## Claims

1. A process for the production of a target polypeptide which comprises:
(a) expressing an expression vector for expressing a target polypeptide in a host cell, the expression vector comprising an expression cassette comprising a polynucleotide encoding a recombinant polypeptide operably linked to a fibronectin secretion leader sequence or a functional equivalent thereof; and
(b) recovering the target polypeptide.

2. A process for the production of a target polypeptide which comprises:
(a) transfection or transformation of a host cell with an expression vector for expressing a target polypeptide in a host cell, the expression vector comprising an expression cassette comprising a polynucleotide encoding the target polypeptide operably linked to a fibronectin secretion leader sequence or a functional equivalent thereof;
(b) culturing the host cell under conditions which allow proliferation of the host cell and expression and secretion of the target polypeptide from the host cell; and
(c) recovering the target polypeptide.

3. A process according to either preceding claim, wherein the fibronectin secretion leader is selected to correspond to the host cell.

4. A process according to any preceding claim, wherein the host cell is a mammalian cell.

5. A process according to claim 4 , wherein the host cell is a CHO cell.

6. A process according to claim 4 or 5, wherein the expression cassette comprises an hEF1a promoter.

7. A process according to any one of claims 4 to 7, wherein the expression cassette comprises a polyA sequence.

8. A process according to claim 7, wherein the poly A sequence is selected from human betaglobin polyA, bovine growth hormone polyA SV40 early or late poly A sequences.

9. A process according to any preceding claim. wherein the fibronectin secretion leader has the sequence MLRGPGPGLLLLAVQCLGTAVPSTGA or MLRGPGPGLLLAVLCLGTAVRCTEA.

10. A process according to any preceding claim, wherein two expression cassettes are employed, one expression cassette comprising a polynucleotide encoding a light chain of a monoclonal antibody, and a second expression cassette comprising a polynucleotide encoding a heavy chain of a monoclonal antibody.

11. A process according to claim 10, wherein the two expression cassettes comprise the same promoter, secretion leader and polyA sequence.

12. A process according to claim 11, wherein the host cell is a CHO cell, the promoter is an hEF1a promoter, the fibronectin secretion leader is Chinese hamster fibronectin secretion leader and the polyA sequence is bovine betaglobin polyA sequence.

13. A Chinese hamster ovary cell, preferably a CHOK1, DG44, DUXKB11 or CHO pro3- cell, transfected with an expression vector comprising an expression cassette comprising a polynucleotide encoding the target polypeptide operably linked to a fibronectin secretion leader sequence or a functional equivalent thereof.

14. A Chinese hamster ovary cell according to claim 13, wherein the target polypeptide comprises a monoclonal antibody.

15. A Chinese hamster ovary cell according to claim 14, wherein separate expression cassettes comprising heavy and light chains are employed.

16. A Chinese hamster ovary cell according to claim 15, wherein the expression cassettes are located on the same vector.

17. A Chinese hamster ovary cell according to any one of claims 13 to 16, wherein each expression cassette comprises a housekeeping gene promoter, especially an hEF1a promoter operably linked to the polynucleotide encoding the target polypeptide.

18. A Chinese hamster ovary cell according to any one of claims 13 to 17, wherein each expression cassette comprises a bovine growth hormone polyA sequence.

19. A Chinese hamster ovary cell according to any one of claims 13 to 18 which further comprises a dihydrofolate reductase marker system.

20. A Chinese hamster ovary cell according to claim 19, wherein the dihydrofolate reductase marker system comprises a murine phosphoglycerate kinase promoter.

21. A Chinese hamster ovary cell according to any one of claims 13 to 20, wherein the fibronectin secretion leader is CHO fibronectin.

22. A Chinese hamster ovary cell according to any one of claims 13 to 21, wherein the fibronectin secretion leader has the sequence MLRGPGPGLLLAVLCLGTAVRCTEA.

23. A process for the production of a polypeptide which comprises culturing a Chinese hamster ovary cell according to any one of claims 13 to 22.

24. A DNA construct comprising an expression cassette comprising a promoter effective in a mammalian cell and a polynucleotide encoding a target polypeptide operably linked to a fibronectin secretion leader sequence.

25. A DNA construct according to claim 24, wherein the promoter is a housekeeping promoter, preferably an hEF1a promoter, and the expression cassette further comprises a bovine growth hormone poly A sequence.

## Claims

1. A process for the production of a target polypeptide which comprises:
(a) expressing an expression vector for expressing a target polypeptide in a Chinese hamster ovary cell ("**CHO cell**"), the expression vector comprising an expression cassette comprising a polynucleotide encoding a recombinant polypeptide operably linked to a fibronectin secretion leader sequence or a functional equivalent thereof; and
(b) recovering the target polypeptide.

2. A process for the production of a target polypeptide which comprises:
(a) transfection or transformation of a CHO cell with an expression vector for expressing a target polypeptide in the CHO cell, the expression vector comprising an expression cassette comprising a polynucleotide encoding the target polypeptide operably linked to a fibronectin secretion leader sequence or a functional equivalent thereof;
(b) culturing the CHO cell under conditions which allow proliferation of the CHO cell and expression and secretion of the target polypeptide from the CHO cell; and
(c) recovering the target polypeptide.

3. A process according to either preceding claim, wherein the fibronectin secretion leader is Chinese hamster fibronectin secretion leader.

4. A process according to any preceding claim, wherein the CHO cell is CHOK1, DG44, DUXKB11 or CHO pro3- cell.

5. A process according to claim 4 , wherein the CHO cell is a DG44 cell.

6. A process according to claim 4 or 5, wherein the expression cassette comprises an hEF1a promoter.

7. A process according to any one of claims 4 to 6, wherein the expression cassette comprises a polyA sequence.

8. A process according to claim 7, wherein the poly A sequence is selected from human betaglobin polyA, bovine growth hormone polyA SV40 early or late poly A sequences.

9. A process according to any preceding claim. wherein the fibronectin secretion leader has the sequence MLRGPGPGLLLAVLCLGTAVRCTEA.

10. A process according to any preceding claim, wherein two expression cassettes are employed, one expression cassette comprising a polynucleotide encoding a light chain of a monoclonal antibody, and a second expression cassette comprising a polynucleotide encoding a heavy chain of a monoclonal antibody.

11. A process according to claim 10, wherein the two expression cassettes comprise the same promoter, secretion leader and polyA sequence.

12. A process according to claim 11, wherein the promoter is an hEF1a promoter, the fibronectin secretion leader is Chinese hamster fibronectin secretion leader and the polyA sequence is bovine betaglobin polyA sequence.

13. A Chinese hamster ovary cell, preferably a CHOK1, DG44, DUXKB11 or CHO pro3- cell, transfected with an expression vector comprising an expression cassette comprising a polynucleotide encoding the target polypeptide operably linked to a fibronectin secretion leader sequence or a functional equivalent thereof.

14. A Chinese hamster ovary cell according to claim 13, wherein the target polypeptide comprises a monoclonal antibody.

15. A Chinese hamster ovary cell according to claim 14, wherein separate expression cassettes comprising heavy and light chains are employed.

16. A Chinese hamster ovary cell according to claim 15, wherein the expression cassettes are located on the same vector.

17. A Chinese hamster ovary cell according to any one of claims 13 to 16, wherein each expression cassette comprises a housekeeping gene promoter, especially an hEF1a promoter operably linked to the polynucleotide encoding the target polypeptide.

18. A Chinese hamster ovary cell according to any one of claims 13 to 17, wherein each expression cassette comprises a bovine growth hormone polyA sequence.

19. A Chinese hamster ovary cell according to any one of claims 13 to 18 which further comprises a dihydrofolate reductase marker system.

20. A Chinese hamster ovary cell according to claim 19, wherein the dihydrofolate reductase marker system comprises a murine phosphoglycerate kinase promoter.

21. A Chinese hamster ovary cell according to any one of claims 13 to 20, wherein the fibronectin secretion leader is CHO fibronectin.

22. A Chinese hamster ovary cell according to any one of claims 13 to 21, wherein the fibronectin secretion leader has the sequence MLRGPGPGLLLAVLCLGTAVRCTEA.

23. A process for the production of a polypeptide which comprises culturing a Chinese hamster ovary cell according to any one of claims 13 to 22.

24. A DNA construct comprising an expression cassette comprising a housekeeping promoter and a polynucleotide encoding a target polypeptide operably linked to a fibronectin secretion leader sequence.

25. A DNA construct according to claim 24, wherein the promoter is an hEF1a promoter, and the expression cassette further comprises a bovine growth hormone poly A sequence.