CLAIMS

1. A method for purifying fibrinogen, the method comprising the steps of:
   (i) passing a solution comprising fibrinogen through an anion exchange chromatographic resin under conditions selected such that fibrinogen monomer present in the solution is bound to the resin;
   (ii) eluting fibrinogen monomer from the resin with an elution buffer, wherein the elution buffer has a conductivity in the range from about 19 to about 24 mS/cm; and
   (iii) filtering the eluted fibrinogen monomer from step (ii) through a filter having a pore size in the range from about 15 nm to about 35 nm.

2. The method of claim 1, wherein the solution comprising fibrinogen in step (i) is recovered after passing a feedstock comprising fibrinogen through a hydrophobic charge-induction chromatographic resin under conditions selected such that plasminogen and/or tissue plasminogen activator and/or other protease(s) in the feedstock is bound to the resin and the fibrinogen passes through the resin.

3. The method of claim 1 or claim 2, wherein the anion exchange chromatographic resin is a strong anion exchange chromatographic resin or a weak anion exchange chromatographic resin.

4. The method of any one of claims 1 to 3, wherein the anion exchange chromatographic resin comprises a quaternary amino group.

5. The method of any one of claims 1 to 4, wherein the anion exchange chromatographic resin is a polymer support grafted with tertiary or quaternary amines.

6. The method of any one of claims 1 to 5, wherein the anion exchange chromatographic resin is a hydroxylated polymer support grafted with tertiary or quaternary amines.

7. The method of any one of claims 1 to 6, wherein the anion exchange chromatographic

resin comprises a methacrylate polymer support.

8. The method of any one of claims 1 to 7, wherein the solution comprising fibrinogen has a pH in the range of about pH 7 to pH 10.

9. The method of any one of claims 1 to 8, wherein the eluted fibrinogen monomer is formulated with one or more amino acids prior to filtering in step (iii).

10. The method of claim 9, wherein the amino acid is arginine or glycine or a combination thereof.

11. The method of claim 10 or claim 11, wherein the concentration of the amino acid in the elution buffer comprising fibrinogen is in the range from about 0.5% to about 10% (w/w).

12. The method of any one of claims 1 to 10, wherein the elution buffer comprises NaCl at a concentration in the range from about 180mM to about 230mM.

13. The method of any one of claims 1 to 12, wherein the elution buffer comprising the fibrinogen has a protein concentration in the range from about 0.5 to about 10mg/mL.

14. The method of any one of claims 1 to 13, wherein the eluted fibrinogen monomer has a pH in the range from about pH 7 to about pH 9.

15. The method of any one of claims 1 to 14, wherein the filter of step (iii) has a pore size in the range from about 15 nm to about 35 nm.

16. The method of any one of claims 1 to 15, wherein step (iii) is conducted using two or more small virus filters in series.

17. The method of any one of claims 1 to 16, wherein step (iii) comprises tangential flow filtration or dead-end filtration.

18. The method of claim 17, wherein step (iii) comprises dead-end filtration.

19. The method of claim 18, wherein step (iii) is performed with filtration pressure maintained at about 1 bar to about 2 bar.

20. The method of any one of claims 1 to 19, wherein the filter has a filter capacity of at least 0.20kg of fibrinogen per m^2 of filter surface area.

21. The method of any one of claims 1 to 20, further comprising a pre-filtration or clarifying filtration step before step (iii) to remove macro-size particles.

22. The method of any one of claims 1 to 21, wherein the eluted fibrinogen monomer to be filtered in step (iii) has a temperature in the range from about 18ºC to about 35ºC.

23. A solution comprising fibrinogen purified by the method of any one of claims 1 to 22, where the solution comprises at least LRV 6.9 log for parvoviruses-like MVM.