Claims

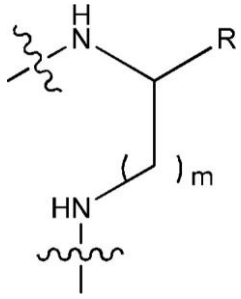
1. A compound of Formula I,

Lt-Q-Db (1)

wherein :

Q represents Z or A-Q-B;

Q is a structural fragment of Formula Il,

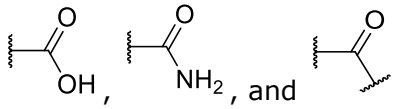


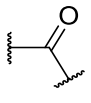
(11)

wherein :

the squiggly lines represent points of attachment of Q to A and/or B;

R is selected from the group consisting of:





wherein, when R represents , one of the squiggly lines represents a point of attachment to the rest of the Q fragment, and the other squiggly line represents a point of attachment to a Z group; m

represents an integer 1 to 4;

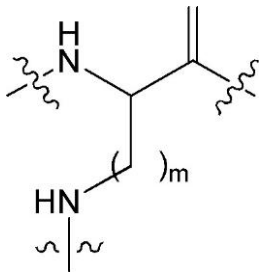
A and B independently represent Z or A^{1}-Q^{I}-B^{I}•

A^{1} and B^{1} independently represent Z or A^{2}-Q^{2}-B^{2}•

A^{2} and B^{2} independently represent Z or Z-Q^{3}-Z;

Q^{i}, Q^{2} and Q^{3} independently represent structural fragments of Formula Ill,

o



(III)

wherein :

the squiggly lines adjacent to the NH groups represent the points of attachment of Q [I] Q [2] and (2[3] to A[l] and/or B [1] , A[2] and/or B), and Z, respectively;

the squiggly line adjacent to the C=O group represents the point of attachment of Q, Q [2] and (2[3] to Q, Q [I] and (2 [2] , respectively; m is as defined above; each L independently represents one or more lipids selected from the group consisting of

vitamin A, vitamin E, cholesterol and a fatty acid comprising one or more carboxylic acid groups, 1 to 50 carbons, and/or one or more cyclic rings, is linear or branched, saturated or unsaturated with between 1 and 10 carbon-carbon double bonds and/or substituted by between 1 to 10 -OH groups, or a derivative of any of these lipids; t represents an integer selected from 1 to 32;

D represents montelukast; b represents an integer selected from O to 16; on each occasion that it is employed above, Z represents a structural fragment Formula

$$[(W)_r\text{-Lys-}X^1\text{-T-U-}X^2\text{-Y}]_n\text{-}(W)_r\text{-Lys-}X^1\text{-T-U-}X^2\text{-Y} \quad \text{(IV)}$$

(SEQ ID No: 1) wherein :

n represents an integer selected from 0 to 4; on each occasion that it is employed, r independently represents O or 1; on each occasion that it is employed, W independently represents a 1 or 2 amino acid

sequence selected from one or more of the group Ser, Lys, Ala, DOPA and a 3,4dihydrocinnamic acid (HCA) residue, provided that, when present, the HCA residue is located at the N-terminus of Z;

X [1] independently represents Pro, Hyp or diHyp;

T independently represents Ser or pSer;

U independently represents Tyr, pTyr, DOPA, Hyp, or Pro; X independently

represents Thr, Ser, Pro, Hyp or diHyp;

Y independently represents a 1 to 5 (such as 1 to 4) amino acid sequence selected from one or more of the group Lys, Ala, Pro, Hyp, diHyp, Thr, pThr, DOPA, Tyr, which sequences is optionally terminated by dopamine (or, more properly, 'a dopamine fragment');

if present, each D is covalently bonded to Z through an amide bond between respective carboxylic acid residues thereof and one or more NH2 residues of Z; and each of the L residues are covalently bonded to Z through an amide bond between respective carboxylic acid residues of L and one or more NH) residues of Z and/or through an ester bond between respective -OH residues of L and one or more carboxylic acid

residues of Z, as well as regioisomers, stereoisomers, and pharmaceutically- or cosmetically-acceptable salts of said compound.

2. A compound as claimed in Claim 1, wherein the lipid is selected from the group consisting of palmitic acid, stearic acid, oleic acid, octadecanedioic acid, docosahexaenoic acid and leukotriene B4, or a derivative of any of these.

3. A compound as claimed in Claim 2, wherein lipid is palmitic acid, or a derivative thereof.

4. A compound as claimed in Claim 3, wherein the derivative is:

(a) palmitoylethanolamide (PEA);

(b) a phosphatidylserine; or

(c) 1,2-dipalmitoyl-sn-glycero-3-phospho-l-serine, phosphatidylethanolamine, or 1,2-dipalmitoyl-sn-glycero-3-phosphoethanolamine.

5. A compound as claimed in Claim 2, wherein the lipid is selected from the group consisting of palmitic acid, stearic acid, vitamin E, vitamin A and cholesterol, or a derivative of any of these.

6. A compound as claimed in Claim 3, wherein the derivative is:

(a) 1,2-distearoyl-sn-glycero-3-phospho-l-serine;

(b) 1,2-dioleoyl-sn-glycero-3-phospho-L-serine; or

(c) cholesterol-acetic acid.

7. A compound as claimed in any one of the preceding claims wherein:

(a) Q^a represents Z;

(b) n represents 0;

(c) W, if present, represents Ala;

(d) X^1 represents Pro;

(e) T represents Ser;

(f) U represents Tyr or DOPA;

(g) X^2 represents Hyp;

(h) Y represents a 4 amino acid sequence, in which the amino acids are selected from one or more of the group Lys, Hyp, Thr, DOPA and Tyr, optionally terminated by a dopamine fragment.

8. A compound as claimed in Claim 7, wherein the amino acid sequence defined by Y is selected from the group:
-Hyp-Thr-Tyr-Lys-;
-Hyp-Thr-DOPA-Lys-; -Thr-Tyr-Hyp-Lys-; -Thr-DOPA-Hyp-Lys-; -DOPA-Lys-; and
-Tyr-Lys-, each of which is optionally terminated by a dopamine fragment.

9.A compound as claimed in any one of the preceding claims, wherein Z is selected from the group:

Ala-Lys-Pro-ser-Tyr-Hyp-Hyp-Thr-Tyr-Lys (SEQ ID No: 2);
Ala-Lys-Pro-ser-Tyr-Hyp-Thr-DOPA-Hyp-Lys (SEQ ID No: 9);
Ala-Lys-Pro-ser-Tyr-Hyp-Thr-Tyr-Hyp-Lys (SEQ ID No: 11);
Ala-Lys-Pro-ser-DOPA-Hyp-Hyp-Thr-DOPA-Lys (SEQ ID No: 12);
Lys-Pro-ser-Tyr-Hyp-DOPA-Lys (SEQ ID No: 14);
Lys-pro-Ser-Tyr-Hyp-Tyr-Lys (SEQ ID No: 16);
and Lys-Hyp-Ser-Tyr-Hyp-Tyr-Lys (SEQ ID No: 19).

10. A compound as defined in any one of Claims 1 to 9, for use as a pharmaceutical, in veterinary science, as a cosmetic and/or as part of a medical device.

11. A formulation comprising a compound as defined in any one of Claims 1 to 9, which further comprises a pharmaceutically- or cosmetically-acceptable, adjuvant, diluent or carrier.

12. A formulation as claimed in Claim 11 that is suitable for,
adapted for, and/or packaged and presented for, topical administration, wherein the pharmaceutically- or cosmetically-acceptable adjuvant, diluent or carrier is a topical adjuvant, diluent or carrier.

13. A formulation as claimed in Claim 11 or Claim 12, which is in the form of a gel, a spray, a cream, an ointment or a dry powder.

14. A compound as defined in any one of Claims 1 to 9, or a formulation as claimed in any one of Claims 11 to 13, for use in the treatment of inflammation, an inflammatory disorder, and/or of a disorder characterised by inflammation.

15. A compound, formulation or kit of parts for use, use or method as claimed in Claim 14 wherein the relevant condition is treated by way of direct topical administration to the skin or to a mucosal surface.