of claims 1 to 3 comprising culturing the cell of claim 8 under conditions suitable for expressing the polypeptide, and purifying the polypeptide.

10. Use of the fusion polypeptide of claims 1 to 3 or the composition of claim 4 in the manufacture of a medicament for the treatment of a cholesterol-related disease in a subject in need thereof.

11. The use of claim 10, wherein the cholesterol-related disease is atherosclerosis.

12. The use of claim 11, wherein the cholesterol-related disease is hypercholesterolemia.