Claims

1. A peptide-containing compound that comprises a peptide component that comprises or consists of:

(a) the amino acid sequence:

X-Pro-Y-Z (SEQ ID No: 5),

wherein:

X represents a chain of 1 to 2 amino acid residues each independently selected from the group consisting of Ala and Lys;

Y is selected from the group consisting of Ser and pSer; and

Z represents a chain of 1 to 7 amino acid residues each independently selected from the group consisting of Tyr, pTyr, 3Hyp or 4Hyp, Thr, pThr, DOPA and Lys;

(b) the amino acid sequence:

G^1-Lys-Pro-G^2-T-Hyp-G^3-Lys (SEQ ID No: 7),

wherein

G^1 is absent or represents Ala;

G^2 is selected from the group consisting of Ser and pSer;

T is selected from the group consisting of DOPA, Tyr and pTyr;

Hyp is selected from the group consisting of 3Hyp and 4Hyp; and

G^3 represents a chain of 1 to 3, or 1 to 4, amino acid residues each independently selected from the group consisting of Tyr, pTyr, 3Hyp, 4Hyp, Thr, pThr and DOPA;

(c) the amino acid sequence:

Lys-Pro-G^2-T-Hyp-G^3-Lys (SEQ ID No: 8),

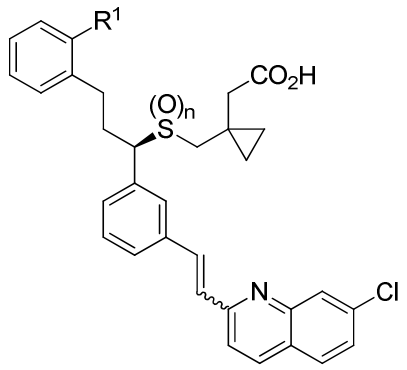
wherein G^2, T, Hyp and G^3 are as defined above; or

(d) the amino acid sequence:

Ala-Lys-Pro-G^2-T-Hyp-Hyp-Thr-G^4-Lys (SEQ ID No: 9),

wherein G^4 is selected from the group consisting of Tyr, pTyr, 3Hyp, 4Hyp, Thr, pThr and DOPA, and G^2, T, and Hyp are as defined above; and

at least one of the Lys residues, and/or, where present, the Ala residue, of the peptide component is covalently bonded to one or more compounds of the formula I,



I

wherein:

R^1 is selected from the group consisting of $-C(CH_3)_2OH$, $-COCH_3$, $-C(CH_3)=CH_2$ and $-C(CH_3)_2H$; and

n is 0, 1 or 2,

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

2. A peptide-containing compound as claimed in Claim 1, wherein

G^1 represents Ala;

G^2 represents Ser;

T represents Tyr; and/or .

G^3 or G^4 (as appropriate) represents Tyr or DOPA.

3. A peptide-containing compound as claimed in Claim 1 or Claim 2, wherein the peptide component comprises or consists of the amino acid sequence:

Ala-Lys-Pro-Ser-Tyr-Hyp-Hyp-Thr-DOPA-Lys (SEQ ID No: 4);

Ala-Lys-Pro-pSer-Tyr-Hyp-Hyp-Thr-DOPA-Lys (SEQ ID No: 11);

Ala-Lys-Pro-Ser-Tyr-Hyp-Hyp-Thr-Tyr-Lys (SEQ ID No: 12);

Ala-Lys-Pro-pSer-Tyr-Hyp-Hyp-Thr-Tyr-Lys (SEQ ID No: 13);

Lys-Pro-Ser-Tyr-Hyp-DOPA-Lys (SEQ ID No: 14);

Lys-Pro-Ser-pTyr-Hyp-DOPA-Lys (SEQ ID No: 15);

Ala-Lys-Pro-Ser-Tyr-Hyp-Hyp-Thr-DOPA-Hyp-Lys (SEQ ID No: 18);

Ala-Lys-Pro-pSer-Tyr-Hyp-Hyp-Thr-DOPA-Hyp-Lys (SEQ ID No: 19);

Ala-Lys-Pro-Ser-Tyr-Hyp-Hyp-Thr-Tyr-Hyp-Lys (SEQ ID No: 20);

Ala-Lys-Pro-pSer-Tyr-Hyp-Hyp-Thr-Tyr-Hyp-Lys (SEQ ID No: 21);

Ala-Lys-Pro-Ser-Tyr-Hyp-Thr-DOPA-Hyp-Lys (SEQ ID No: 22),

Ala-Lys-Pro-pSer-Tyr-Hyp-Thr-DOPA-Hyp-Lys (SEQ ID No: 23);

Ala-Lys-Pro-Ser-Tyr-Hyp-Thr-Tyr-Hyp-Lys (SEQ ID No: 24); and

Ala-Lys-Pro-pSer-Tyr-Hyp-Thr-Tyr-Hyp-Lys (SEQ ID No: 25).

4. A peptide-containing compound as claimed in any one of the preceding claims, wherein the one or more compounds of formula I is/are montelukast, montelukast styrene, or hydrogenated montelukast styrene.

5. A peptide-containing compound as defined in any of the preceding claims, or a pharmaceutically- or cosmetically-acceptable salt thereof, for use as a pharmaceutical.

6. A pharmaceutical formulation comprising a compound as defined in any one of Claims 1 to 4, or a pharmaceutically- or cosmetically-acceptable salt thereof, and a pharmaceutically- or cosmetically-acceptable, adjuvant, diluent or carrier

7. A peptide-containing compound as defined in any one of Claims 1 to 4, or a pharmaceutically- or cosmetically-acceptable salt thereof, or formulation as defined in Claim 6, for use in the treatment of inflammation, an inflammatory disorder, and/or of a disorder characterised by inflammation, or for use in the treatment of idiopathic pulmonary fibrosis.

8. A compound, or a formulation, for use as claimed in Claim 7, wherein:

(a) the inflammatory disorder comprises inflammation of one or more of the soft tissue, the joints, the nerves, the vascular system, one or more internal organs, one or more mucosal surfaces or the skin;

(b) the inflammatory disorder comprises inflammation of one or more mucosal surfaces and is selected from oral mucositis, aphthous ulcers, otitis media, laryngitis, tracheitis, esophagitis, gastritis, enteritis and enterocolitis, bacillary dysentery, chronic amoebic dysentery, schistosomiasis, nonspecific ulcerative colitis, regional enteritis, cervicitis and endocervicitis, endometritis, inflammation caused by inhalation injury, mucosal inflammation associated with cancers, and mucosal inflammation associated with an infection;

(c) the inflammatory disorder comprises inflammation of the heart, the stomach, the intestine, the lung, the liver, the spleen, the kidney, the pancreas, the bladder, the ovary or the prostate, pericarditis, myocarditis, endocarditis, pneumonia, hepatitis, splenitis, nephritis pancreatitis, cystitis, oophoritis, prostatitis or a gastric ulcer;

(d) the inflammatory disorder is selected from psoriasis, acne, eczema, dermatitis, seborrheic dermatitis, rhinitis, conjunctivitis, hemorrhoids, a chronic obstructive pulmonary disease, including emphysema or chronic bronchitis, and an inflammatory bowel disease;

(e) the inflammatory disorder comprises inflammation of the eye and surrounding area,

conjunctivitis, keratitis or optic neuritis; and/or

(f) the disorder characterised by inflammation is, or results in, a wound or a burn.

9. A compound, or a formulation, for use as claimed in Claim 8, wherein:

(a) the inflammatory disorder is asthma, allergic rhinitis, allergic/atopic dermatitis or seborrheic dermatitis;

(b) the inflammatory bowel disease is ulcerative colitis or Crohn's disease;

(c) the inflammatory disorder of the eye is selected from allergic conjunctivitis, acute epithelial keratitis, nummular keratitis, interstitial keratitis, disciform keratitis, neurotrophic keratitis, mucous plaque keratitis, herpes simplex keratitis, herpes zoster keratitis, bacterial keratitis, fungal keratitis acanthamoebic keratitis, onchocercal keratitis, superficial punctate keratitis, ulcerative keratitis, exposure keratitis photokeratitis and contact lens acute red eye;

(d) the wound comprises an abrasion, a scratch, an incision, a laceration, a skin puncture, an avulsion, a bruise, a scar or a blister; and/or

(e) the disorder resulting in a wound is hemorrhoids or ulcerative colitis.

10. A peptide-containing compound as defined in any one of Claims 1 to 4, or a pharmaceutically- or cosmetically-acceptable salt thereof, or formulation as defined in Claim 6, for use in the treatment of lung condition and/or a fibrotic condition, selected from lung fibrosis, renal fibrosis, liver fibrosis, silicosis, acute bronchitis, chronic bronchitis, tracheobronchitis, bronchial asthma, status asthmatics, bronchiectasis, upper respiratory tract infections, including the common cold and influenza), allergic airway inflammation, bacterial pneumonia, viral pneumonia, mycoplasma pneumonia, reckettsia, radiaton pneumonia, pneumococcal, staphylococcal pneumonia, streptococcal pneumonia, gram-negative bacillus pneumonia, pulmonary candidiasis, aspergillosis, mucormycosis, histoplasmosis, actinomycosis, nocardiosis, pulmonary mycosis, cryptococcosis, lung abscesses, anaphylactic pneumonia, Leoffer`s syndrome, extrinsic allergic alveolitis, pulmonary eosinophia, eosinophilosis, obstructive pulmonary emphysema, pulmonary edema, pulmonary tuberculosis, respiratory alkalosis (acidosis), acute lung injury, interstitial lung disease, empyema, lung fibroma and cor pulmonale.

11. A compound, or a formulation, for use as claimed in Claim 10, wherein the condition is selected from idiopathic pulmonary fibrosis or acute lung injury.

12. A peptide-containing compound as defined in any one of Claims 1 to 4, or a pharmaceutically- or cosmetically-acceptable salt thereof, or formulation as defined in Claim 6, for use in the treatment of a viral infection, caused by one or more viruses selected

from an adenovirus, human papillomavirus, BK virus, JC virus, herpes simplex, type 1 virus, herpes simplex, type 2 virus, varicella-zoster virus, Epstein–Barr virus, human cytomegalovirus, human herpes virus, type 8, smallpox, hepatitis B virus, parvovirus B19, human astrovirus, a norovirus, Norwalk virus, coxsackievirus, hepatitis A virus, poliovirus, a rhinovirus, a coronovirus, hepatitis C virus, yellow fever virus, dengue virus, West Nile virus, tick-borne encephalitis virus, human immunodeficiency virus, rubella virus, Lassa virus, hantavirus, Crimean-Congo hemorrhagic fever virus, Hantaan virus, Ebola virus, Marburg virus, Ravn virus, an influenza virus, measles virus, mumps virus, parainfluenza virus, respiratory syncytial virus, rhabdoviridae, hepatitis E virus, rotavirus, orbivirus, coltivirus, Banna virus and hepatitis D virus.

13. A compound, or a formulation, for use as claimed in Claim 12, wherein the virus is selected from an adenovirus, human papillomavirus, herpes simplex, type 1 virus, herpes simplex, type 2 virus, a rhinovirus, a coronavirus, an influenza A virus, an influenza B virus or influenza C virus, a parainfluenza virus and a respiratory syncytial virus.

14. A compound, or a formulation, for use as claimed in Claim 13, wherein the virus causes an infection of the airways.

15. A compound, or a formulation, for use as claimed in any one of Claims 5 or 7 to 14 (as appropriate), wherein the compound(s) or salt thereof is administered in the form of a topical formulation to treat the relevant condition by way of direct topical administration to the skin, or to a mucosal surface.

16. A compound, or a formulation, for use as claimed in any one of Claims 5 or 7 to 15 (as appropriate), wherein the compound(s) is/are administered by oral, intravenous, intraarterial, intravascular, perivascular, intramuscular, cutaneous, subcutaneous, transmucosal, sublingual, buccal, rectal, intravaginal, transdermal, nasal, pulmonary, tracheal, bronchial, intraperitoneal or anorectal delivery.