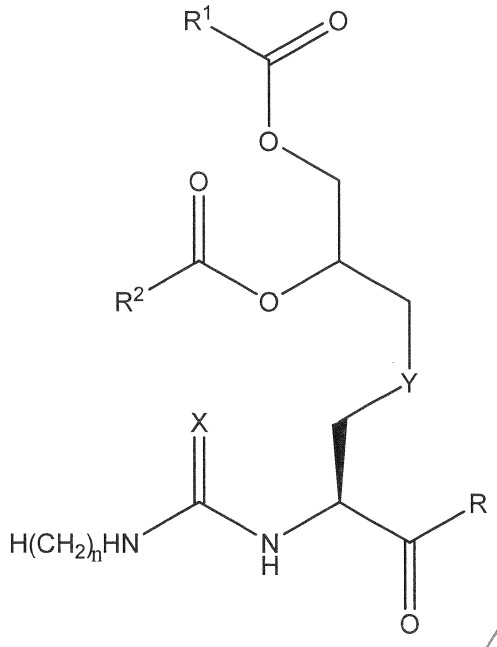
CLAIMS

1. Compound represented by



[1]

the above formula [1] wherein R^1 and R^2 are each independently a branched or straight alkyl group having up to 17 atoms, n is 0 to and including 18, Y is sulphur or selene, X is S or O and R is an organic group comprising one or more peptides, one or more nucleic acids, one or more antibodies or combinations thereof.

2. Compound according to claim 1, wherein X is O.

3. Compound according to any one of claims 1-2, wherein Y is sulphur.

4. Compound according to any one of claims 1-3, wherein R^1 and R^2 are each independently a straight alkyl group having 10 to 17 carbon atoms.

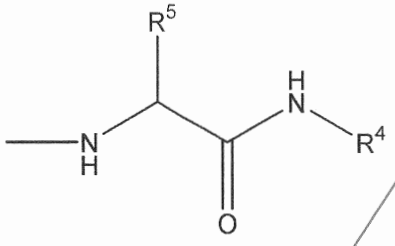
5. Compound according to claim 4, wherein R^1 and R^2 are straight alkyl groups having 15 carbon atoms.

6. Compound according to any one of claims 1-5, wherein n is 11 to and including 15.

7. Compound according to any one of claims 1-6, wherein R is SK_m, wherein m is 1, 2, 3, 4 or 5, and wherein R is optionally coupled to an antigen.

8. The compound according to claim 7, wherein R^1 and R^2 are straight chain alkyl groups having 15 carbon atoms, m is 4, n is 12 or 14, X is O, and Y is sulphur.

9 Compound according to claim 1, wherein group R is represented by



in which R^4 a K_m peptide part, wherein m is 0, 1, 2, 3, 4 or 5, and wherein R^4 is optionally coupled to an antigen and in which R^5 is hydrogen or a group comprising one to six atoms chosen from carbon, nitrogen and oxygen.

10. Compound according to claim 9, wherein R^5 is a $-CH_2$-OH group, a $-CH_2$-CH_3 group, a $-(CH_2)_3$-CH_3 group, a $-CH_2C{\equiv}CH$ group, a $-CH_2CH{=}CH_2$ group or a $-(CH_2)_2NH_2$ group.

11. Compound according to claim 9 or 10, wherein R^5 is not hydrogen and the asymmetric carbon to which R^5 is attached has the L configuration.

12. Compound according to any one of claims 7-11, wherein the K_m peptide part is coupled to an antigen, a nucleic acid and/or an antibody.

13. Solid phase peptide synthesis process to prepare a compound according to any one of claims 1-12, comprising

(a) providing R-H, which is optionally immobilized and/or side-chain protected;

(b) coupling of substituted cysteine building block Fmoc-(Y-(2-(OC(O)R^2)-3-(OC(O)R^1))propyl)-Cys-OH to R-H; and

(c) cleavage of the Fmoc-group from the N-terminus of the resulting peptide; and

(d) treatment of the Fmoc-liberated peptide with H-$(CH_2)_n$-N=C=X,

wherein R, R^1, R^2, X, Y and n are as defined in any one of claims 1-11.

14. Process according to claim 13, wherein R-H is immobilized and/or side-chain protected.

15. Process according to claim 14, further comprising:

(e) conjugating an antibody or a nucleic acid to the $H-(CH_2)_n-N=C=X-$ treated peptide.

16. Composition comprising the compound according to any one of claims 1-12 and an antigen either as separate compound or as part of the compound according to any one of claims 1-12.

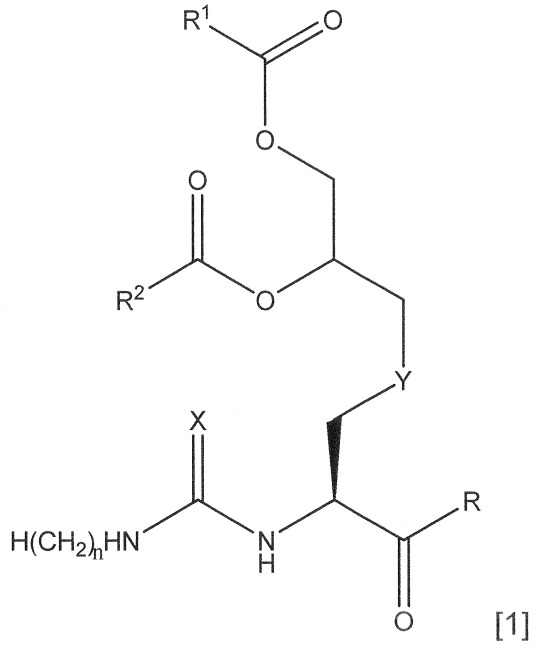
17. Use of the compound according to any one of claims 1 to 12 or a composition according to claim 16 for the manufacture of a medicament.

18. Use of a composition according to claim 17, wherein the medicament is for the prevention, delay and/or treatment of a disease or condition selected from a tumor, a disease or damage of the central nervous system, an ischemia and an infection.

19. Use of a compound according to any one of claims 1-12 and an antigen, either as separate compound or as part of the compound according to any one of claims 1-12, for the manufacture of a vaccine composition for the prevention, delay and/or treatment of an infection, a cancer or pre-malignant lesion associated with the antigen in a subject.

CLAIMS

1. Compound represented by



[1]

the above formula [1] wherein R^1 and R^2 are each independently a branched or straight chain alkyl group having up to 17 carbon atoms, n is 0 to and including 18, Y is sulphur or selene, X is S or O and R is an organic group comprising one or more peptides, one or more nucleic acids, one or more antibodies or combinations thereof

2. Compound according to claim 1, wherein X is O.

3. Compound according to any one of claims 1-2, wherein Y is sulphur.

4. Compound according to any one of claims 1-3, wherein R^1 and R^2 are each independently a straight chain alkyl group having 10 to 17 carbon atoms.

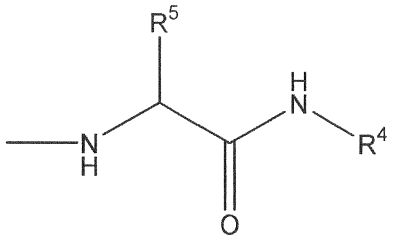
5. Compound according to claim 4, wherein R^1 and R^2 are straight chain alkyl groups having 15 carbon atoms.

6. Compound according to any one of claims 1-5, wherein n is 11 to and including 15.

7. Compound according to any one of claims 1-6, wherein R is SK_m, wherein m is 1, 2, 3, 4 or 5, and wherein R is optionally coupled to an antigen.

8. The compound according to claim 7, wherein R^1 and R^2 are straight chain alkyl groups having 15 carbon atoms, m is 4, n is 12 or 14, X is O, and Y is sulphur.

9 Compound according to claim 1, wherein group R is represented by



in which R^4 a K_m peptide part, wherein m is 0, 1, 2, 3, 4 or 5, and wherein R^4 is optionally coupled to an antigen and in which R^5 is hydrogen or a group comprising one to six atoms chosen from carbon, nitrogen and oxygen.

10. Compound according to claim 9, wherein R^5 is a $-CH_2$-OH group, a $-CH_2$-CH_3 group, a $-(CH_2)_3$-CH_3 group, a $-CH_2C{\equiv}CH$ group, a $-CH_2CH{=}CH_2$ group or a $-(CH_2)_2NH_2$ group.

11. Compound according to claim 9 or 10, wherein R^5 is not hydrogen and the asymmetric carbon to which R^5 is attached has the L configuration.

12. Compound according to any one of claims 7-11, wherein the K_m peptide part is coupled to an antigen, a nucleic acid and/or an antibody.

13. Solid phase peptide synthesis process to prepare a compound according to any one of claims 1-12, comprising

(a)providing R-H, which is optionally immobilized and/or side-chain protected;

(b) coupling of substituted cysteine building block Fmoc-(Y-(2-($OC(O)R^2$)-3-($OC(O)R^1$))propyl)-Cys-OH to R-H; and

(c) cleavage of the Fmoc-group from the N-terminus of the resulting peptide; and

(d) treatment of the Fmoc-liberated peptide with H-$(CH_2)_n$-N=C=X, wherein R, R^1, R^2, X, Y and n are as defined in any one of claims 1-11.

14. Process according to claim 13, wherein R-H is immobilized and/or side-chain protected.

15. Process according to claim 14, further comprising:

(e) conjugating an antibody or a nucleic acid to the H-$(CH_2)_n$-N=C=X-treated peptide.

16. Composition comprising the compound according to any one of claims 1-12 and an antigen either as separate compound or as part of the compound according to any one of claims 1-12.

17. Use of the compound according to any one of claims 1 to 12 or a composition according to claim 16 for the manufacture of a medicament.

18. Use of a composition according to claim 17, wherein the medicament is for the induction, maintenance and/or enhancement of an immune response in a subject against an antigen.

19. Use of a compound according to any one of claims 1-12 and an antigen, either as separate compound or as part of the compound according to any one of claims 1-12, for the manufacture of a vaccine composition for the prevention, delay and/or treatment of an infection, a cancer or pre-malignant lesion associated with the antigen in a subject, wherein the antigen is derived from any one of selected from the group consisting of influenza virus antigen, haemaglutinin or neuraminidase antigen; human papilloma virus antigen, human immunodeficiency virus antigen, hepatitis virus antigen, respiratory syntytial virus antigen; SV40 virus antigen, EBV antigen, Kaposi Sarcoma Virus (KSV) antigen, Human T-Lymphotropic Virus-1 antigen, Merkel cell virus antigen and herpes simplex virus antigen, Cryptosporidium hominis, Cryptosporidium parvum, Schistosoma haematobium, Schistosoma , mansoni Schistosoma japonicum, Plasmodium falciparum, Plasmodium malariae,

Plasmodium vivax, Plasmodium ovale, Leishmania major, Leishmania tropica, Leishmania aethiopica, Leishmania mexicana, Leishmania donovani, Leishmania infantum, Leishmania braziliensis, Toxoplasma Gondii, Mycobacterium Tuberculosis, Streptococcus pneumoniae, Staphylococcus Aureus, Vibrio cholera, Neisseria meningitides, p53, MDM-2, HDM2, survivin, telomerase, cytochrome P450 isoform 1B1, Her-2/neu and CD19.