WHAT IS CLAIMED IS:

1. A coagulation factor complex comprising:
   a. a coagulation factor;
   b. a fusion protein comprising a first protein fused to albumin, or an albumin fragment, wherein said albumin fragment retains the ability to prolong half-life of the fusion protein; and
   c. a modifying molecule, wherein the modifying molecule is coupled to the coagulation factor in such a way as to allow binding by the fusion protein, thereby creating a modified coagulation factor, wherein the modifying molecule is attached to the coagulation factor through at least one bond that is not a peptide bond;
   wherein the modified coagulation factor and the fusion protein interact in at least two independent sites.
2. The coagulation factor complex of claim 1, wherein at least one binding site of the modified coagulation factor is a natural binding site.
3. The coagulation factor complex of claim 1 or 2, wherein at least one binding site of the fusion protein is provided by the modifying molecule.
4. The coagulation factor complex of any one of claims 1-3, wherein the coagulation factor is Factor VIII.
5. The coagulation factor complex of any one of claims 1-3, wherein the modified coagulation factor is modified Factor VIIa.
6. The coagulation factor complex of any one of claims 1-5, wherein the first protein of the fusion protein is a fragment of von Willebrand's factor.
7. The coagulation factor complex of claim 6, wherein the fragment of von Willebrand's factor is a D'D3 fragment.
8. The coagulation factor complex of claim 1, the first protein of the fusion protein is Tissue Factor (TF).
9. The coagulation factor complex of any one of claims 1-8, wherein the modified coagulation factor and the fusion protein form a non-covalant bond.
10. The coagulation factor complex of any one of claims 1-8, wherein the modified coagulation factor and the fusion protein interact covalently.
11. The coagulation factor complex of claim 10, wherein the covalent bond is not a peptide bond.
12. The coagulation factor complex of claim 10, wherein the covalent bond is not a peptide

bond produced by translation of a nucleic acid.

13. The coagulation factor complex of any one of claims 1-12, wherein the modifying molecule comprises a fatty acid, wherein the fatty acid binds to the albumin, or the albumin fragment, of the fusion protein.
14. The coagulation factor complex of any one of claims 1-13, wherein the modifying molecule is produced by click chemistry.
15. The coagulation factor complex of any one of claims 1-14, wherein the coagulation factor is coupled to the fusion protein by click chemistry.
16. The coagulation factor complex of any one of claims 1-15, wherein the modifying molecule is attached to the coagulation factor through a polyethylene glycol chain.
17. The coagulation factor complex of claim 16, wherein the polyethylene glycol chain is linked to a maleimide on the coagulation factor.
18. The coagulation factor complex of claim 17, wherein the polyethylene glycol chain is linked to maleimide with a structure comprising maleimide-PEG4-6-methyl tetrazine.
19. The coagulation factor complex of any one of claims 1-18, wherein the first protein of the fusion protein is joined together with albumin via a linker.
20. The coagulation factor complex of any one of claims 1-19, wherein the coagulation factor comprises modified amino acids.
21. The coagulation factor complex of any one of claims 1-20, wherein the fusion protein comprises modified amino acids.
22. The coagulation factor complex of any one of claims 1-21, wherein half-life of the coagulation factor complex is at least 20% greater compared to the coagulation factor not in a complex.
23. A kit comprising the coagulation factor complex of any one of claim 1-22.
24. The coagulation factor complex of any one of claims 1-22 for use in therapy.
25. The coagulation factor complex of any one of claims 1-22 for use in the treatment of hemophilia.
26. Use of the coagulation factor complex of any one of claims 1-22 in the manufacture of a medicament for the treatment of hemophilia.
27. The use of claim 26, wherein the medicament is to be administered via injection, inhalation, internasally, or orally.