WHAT IS CLAIMED IS:

1. A method for expressing a disintegrin and metalloproteinase with thrombospondin motifs 13 (ADAMTS13) protein, the method comprising culturing a cell harboring a nucleic acid encoding an ADAMTS13 protein in a culture medium comprising ~~at least~~from 3 μM to 12 μM zinc.

~~2. The method according to claim 1, wherein the culture medium comprises between 3 μM and 12 μM zinc.~~

~~3~~2. The method of claim 1 ~~or 2~~, wherein the culture medium comprises at least 5 μM zinc.

43. The method ~~according to any one~~ of claims 1 ~~to~~or ~~3~~2, wherein the culture medium comprises between 5 μM and 12 μM zinc.

~~5~~4. The method according to any one of claims 1 to 43, wherein the culture medium further comprises at least 0.5 mM calcium.

~~6~~5. The method of claim ~~5~~4, wherein the culture medium comprises between 0.5 mM and 1.5 mM calcium.

~~7~~6. The method according to any one of claims 1 to ~~6~~5, wherein the culture medium further comprises at least 2 mg/L nicotinamide (vitamin B3).

~~8~~7. The method according to any one of claims 1 to ~~7~~6, wherein the culture medium further comprises at least 7 mg/L nicotinamide (vitamin B3).

~~9~~8. The method according to any one of claims 1 to ~~8~~7, wherein the culture medium comprises between 2 mg/L and 10 mg/L nicotinamide (vitamin B3).

~~10~~9. The method according to any one of claims 1 to ~~9~~8, wherein the culture medium further comprises at least 0.5 mg/L polyamine.

~~11~~10. The method of claim ~~10~~9, wherein the polyamine is putrescine.

~~12~~11. The method of claim ~~11~~10, wherein the culture medium comprises between 2 mg/L and 8 mg/L putrescine.

~~13~~12. The method according to any one of claims 1 to ~~12~~11, wherein the culture medium is animal protein free.

~~14~~13. The method according to any one of claims 1 to ~~13~~12, wherein the culture medium is chemically defined.

~~15~~14. The method according to any one of claims 1 to ~~14~~13, wherein the cell is selected from the group consisting of a bacterial cell, a yeast cell, an insect cell, an avian cell, and a mammalian cell.

~~16~~15. The method of claim ~~15~~14, wherein the mammalian cell is a cell line selected from the group consisting of a human cell line, a hamster cell line, and a murine cell line.

~~17~~16. The method of claim ~~16~~15, wherein the cell line is selected from the group consisting of a CHO cell line, a BHK cell line, and an HEK cell line.

~~18~~17. The method of claim ~~17~~16, wherein the cell line is a CHO cell line.

~~19~~18. The method according to any one of claims 1 to ~~18~~17, wherein the nucleic acid encoding the ADAMTS protein further comprises an inducible promoter.

~~20~~19. The method according to any one of claims 1 to ~~19~~18, wherein the method comprises batch cell cultivation.

~~21~~20. The method of claim ~~20~~19, wherein the batch cell cultivation is repeated-batch cell cultivation.

~~22~~21. The method according to claim ~~20~~19, wherein the batch cell cultivation is fed-batch cell cultivation.

~~23~~22. The method according to any one of claims 1 to ~~19~~18 and ~~21~~20, wherein the method comprises continuous cell cultivation.

~~24~~23. The method according to claim ~~23~~22, wherein the continuous cell cultivation comprises continuous suspension cell cultivation.

~~25~~24. The method according to claim ~~23~~22, wherein the continuous cell cultivation comprises continuous adherent cell cultivation.

~~26~~25. The method of claim ~~24~~23, wherein the cultivation is performed in chemostat mode.

~~27~~26. The method according to claim ~~24~~23 or ~~25~~24, wherein the cultivation is performed in perfusion mode.

~~28~~27. The method of claim ~~25~~24 or ~~27~~26, wherein a microcarrier is used to culture the cell.

~~29~~28. The method of claim ~~28~~27, wherein the microcarrier is a porous microcarrier.

~~30~~29. The method according to any one of claims ~~21~~20 and ~~23~~22 to ~~29~~28, wherein the culture is maintained for at least 7 days.

~~31~~30. The method of claim ~~30~~29, wherein the culture is maintained for at least one month.

~~32~~31. The method of claim ~~31~~30, wherein the culture is maintained for at least two months.

~~33~~32. The method according to any one of claims 1 to ~~32~~31, wherein the culture is maintained at a temperature between 35°C and 37°C.

~~34~~33. The method according to any one of claims 1 to ~~33~~32, wherein the culture is maintained at a pH of between 6.9 and 7.3.

~~35~~34. The method according to claim ~~34~~33, wherein the culture is maintained at a pH of between 7.05 and 7.15.

~~36. The method according to any one of claims 1 to 35, wherein the ADAMTS protein is ADAMTS13.~~

3735. The method according to any one of claims 1 to ~~36~~34, wherein the specific activity of the ADAMTS13 protein in the culture medium is at least 600U per mg ADAMTS13 protein.

~~38~~36. The method of claim ~~37~~35, wherein the specific activity of the ADAMTS13 protein in the culture medium is at least 800U per mg ADAMTS13 protein.

~~39~~37. The method according to any one of claims 1 to 36~~ to 38~~, wherein the culture yields at least 400U of ADAMTS13 activity per L of culture per day (U/L/D).

~~40~~38. The method of claim ~~39~~37, wherein the culture yields at least ~~about~~ 800U of ADAMTS13 activity per L of culture per day (U/L/D).

~~41. A method for producing an ADAMTS composition, the method comprising the steps of:~~

~~(a) culturing a cell harboring a nucleic acid encoding an ADAMTS protein in an animal protein-free culture medium;~~

~~(b) removing a fraction of the supernatant from the culture;~~

~~(c) performing a filtration or centrifugation step to remove any residual cells;~~

~~(d) performing an ultrafiltration step to concentrate the ADAMTS protein; and~~

~~(e) performing a diafiltration step with a buffer comprising at least about 0.5 μM zinc and at least about 0.1 mM calcium; thereby preparing an ADAMTS composition.~~

~~42. The method of claim 41, wherein the step of culturing a cell comprises batch cell cultivation.~~

~~43. The method of claim 41, wherein the step of culturing a cell comprises continuous cell cultivation.~~

~~44. The method according to any one of claims 41 to 43, wherein the culture medium contains calcium.~~

~~45. The method of claim 44, wherein the culture medium contains at least 0.5 mM calcium.~~

~~46. The method according to any one of claims 41 to 45, wherein the culture medium contains zinc.~~

~~47. The method of claim 46, wherein the culture medium contains at least 2 μM zinc.~~

~~48. The method according to any one of claims 41 to 47, wherein the culture medium contains nicotinamide (vitamin B3).~~

~~49. The method of claim 48, wherein the culture medium contains at least 2 mg/L nicotinamide (vitamin B3).~~

~~50. The method according to any one of claims 41 to 49, wherein the diafiltration buffer contains at least about 5 μM zinc and at least about 2 mM calcium.~~

~~51. The method according to any one of claims 41 to 50, wherein the ADAMTS protein is ADAMTS13.~~

~~52. The method according to any one of claims 41 to51, wherein less than about 20% of the ADAMTS13 specific activity is lost between the end of step (c) and the end of step (e).~~

~~53. The method according to claim 52, wherein less than about 10% of the ADAMTS13 specific activity is lost between the end of step (c) and the end of step (e).~~

~~54. The method according to any one of claims 41 to 53, wherein the ADAMTS13 composition has a specific activity of at least about 1000 U/mg.~~

~~55. The method of claim 54, wherein the ADAMTS13 composition has a specific activity of at least about 1500 U/mg.~~

~~56~~39. A~~n ADAMTS protein~~ composition comprising a disintegrin and metalloproteinase with thrombospondin motifs 13 (ADAMTS13) protein prepared by a method comprising expressing the ADAMTS13 protein in a cell culture according to the method of any one of claims 1 to ~~40~~38.

~~57. An ADAMTS protein composition prepared by a method according to any one of claims 41 to 55.~~