CLAIMS

~~1. A method of producing a recombinant peptide, the method comprising the following steps:~~

~~expressing a fusion polypeptide comprising the peptide wherein said peptide is flanked by one or more peptide cleavage site(s) and wherein said peptide cleavage site(s) are otherwise absent from said peptide; and~~

~~cleaving the fusion polypeptide at the peptide cleavage site(s) with a cleaving agent(s) that cleaves at the peptide cleavage site(s);~~

~~wherein the step of cleaving the fusion polypeptide releases said peptide from the fusion polypeptide.~~

~~2.~~1. A method of producing a recombinant vessel dilator (VSDL) peptide, the method comprising the following steps:

expressing a fusion polypeptide comprising concatemeric copies of the VSDL peptide wherein the VSDL ~~said~~ peptide is flanked by an N-terminally located peptide cleavage sites and a C-terminally located peptide cleavaga site, and wherein ~~said peptide is characterised in that~~ said peptide cleavage sites are otherwise absent from the VSDL ~~said~~ peptide; and

cleaving the fusion polypeptide at the peptide cleavage sites with a cleaving agent(s) that cleaves at the peptide cleavage sites;

wherein the step of cleaving the fusion polypeptide releases the VSDL ~~said~~ peptide from the fusion polypeptide; and

wherein the VSDL peptide consists of a native peptide sequence comprising a C terminal arginine residue; the C-terminally located peptide cleavage site of each concatemeric copy of the VSDL peptide consists of the C terminal arginine residue; and the C terminal arginine residue of each VSDL peptide except the last VSDL peptide in the fusion polypeptide additionally serves as the N-terminally located peptide cleavage site of a following VSDL peptide.

~~3. The method of claim 1 or 2, wherein said peptide comprises an amino acid sequence according to the formula~~

~~X_1-X_2-...-X_{n-1}-X_n-(R/K) (SEQ ID NO: 1);~~

~~wherein X is any amino acid except arginine or lysine, R/K is arginine or lysine, and n is any suitable number of amino acids.~~

~~4. The method of any one of claims 1 to 3, wherein said peptide has a native sequence.~~

~~5. The method of any one of claims 1 to 3, wherein said peptide comprises a vessel dilator (VSDL) peptide or a variant or modified peptide thereof.~~

~~6.~~2. The method of ~~any one of~~ claim~~s~~ 1 ~~to 5,~~ wherein the ~~peptide is a~~ VSDL peptide comprise~~s~~~~ing~~ or consist~~s~~~~ting~~ of an ~~the~~ amino acid sequence according to SEQ ID NO: 2.

~~7.~~3. The method of ~~any one of~~ claims 1or 2 ~~to 6~~, wherein the peptide cleavage sites are trypsin cleavage sites, and\

~~8. The method of claim 7,~~ wherein the cleaving agent is trypsin or a trypsin-like enzyme.

~~9. A method of producing a recombinant vessel dilator (VSDL) peptide (or a variant or modified peptide thereof), the method comprising the following steps:~~

~~expressing a fusion polypeptide comprising at least one VSDL peptide (or a variant or modified peptide thereof) wherein said peptide is flanked by one or more trypsin cleavage sites and wherein said peptide is characterised in that trypsin cleavage sites are otherwise absent; and~~

~~cleaving the fusion polypeptide at the trypsin cleavage sites with a cleaving agent(s) that cleaves at the trypsin cleavage sites;~~

~~wherein the step of cleaving the fusion polypeptide releases said peptide from the fusion polypeptide.~~

~~10. The method of claim 9, wherein the peptide is a VSDL peptide comprising or consisting of the amino acid sequence according to SEQ ID NO: 2.~~

~~11. The method of claim 9 or 10, wherein the step of cleaving the fusion polypeptide comprises cleaving the fusion polypeptide with trypsin or a trypsin-like enzyme.~~

~~12.~~4. The method of any one of claims 1 to 3 ~~9 to 11,~~ further comprising the steps of:

adjusting the pH of the cleaved fusion polypeptide to below 5; and

purifying the peptide from the digested fusion polypeptide using at least one anion exchange technique.

~~13.~~5. The method of ~~claim~~ any one of claims 1 to 4 ~~12,~~ further comprising spray or freeze drying the peptide.

~~14.~~6. The method of any one of claims 1 to 5 ~~13,~~ wherein the fusion polypeptide consists of ~~comprises from~~ two to twenty concatemeric copies of the VSDL peptide.

~~15.~~7. The method of any one of claims 1 to 6 ~~13,~~ wherein the fusion polypeptide consists of ~~comprises~~ three concatemeric copies of the VSDL peptide.

~~16.~~8. The method of any one of claims 1 to 7 ~~13~~, wherein the fusion polypeptide consists of ~~comprises~~ ten concatemeric copies of the VSDL peptide.

~~17. The method of any one of claims 1 to 15, wherein said peptide comprises a peptide cleavage site at one terminus.~~

~~18. The method of any one of claims 1 to 17, wherein said peptide comprises a C-terminal arginine or lysine residue.~~

~~19~~. The method of any one of claims 1 to ~~18~~, wherein the fusion polypeptide comprises a leader fusion partner having a C-terminal peptide cleavage site.

~~20.~~10. The method of claim ~~19~~, wherein the leader fusion partner comprises a C-terminal arginine or lysine residue.

~~21.~~11. The method of any one of claims 1 to 10 ~~20~~, wherein the step of expressing the fusion polypeptide is conducted using *Escherichia coli* as an expression host.

~~22. An expression construct comprising a nucleotide sequence encoding a leader fusion partner operably fused to at least one nucleotide sequence encoding concatemeric copies of a peptide having a C-terminal trypsin cleavage site.~~

~~23.~~12. An expression construct comprising a nucleotide sequence encoding a leader fusion partner operably fused to at least one nucleotide sequence encoding two to twenty concatemeric copies of a VSDL peptide~~; (or a variant or modified peptide thereof) having a C-terminal trypsin cleavage site.~~

~~24. The expression construct of claim 22 or 23,~~ wherein the leader fusion partner has a C-terminal trypsin cleavage site; and

wherein the VSDL peptide is flanked by an N-terminally located peptide cleavage site and a C-terminally located peptide cleavage site, and said peptide cleavage sites are otherwise absent from the VSDL peptide; the VSDL peptide consists of a native peptide sequence comprising a C terminal arginine residue; the C-terminally located peptide cleavage site of each concatemeric copy of the VSDL peptide consists of the C terminal arginine residue; and the C terminal arginine residue of each VSDL peptide except the last VSDL peptide in the fusion polypeptide additionally serves as the N-terminally located peptide cleavage site of a following VSDL peptide.

~~25. The expression construct of any one of claims 22 to 24, wherein the nucleotide sequence encoding the leader fusion partner is linked to two to twenty concatemeric copies of the nucleotide sequence encoding the peptide.~~

13. The expression construct of claim 12, wherein the VSDL peptide comprises or consists of an amino acid sequence according to SEQ ID NO: 2.

~~26.~~14. A host cell for recombinantly expressing a peptide, wherein the host cell comprises the expression construct of any one of claim 12 or 13~~ claims 22 to 25~~.

~~27.~~15. A recombinant peptide produced in accordance with the method of any one of claims 1 to 11 ~~21~~.

~~28.~~16. A recombinant fusion polypeptide comprising a leader fusion partner linked to two to twenty concatemeric copies of a VSDL peptide, ~~having a C-terminal trypsin cleavage site.~~

~~29. The polypeptide of claim 28,~~ wherein the leader fusion partner has a C-terminal trypsin cleavage site; and
wherein the VSDL peptide is flanked by an N-terminally located peptide cleavage site and a C-terminally located peptide cleavage site, and said peptide cleavage sites are otherwise absent from the VSDL peptide; the VSDL peptide consists of a native peptide sequence comprising a C terminal arginine residue; the C-terminally located peptide cleavage site of each concatemeric copy of the VSDL peptide consists of the C terminal arginine residue; and the C terminal arginine residue of each VSDL peptide except the last VSDL peptide in the fusion polypeptide additionally serves as the N-terminally located peptide cleavage site of a following VSDL peptide.

~~30. The polypeptide of claim 28 or 29, wherein the leader fusion partner is linked to two to twenty concatemeric copies of the peptide.~~

~~31. A recombinant fusion polypeptide comprising or consisting of concatemeric copies of a peptide having a C terminal trypsin cleavage site.~~

~~32. The polypeptide of claim 31 comprising two to twenty concatemeric copies of the peptide.~~

~~33. The polypeptide of claim 32 comprising three to ten concatemeric copies of the peptide.~~

~~34. The polypeptide of any one of claims 28 to 33, wherein the peptide has no internal trypsin cleavage sites.~~

~~35. The polypeptide of any one of claims 28 to 34, wherein the peptide is a VSDL peptide or a variant or modified peptide thereof.~~

~~36.~~17. The polypeptide of claim 16 ~~any one of claims 28 to 35~~, wherein the ~~peptide is a~~ VSDL peptide comprise~~s~~~~ing~~ or consist~~s~~~~ing~~ of the amino acid sequence according to SEQ ID NO: 2.