6. The modified blood coagulation protein of any one of claims 1-5 wherein the PSA is comprised of 5-500 sialic acid units.

7. The modified blood coagulation protein of any one of claims 1-5 wherein the PSA is comprised of 10-300 sialic acid units.

8. The modified blood coagulation protein of any one of claims 1-5 wherein the PSA has a molecular weight from 2,000 Da to 45,000 Da.

9. The modified blood coagulation protein of any one of claims 1-5 and 8 wherein the PSA has a molecular weight from 3,000 Da to 35,000 Da.

10. The modified blood coagulation protein of any one of claims 1-5 and 8-9 wherein the PSA has a molecular weight from 5,000 Da to 25,000 Da.

11. The modified blood coagulation protein of any one of claims 1-10 wherein the oxidized carbohydrate moiety of the blood coagulation protein is located in the activation peptide of the blood coagulation protein.

12. The modified blood coagulation protein of any one of claims 1-11 wherein the blood coagulation protein is a full-length blood coagulation protein.

13. The modified blood coagulation protein of any one of claims 1-12 wherein the blood coagulation protein molecule has FIX biological activity.

14. The modified blood coagulation protein of any one of claims 1-12 wherein the blood coagulation protein molecule has FVIII biological activity.

15. The modified blood coagulation protein of any one of claims 1-3, 6-14 wherein the PSA has a molecular weight from 3,000 Da to 35,000 Da and comprises 1-50 ethylene glycol units, and wherein the carbohydrate moiety is oxidized by the oxidizing agent sodium periodate ($NaIO_4$).

16. The modified blood coagulation protein of any one of claims 1-3, 6-14 wherein the PSA has a molecular weight from 3,000 Da to 35,000 Da and has

said modified blood coagulation protein having a specific activity of at least 50% relative to an unmodified blood coagulation protein.

18. The method of claim 17 wherein said blood coagulation protein is a blood coagulation protein with FIX biological activity, and wherein said modified blood coagulation protein has a specific activity of at least 60% relative to an unmodified blood coagulation protein.

19. The method of claim 17 wherein said blood coagulation protein is a blood coagulation protein with FVIII biological activity, and wherein said modified blood coagulation protein has a specific activity of at least 70% relative to an unmodified blood coagulation protein.

20. The method of any one of claims 17-19 wherein the PSA is comprised of about 10 - 300 sialic acid units.

21. The method of any one of claims 17-19 wherein the PSA is comprised of 5-500 sialic acid units.

22. The method of any one of claims 17-19 wherein the PSA has a molecular weight from 2,000 Da to 45,000 Da.

23. The method of any one of claims 17-19 wherein the PSA has a molecular weight from 3,000 Da to 35,000 Da.

24. The method of any one of claims 17-19 wherein the PSA has a molecular weight from 5,000 Da to 25,000 Da.

25. The method of any one of claims 17-24 wherein the oxidizing agent is sodium periodate ($NaIO_4$).

26. The method of any one of claims 17-25 wherein the oxidized carbohydrate moiety of the blood coagulation protein is located in the activation peptide of the blood coagulation protein.

27. The method of any one of claims 17-26 wherein the blood coagulation protein is a full-length blood coagulation protein.

28. The method of any one of claims 17-27 wherein the blood coagulation protein has FVIIa biological activity.

29. The method of any one of claims 17-27 wherein the blood coagulation protein has FVIII biological activity.

30. The method of any one of claims 17-27 wherein the blood coagulation protein molecule is a full-length blood coagulation protein with FVIII biological activity.

31. The method of any one of claims 17-27 wherein the blood coagulation protein has FIX biological activity.

32. The method of any one of claims 17-27 wherein the blood coagulation protein molecule is a full-length blood coagulation protein with FIX biological activity.

33. The method of any one of claims 17-32 wherein the polysialic acid (PSA) containing an active aminooxy group comprises 1-50 ethylene glycol units.

34. The method of any one of claims 17-32 wherein the polysialic acid (PSA) containing an active aminooxy group has 2 or 4 ethylene glycol units.

35. The method of any one of claims 17-19, 25-32 wherein the PSA has a molecular weight from 3,000 Da to 35,000 Da and comprises 1-50 ethylene glycol units, and wherein the oxidizing agent is sodium periodate ($NaIO_4$).

36. The method of any one of claims 17-19, 25-32 wherein the PSA has a molecular weight from 3,000 Da to 35,000 Da and has 2 or 4 ethylene glycol units, and wherein the oxidizing agent is sodium periodate ($NaIO_4$).

37. The method of any one of claims 17-31 wherein the PSA is prepared by reacting an activated aminooxy linker with oxidized PSA;

wherein the aminooxy linker is selected from the group consisting of:
(a) a 3-oxa-pentane-1,5-dioxyamine linker of the formula: