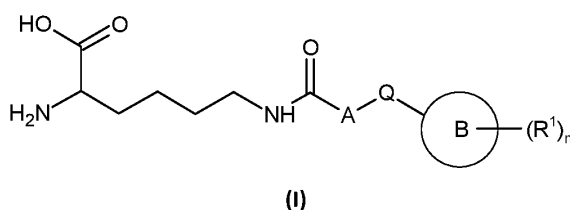


Claims

What is claimed is:

1. A modified lysine of formula (I):



wherein:

A is a bond, C₁₋₆alkylene, carbocyclyl or heterocyclyl; wherein said carbocyclyl or heterocyclyl may be optionally substituted on carbon by one or more R²; and wherein if said heterocyclyl contains an -NH- moiety that nitrogen may be optionally substituted by a group selected from R^A;

Q is a bond, carbocyclyl or heterocyclyl; wherein said carbocyclyl or heterocyclyl may be optionally substituted on carbon by one or more R³; and wherein if said heterocyclyl contains an -NH- moiety that nitrogen may be optionally substituted by a group selected from R^B;

Ring B is morpholinyl or thiomorpholinyl; wherein if said morpholinyl or thiomorpholinyl contains an -NH- moiety that nitrogen may be optionally substituted by a group selected from R^C;

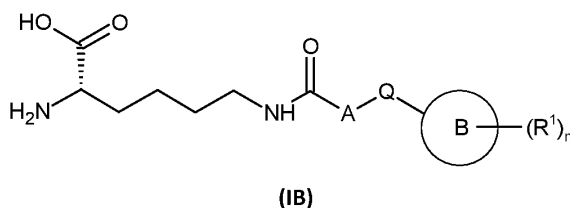
R¹, R² and R³ are each independently selected from halo, nitro, cyano, hydroxy, trifluoromethoxy, trifluoromethyl, amino, carboxy, carbamoyl, mercapto, sulphamoyl, methyl, ethyl, methoxy, ethoxy, acetyl, acetoxy, methylamino, ethylamino, dimethylamino, diethylamino, N-methyl-N-ethylamino, acetylamino, N-methylcarbamoyl, N-ethylcarbamoyl, N,N-dimethylcarbamoyl, N,N-diethylcarbamoyl, N-methyl-N-ethylcarbamoyl, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, mesyl, ethylsulphonyl, methoxycarbonyl, ethoxycarbonyl, N-methylsulphamoyl, N-ethylsulphamoyl, N,N-dimethylsulphamoyl, N,N-diethylsulphamoyl and N-methyl-N-ethylsulphamoyl;

n is 0-4;

R^A, R^B and R^C are independently selected from methyl, ethyl, propyl, isopropyl, acetyl, mesyl, ethylsulphonyl, methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl, butoxycarbonyl, carbamoyl, N-methylcarbamoyl, N-ethylcarbamoyl, N,N-dimethylcarbamoyl, N,N-diethylcarbamoyl and N-methyl-N-ethylcarbamoyl.

2. A modified lysine as claimed in claim 1 wherein **A** is a bond, C₁₋₆alkylene or heterocyclyl.

3. A modified lysine as claimed in claim 1 or claim 2 wherein **Q** is a bond.
4. A modified lysine as claimed in any one of claims 1 – 3 wherein **n** is 0.
5. A modified lysine as claimed in any one of claims 1 – 4 wherein **Ring B** is morpholinyl.
6. A modified lysine as claimed in any one of claims 1 – 4 wherein **Ring B** is thiomorpholinyl.
7. A modified lysine as claimed in any one of claims 1 – 4 wherein:
A is a bond, methylene or a pyridyl;
Q is a bond;
Ring B is morpholinyl or thiomorpholinyl; and
n is 0.
8. A modified lysine as claimed in any one of claims 1 – 7 which is a modified lysine of formula **(IB)**:



9. A modified lysine as claimed in any one of claims 1 – 4, 7 or 8 selected from:
 2-amino-6-[[6-(morpholin-4-yl)pyridine-3-carbonyl]amino]hexanoic acid;
 2-amino-6-[(thiomorpholine-3-carbonyl)amino]hexanoic acid; and
 2-amino-6-[2-(morpholin-4-yl)acetamido]hexanoic acid.
10. A polypeptide comprising one or more modified lysine residues as claimed in any one of claims 1-9.
11. A polypeptide as claimed in claim 10 comprising 20-50 amino acid residues.
12. A polypeptide as claimed in either claim 10 or claim 11 wherein fewer than 50% of the amino acid residues are modified lysine residues.

13. A polypeptide as claimed in any one of claims 10-12 wherein fewer than 50% of the amino acid residues are modified lysine residues and the remainder are unmodified lysine residues.
- 5 14. A polypeptide as claimed in any one of claims 10-13 further comprising a polyethylene glycol polymer.
15. A polypeptide as claimed in any one of claims 10-14 for use as a pharmaceutical delivery system.
- 10 16. A pharmaceutical composition which comprises a polypeptide as claimed in any one of claims 10-14 and a pharmaceutically active agent.
- 15 17. A pharmaceutical composition as claimed in claim 16 wherein the pharmaceutically active agent is genetic material.
18. A pharmaceutical composition as claimed in claim 17 wherein the genetic material is DNA.
19. A method of gene therapy in a warm-blooded animal, such as man, which comprises
20 administering to said animal an effective amount of a pharmaceutical composition as claimed in any one of claims 16-18.