

## CLAIMS

1. An Fc construct comprising:
  - a) a first polypeptide having the formula A-L-B; wherein
    - i) A comprises a first Fc domain monomer;
    - ii) L is a linker; and
    - iii). B comprises a second Fc domain monomer;
  - b) a second polypeptide comprising a third Fc domain monomer; and
  - c) a third polypeptide comprising a fourth Fc domain monomer;wherein the first Fc domain monomer and the third Fc domain monomer combine to form a first Fc domain and the second Fc domain monomer and the fourth Fc domain monomer combine to form a second Fc domain; and  
wherein at least one of the Fc domains comprises at least one amino acid modification that alters: one or more of: (i) binding affinity to one or more Fc receptors, (ii) an effector function, (iii) the level of Fc domain sulfation, (iv) half-life, (v) protease resistance, (vi) Fc domain stability, and/or (vii) susceptibility to degradation.
2. The Fc construct of claim 1, wherein the first Fc domain monomer and the third Fc domain monomer comprise complementary dimerization selectivity modules that promote dimerization between the first Fc domain monomer and the third Fc domain monomer.
3. The Fc construct of claim 1, wherein the second Fc domain monomer and the fourth Fc domain monomer comprise complementary dimerization selectivity modules that promote dimerization between the second Fc domain monomer and the fourth Fc domain monomer.
4. The Fc construct of claim 1, wherein A consists of an Fc domain monomer.
5. The Fc construct of claim 1, wherein B consists of an Fc domain monomer.
6. The Fc construct of claim 1, wherein the second polypeptide consists of an Fc domain monomer.

7. The Fc construct of claim 1, wherein the third polypeptide consists of an Fc domain monomer.

8. The Fc construct of claim 1, further comprising an IgG C<sub>L</sub> antibody constant domain and an IgG C<sub>H</sub>1 antibody constant domain, wherein the IgG C<sub>H</sub>1 antibody constant domain is attached to the N-terminus of A or the second polypeptide by way of a linker.

9. An Fc construct comprising:

a). a first polypeptide having the formula A-L-B; wherein

i). A comprises a first Fc domain monomer;

ii). L is a linker; and

iii). B comprises a second Fc domain monomer;

b). a second polypeptide having the formula A'-L'-B'; wherein

i). A' comprises a third Fc domain monomer;

ii). L' is a linker; and

iii). B' comprises a fourth Fc domain monomer;

c). a third polypeptide comprises a fifth Fc domain monomer; and

d). a fourth polypeptide comprises a sixth Fc domain monomer;

wherein the A of first polypeptide and the A' of second polypeptide combine to form a first Fc domain, the B of first polypeptide and fifth Fc domain monomer combine to form a second Fc domain, and the B' of second polypeptide and sixth Fc domain monomer combine to form a third Fc domain; and

wherein at least one of the Fc domains comprises at least one amino acid modification that alters one or more of (i) binding affinity to one or more Fc receptors, (ii) effector functions, (iii) the level of Fc domain sulfation, (iv) half-life, (v) protease resistance, (vi) Fc domain stability, and/or (vii) susceptibility to degradation.

10. An Fc construct comprising:

a). a first polypeptide having the formula A-L-B; wherein

i). A comprises a first Fc domain monomer;

- ii). L is a linker; and
- iii). B comprises an albumin binding peptide; and
- b). a second polypeptide comprising a second Fc domain monomer;

wherein the first Fc domain monomer and the second Fc domain monomer combine to form an Fc domain; and

wherein at least one of the Fc domains comprises at least one amino acid modification that alters one or more of (i) binding affinity to one or more Fc receptors, (ii) effector functions, (iii) the level of Fc domain sulfation, (iv) half-life, (v) protease resistance, (vi) Fc domain stability, and/or (vii) susceptibility to degradation.

11. The Fc construct of claim 10, wherein the first Fc domain monomer and the second Fc domain monomer comprise complementary dimerization selectivity modules that promote dimerization between the first Fc domain monomer and the second Fc domain monomer.

12. An Fc construct comprising:

- a). a first polypeptide having the formula A-L1-B-L2-C; wherein
  - i). A comprises an IgG C<sub>L</sub> antibody constant domain;
  - ii). L1 and L2 are each a linker;
  - iii) B comprises an IgG C<sub>H</sub>1 antibody constant domain; and
  - iv). C comprises a first Fc domain monomer; and
- b). a second polypeptide having the formula A'-L1'-B'-L2'-C'; wherein
  - i). A' comprises an IgG C<sub>L</sub> antibody constant domain;
  - ii). L1' and L2' are each a linker;
  - iii) B' comprises an IgG C<sub>H</sub>1 antibody constant domain; and
  - iv). C' comprises a second Fc domain monomer; wherein

the first Fc domain monomer and the second Fc domain monomer combine to form an Fc domain; and

wherein at least one of the Fc domains comprises at least one amino acid modification that alters one or more of (i) binding affinity to one or more Fc receptors, (ii) effector functions, (iii) the level of Fc domain sulfation, (iv) half-life, (v) protease resistance, (vi) Fc domain stability, and/or (vii) susceptibility to degradation.

13. The Fc construct of claim 12, wherein the first Fc domain monomer and the second Fc domain monomer comprise complementary dimerization selectivity modules that promote dimerization between the first Fc domain monomer and the second Fc domain monomer.

14. An Fc construct comprising:

a). a first polypeptide having the formula A-L1-B-L2-C; wherein

i). A comprises an IgG C<sub>L</sub> antibody constant domain;

ii). L1 and L2 are each a linker;

iii) B comprises an IgG C<sub>H1</sub> antibody constant domain; and

iv). C comprises a first Fc domain monomer; and

b). a second polypeptide having the formula A'-L1'-B'-L2'-C'; wherein

i). A' comprises an IgG C<sub>L</sub> antibody constant domain;

ii). L1' and L2' are each a linker;

iii) B' comprises an IgG C<sub>H1</sub> antibody constant domain; and

iv). C' comprises a second Fc domain monomer;

c). a third polypeptide comprising a third Fc domain monomer; and

d). a fourth polypeptide comprising a fourth Fc domain monomer; wherein

the first Fc domain monomer and the third Fc domain monomer combine to form a first Fc domain;

the second Fc domain monomer and fourth third Fc domain monomer combine to form a second Fc domain;

the IgG C<sub>H1</sub> antibody constant domain of the first polypeptide combines with the IgG C<sub>L</sub> antibody constant domain of the second polypeptide;

the IgG C<sub>H1</sub> antibody constant domain of the second polypeptide combines with the IgG C<sub>L</sub> antibody constant domain of the first polypeptide; and

wherein at least one of the Fc domains comprises at least one amino acid modification that alters one or more of (i) binding affinity to one or more Fc receptors, (ii) effector functions, (iii) the level of Fc domain sulfation, (iv) half-life, (v) protease resistance, (vi) Fc domain stability, and/or (vii) susceptibility to degradation.

15. An Fc construct comprising:

- a). a first polypeptide having the formula A-L-B; wherein
  - i). A comprises a first Fc domain monomer;
  - ii). L is a linker; and
  - iii). B comprises a second Fc domain monomer;
- b). a second polypeptide having the formula A'-L'-B'; wherein
  - i). A' comprises a third Fc domain monomer;
  - ii). L' is a linker; and
  - iii). B' comprises a fourth Fc domain monomer;

wherein the first and second Fc domain monomer comprise an engineered cavity into their respective C<sub>H</sub>3 domains and the third and fourth Fc domain monomer comprise an engineered protuberance into their respective C<sub>H</sub>3 domains, wherein the engineered cavity and the engineered protuberance are positioned to form a protuberance-into-cavity pair, wherein the first Fc domain monomer and the third Fc domain monomer combine to form a first Fc domain and the second Fc domain monomer and the fourth Fc domain monomer combine to form a second Fc domain; and

wherein at least one of the Fc domains comprises at least one amino acid modification that alters one or more of (i) binding affinity to one or more Fc receptors, (ii) effector functions, (iii) the level of Fc domain sulfation, (iv) half-life, (v) protease resistance, (vi) Fc domain stability, and/or (vii) susceptibility to degradation.

16. An Fc construct comprising:

- a). a first polypeptide having the formula A-L1-B-L2-C; wherein
  - i). A comprises a first Fc domain monomer;
  - ii). L1 is a linker;
  - iii). B comprises a second Fc domain monomer;
  - iv). L2 is a linker;
  - v). C comprises a third Fc domain monomer; and
- b). a second polypeptide having the formula A'-L1'-B'-L2'-C'; wherein
  - i). A' comprises a fourth Fc domain monomer;
  - ii). L1' is a linker;

iii) B' comprises a fifth Fc domain monomer;

iv). L2' is a linker;

v). C' comprises a sixth Fc domain monomer; wherein

the first Fc domain monomer and the second Fc domain monomer combine to form a first Fc domain,

the fourth Fc domain monomer and the fifth Fc domain monomer combine to form a second Fc domain, and the third Fc domain monomer and the sixth Fc domain monomer combine to form a third Fc domain; and

wherein at least one of the Fc domains comprises at least one amino acid modification that alters one or more of (i) binding affinity to one or more Fc receptors, (ii) effector functions, (iii) the level of Fc domain sulfation, (iv) half-life, (v) protease resistance, (vi) Fc domain stability, and/or (vii) susceptibility to degradation.

17. The Fc construct of claim 1 for use in the treatment of inflammation.

18. Use of the Fc construct of claim 1 in the manufacture of a pharmaceutical composition for treating inflammation.