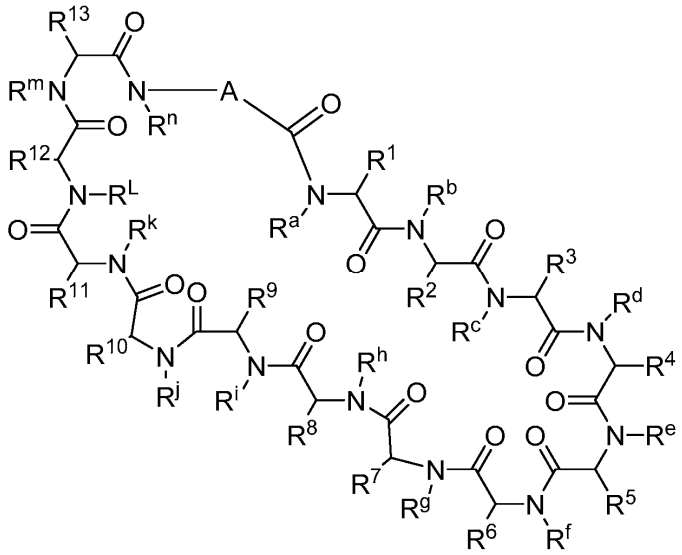
CLAIMS

WHAT IS CLAIMED IS:

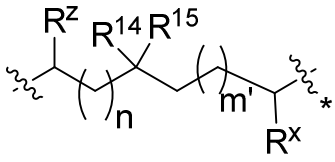
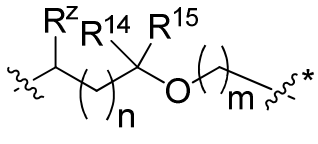
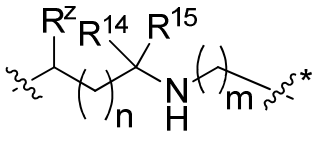
1. A compound of formula (I)

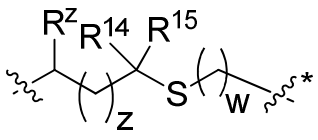
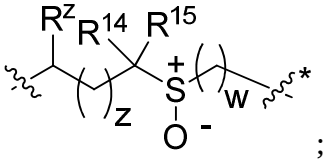
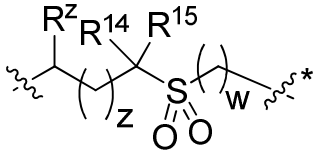


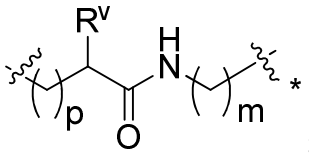
(I),

or a pharmaceutically acceptable salt thereof, wherein:

A is selected from $–CH_2CH_2–$;


; 
; 
;


; 
; 
; and


;

wherein:

 denotes the point of attachment to the carbonyl group and  denotes the point of attachment to the nitrogen atom;

n is 0, 1, or 2;

m is 1 or 2;

m' is 0 or 1;

z is 1 or 2;

when z is 1, w is 2;

when z is 2, w is 1 or 2;

p is 0, 1, or 2;

R^{14} and R^{15} are independently selected from hydrogen and methyl;

R^x is selected from hydrogen, amino, hydroxy, and methyl; and

R^z is selected from hydrogen and $–C(O)NHR^{16}$; wherein R^{16} is selected from hydrogen, $-CHR^{17}C(O)NH_2$, $-CHR^{17}C(O)NHCHR^{18}C(O)NH_2$, and $-CHR^{17}C(O)NHCHR^{18}C(O)NHCH_2C(O)NH_2$; wherein R^{17} is selected from hydrogen and $–CH_2OH$ and wherein R^{18} is selected from hydrogen and methyl;

R^v is hydrogen, methyl, or a natural amino acid side chain;

R^c, R^f, R^h, R^i, and R^m are hydrogen;

R^n is hydrogen or methyl or R^v and R^n form a pyrrolidine ring;

R^a, R^e, R^j, and R^k, are each independently selected from hydrogen and methyl;

R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, and R^{13} are independently selected from a natural amino acid side chain and an unnatural amino acid side chain or form a ring with the corresponding vicinal R group as described below;

R^e and R^k can each form a ring with the corresponding vicinal R group and the atoms to which they are attached selected from azetidine, pyrollidine, morpholine, piperidine, piperazine, and tetrahydrothiazole; wherein each ring is optionally substituted with one to four groups independently selected from amino, cyano, methyl, halo, and hydroxy;

R^b is methyl or, R^b and R^2, together with the atoms to which they are attached, form a ring selected from azetidine, pyrollidine, morpholine, piperidine, piperazine, and tetrahydrothiazole; wherein each ring is optionally substituted with one to four groups independently selected from amino, cyano, methyl, halo, and hydroxy;

R^d is hydrogen or methyl, or, R^d and R^4, together with the atoms to which they are attached, can form a ring selected from azetidine, pyrollidine, morpholine, piperidine, piperazine, and tetrahydrothiazole; wherein each ring is optionally substituted with one to

four groups independently selected from amino, cyano, methyl, halo, hydroxy, and phenyl;

R^g is hydrogen or methyl or R^g and R^7, together with the atoms to which they are attached, can form a ring selected from azetidine, pyrollidine, morpholine, piperidine, piperazine, and tetrahydrothiazole; wherein each ring is optionally substituted with one to four groups independently selected from amino, benzyl optionally substituted with a halo group, benzyloxy, cyano, cyclohexyl, methyl, halo, hydroxy, isoquinolinyloxy optionally substituted with a methoxy group, quinolinyloxy optionally substituted with a halo group, and tetrazolyl; and wherein the pyrrolidine and the piperidine ring are optionally fused to a cyclohexyl, phenyl, or indole group; and

R^L is methyl or, R^L and R^{12}, together with the atoms to which they are attached, form a ring selected from azetidine and pyrollidine, wherein each ring is optionally substituted with one to four groups independently selected from amino, cyano, methyl, halo, and hydroxy.

2. A compound of claim 1, or a pharmaceutically acceptable salt thereof, wherein

R^d and R^4, together with the atoms to which they are attached, form a pyrollidine ring;

R^g and R^7, together with the atoms to which they are attached, form a pyrollidine ring, wherein said ring is optionally substituted with one hydroxy group; and

R^k is methyl.

3. A compound of claim 2, or a therapeutically acceptable salt thereof, wherein:

R^a, R^e, and R^j hydrogen;

R^b and R^2 are each methyl or, R^b and R^2, together with the atoms to which they are attached, form a piperidine ring;

R^L is methyl;

R^n is hydrogen, methyl, or R^n and R^v form a pyrrolidine ring;

R^1 is phenylmethyl wherein the phenyl is substituted with one group selected from halo, hydroxy, methoxy, or methyl;

R^3 is selected from $-CH_2C(O)NH_2$ and $-CH_2CO_2H$;

R^5 is selected from hydrogen, $–CH_2NH_2$, $-CH_2$(imidazolyl), and $–CH_2C(O)NH_2$;

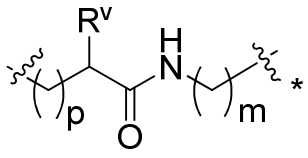
R^6 is selected from $–CH_2CH(CH_3)_2$, $-(CH_2)_4NH_2$, $-(CH_2)_2CO_2H$, and $(CH_2)_2C(O)NH_2$;

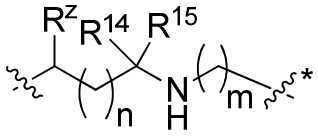
R^8 and R^{10} are $–CH_2$(indolyl), wherein the indolyl is optionally substituted with $–CH_2CO_2H$;

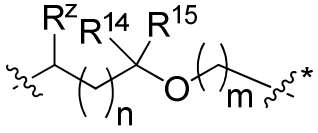
R^9 is selected from hydrogen, $-(CH_2)_2NH_2$, $-(CH_2)_4NH_2$, $-CH_2OH$, and $–CH_2C(O)NH_2$;

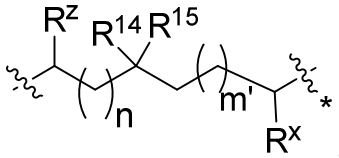
R^{11} and R^{12} are $–(CH_2)_3CH_3$; and

R^{13} is selected from methyl, $-CH_2OH$, $–CH_2CH(CH_3)_2$, and $-(CH_2)_2CO_2H$.

4. A compound of claim 3, or a therapeutically acceptable salt thereof, wherein A is .

5. A compound of claim 3, or a therapeutically acceptable salt thereof, wherein A is .

6. A compound of claim 3, or a therapeutically acceptable salt thereof, wherein A is .

7. A compound of claim 3, or a therapeutically acceptable salt thereof, wherein A is .

8. A compound selected from

Example 5001, Example 5002, Example 5003, Example 5004, Example 5005, Example 5006, Example 5007, Example 5008, Example 5009, Example 10001, Example 10002, Example 10003, Example 10004, Example 10005, Example 10006, Example 10007,

Example 10008, Example 10009, Example 10010, Example 10011, Example 10012, Example 10013, Example 10014, Example 10015, Example 10016, Example 10017, Example 10018, Example 10019, Example 10020, Example 10021, Example 10022, Example 10023, Example 10024, Example 10025, Example 10026, Example 10027, Example 10028, Example 10500, Example 10501, Example 10502, Example 10503, Example 9005, Example 9006, Example 9007, Example 9008, Example 9009, Example 9010, Example 9011, Example 9012, Example 9013, Example 9014, Example 9015, Example 9016, Example 9017, Example 9018, Example 9019, Example 9020, Example 9021, Example 9022, Example 9023, Example 9024, Example 9025, Example 9026, Example 9027, Example 9028, Example 9029, Example 9030, Example 9031, Example 9032, Example 9033, Example 9034, Example 9035, Example 9036, Example 9037, Example 9038, Example 9039, Example 9040, Eample 9041, Example 9042, Example 9043, Example 9044, Example 9045, Example 9046, Example 9047, Example 9048, Example 9049, Example 9050, Example 9051, Example 9052, Example 9053, Example 9054, Example 9055, Example 9056, Example 9057, Example 9058, Example 9059, Example 10029, Example 10030, Example 10031, Example 10032, Example 10033, Example 10034, Example 10035, Example 10036, Example 10037, Example 10038, Example 10039, Example 10040, Example 10041, Example 10042, Example 10504, Example 10505, Example 10506, Example 10507, Example 10508, Example 10509, Example 10510, Example 10511, Example 10512, Example 10513, Example 10514, Example 10515, Example 10516, Example 10517, Example 10518, Example 10519, Example 10520, Example 10521, Example 10522, Example 10525, Example 10526, Example 10527, Example 10528, Example 10529, 10530, Example 10531, Example 10532, Example 10533, Example 10534, Example 10535, Example 10536, Example 10537, Example 10538, Example 10539, Example 10540, Example 10541, Example 10542, Example 10543, Example 10544, Example 10545, Example 10546, Example 10547, Example 10548, Example 10549, Example 10550, Example 10551, Example 10552, Example 10553, Example 10554, Example 10555, Example 10556, Example 10557, Example 10558, Example 10559, Example 10560, Example 10561, Example 10562, Example 10563, Example 10564, Example 10566, Example 10567, Example 10568, Example 10569, Example 10570, Example 10571, and Example 10572, or a pharmaceutically acceptable salt thereof.