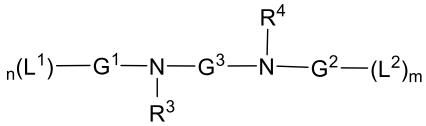
WHAT IS CLAIMED IS:

1. A compound of Formula (I):



(I),

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof, wherein:

G^1 and G^2 are each independently a bond, C_2-C_{12} alkylene, or C_2-C_{12} alkenylene, wherein one or more -CH_2- in G^1 and G^2 is optionally replaced by -O-;

each L^1 is independently –OC(=O)R^1, -C(=O)OR^1, -OC(=O)OR^1, -C(=O)R^1, -OR^1, -S(O)$_x$$R^1$, -S-S$R^1$, -C(=O)S$R^1$, -SC(=O)$R^1$, -N$R^a$C(=O)$R^1$, -C(=O)N$R^b$$R^c$, -N$R^a$C(=O)N$R^b$$R^c$, -OC(=O)N$R^b$$R^c$, -N$R^a$C(=O)O$R^1$, -SC(=S)$R^1$, -C(=S)S$R^1$, -C(=S)$R^1$, -CH(OH)$R^1$, -P(=O)(O$R^b$)(O$R^c$), -N$R^a$P(=O)(O$R^b$)(O$R^c$), -($C_6$-$C_{10}$ arylene)-R^1, -(6- to 10-membered heteroarylene)-R^1, -(4- to 8-membered heterocyclylene)-R^1, or R^1;

each L^2 is independently –OC(=O)R^2, -C(=O)OR^2, -OC(=O)OR^2, -C(=O)R^2, -OR^2, -S(O)$_x$$R^2$, -S-S$R^2$, -C(=O)S$R^2$, -SC(=O)$R^2$, -N$R^d$C(=O)$R^2$, -C(=O)N$R^e$$R^f$, -N$R^d$C(=O)N$R^e$$R^f$, -OC(=O)N$R^e$$R^f$, -N$R^d$C(=O)O$R^2$, -SC(=S)$R^2$, -C(=S)S$R^2$, -C(=S)$R^2$, -CH(OH)$R^2$, -P(=O)(O$R^e$)(O$R^f$), -N$R^d$P(=O)(O$R^e$)(O$R^f$), -($C_6$-$C_{10}$ arylene)-R^2, -(6- to 10-membered heteroarylene)-R^2, -(4- to 8-membered heterocyclylene)-R^2, or R^2;

R^1 and R^2 are each independently C_6-C_{24} alkyl or C_6-C_{24} alkenyl;

R^a, R^b, R^d, and R^e are each independently H, C_1-C_{24} alkyl, or C_2-C_{24} alkenyl;

R^c and R^f are each independently C_1-C_{24} alkyl or C_2-C_{24} alkenyl;

G^3 is C_2-C_{12} alkylene or C_2-C_{12} alkenylene, wherein part or all of alkylene or alkenylene is optionally replaced by C_3-C_8 cycloalkylene, C_3-C_8 cycloalkenylene, C_3-C_8 cycloalkynylene, 4- to 8-membered heterocyclylene, C_6-C_{10} arylene, or 5- to 10-membered heteroarylene;

R^3 is hydrogen, C_1-C_{12} alkyl, C_2-C_{12} alkenyl, C_2-C_{12} alkynyl, C_3-C_8 cycloalkyl, C_3-C_8 cycloalkenyl, C_3-C_8 cycloalkynyl, 4- to 8-membered heterocyclyl, C_6-C_{10} aryl, or 5- to 10-membered heteroaryl; or R^3, G^1 or part of G^1, together with the nitrogen to which they are attached form a cyclic moiety; or R^3, G^3 or part of G^3, together with the nitrogen to which they are attached form a cyclic moiety;

R^4 is C_1-C_{12} alkyl or C_3-C_8 cycloalkyl;

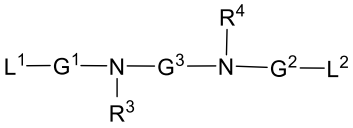
x is 0, 1, or 2;

n is 1 or 2;

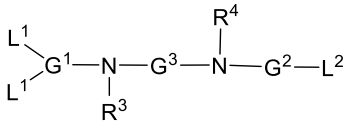
m is 1 or 2; and

wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, cycloalkynyl, heterocyclyl, aryl, heteroaryl, alkylene, alkenylene, cycloalkylene, cycloalkenylene, cycloalkynylene, heterocyclylene, arylene, heteroarylene, and cyclic moiety is independently optionally substituted.

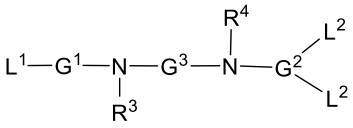
2. The compound of claim 1, which is a compound of Formula (II-A), (II-B), (II-C), or (II-D):



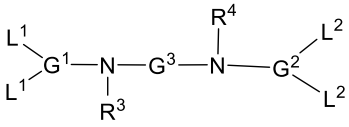
(II-A),



(II-B),



(II-C), or

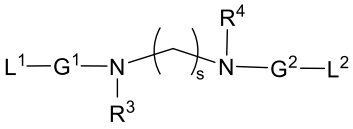


(II-D),

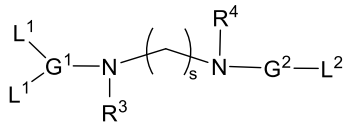
or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

3. The compound of claim 1,

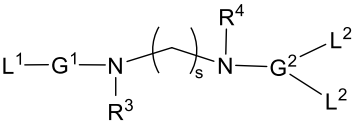
which is a compound of Formula (III-A), (III-B), (III-C), or (III-D):



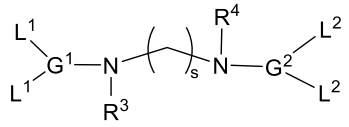
(III-A),



(III-B),



(III-C), or

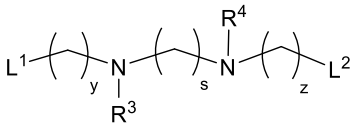


(III-D),

wherein s is an integer from 2 to 12,

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

4. The compound of claim 1, which is a compound of Formula (IV):



(IV),

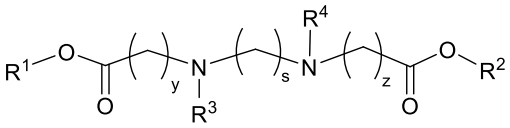
wherein s is an integer from 2 to 12,

y is an integer from 2 to 12; and

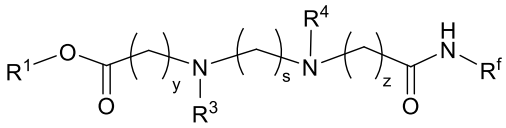
z is an integer from 2 to 12;

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

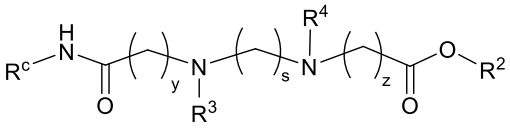
5. The compound of claim 4, which is a compound of Formula (IV-A), (IV-B), (IV-C), (IV-D), (IV-E), (IV-F), (IV-G), or (IV-H):



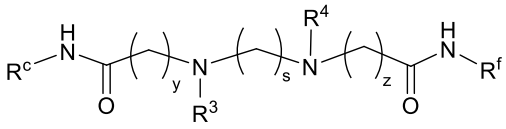
(IV-A),



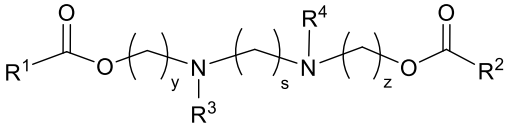
(IV-B),



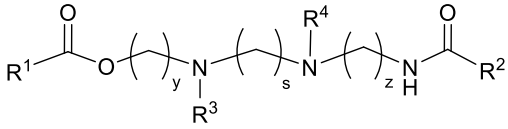
(IV-C),



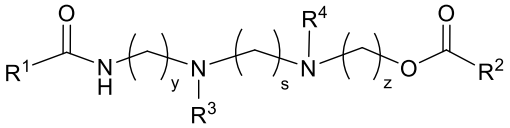
(IV-D),



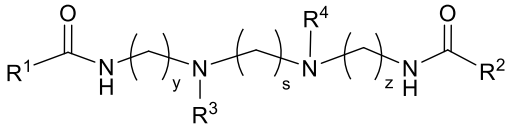
(IV-E),



(IV-F),



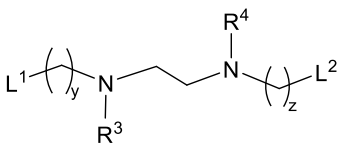
(IV-G), or



(IV-H),

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

6. The compound of claim 1, which is a compound of Formula (V):



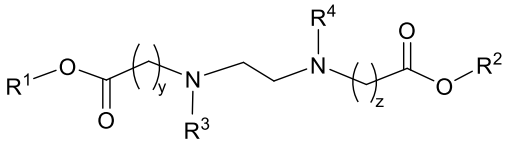
(V),

wherein y is an integer from 2 to 12; and

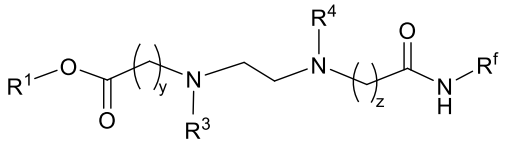
z is an integer from 2 to 12;

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

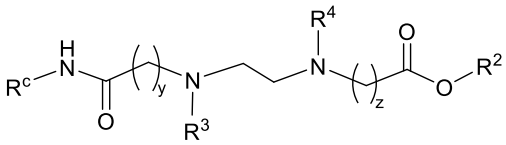
7. The compound of claim 6, which is a compound of Formula (V-A), (V-B), (V-C), (V-D), (V-E), (V-F), (V-G), or (V-H):



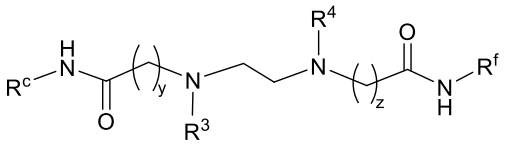
(V-A),



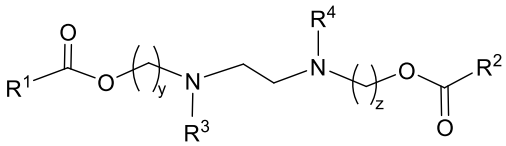
(V-B),



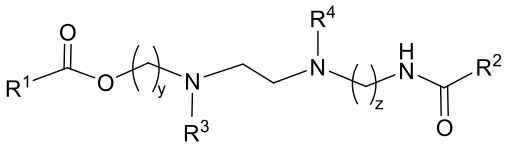
(V-C),



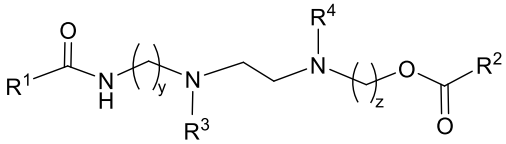
(V-D),



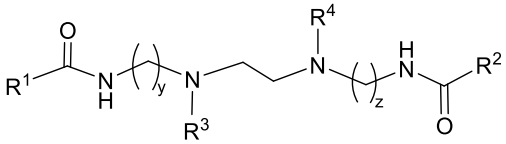
(V-E),



(V-F),



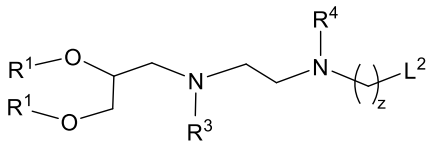
(V-G), or



(V-H),

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

8. The compound of claim 1, which is a compound of Formula (VI):



(VI),

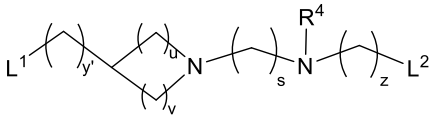
wherein z is an integer from 2 to 12;

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

9. The compound of any one of claims 1 to 8, wherein R^3 is C_1-C_{12} alkyl, C_2-C_{12} alkenyl, or C_3-C_8 cycloalkyl.

10. The compound of any one of claims 1 to 8, wherein R^3, G^1 or part of G^1, together with the nitrogen to which they are attached form a cyclic moiety.

11. The compound of claim 1, which is a compound of Formula (VII):



(VII),

wherein s is an integer from 2 to 12,

u is 1, 2, or 3;

v is 1, 2, or 3;

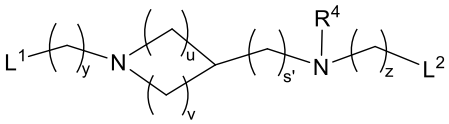
y' is an integer from 0 to 10; and

z is an integer from 2 to 12;

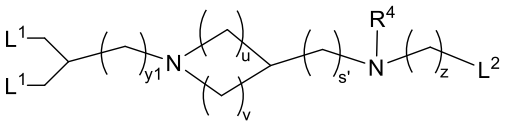
or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

12. The compound of any one of claims 1 to 11, wherein R^3, G^3 or part of G^3, together with the nitrogen to which they are attached form a cyclic moiety.

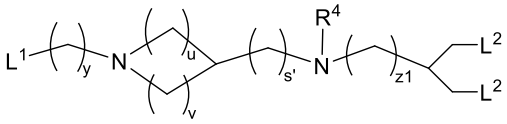
13. The compound of claim 12, which is a compound of Formula (VIII-A), (VIII-B), (VIII-C), (VIII-D), (VIII-E), (VIII-F), or (VIII-G):



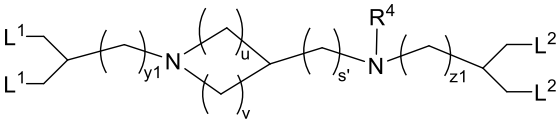
(VIII-A),



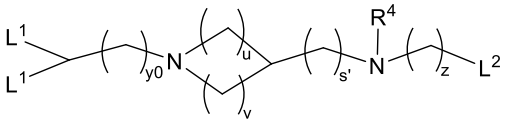
(VIII-B),



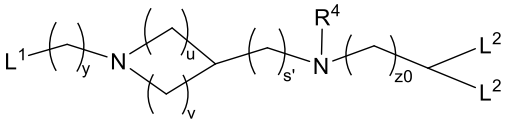
(VIII-C),



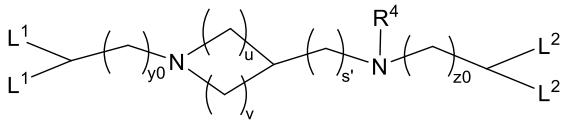
(VIII-D),



(VIII-E),



(VIII-F), or



(VIII-G),

wherein s' is an integer from 0 to 10,

u is 1, 2, or 3;

v is 1, 2, or 3;

y is an integer from 2 to 12;

z is an integer from 2 to 12;

y0 is an integer from 1 to 11;

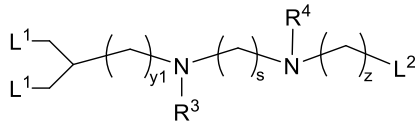
z0 is an integer from 1 to 11;

y1 is an integer from 0 to 9; and

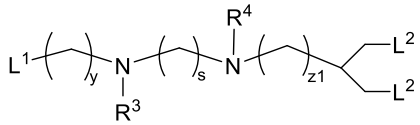
z1 is an integer from 0 to 9;

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

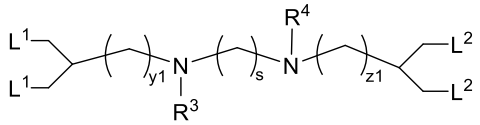
14. The compound of claim 1, which is a compound of Formula (IX-A), (IX-B), (IX-C), (IX-D), (IX-E), (IX-F), (IX-G), (IX-H), (IX-I), (IX-J), (IX-K), (IX-L), (IX-M), (IX-N), (IX-O), (IX-P), (IX-Q), (IX-R), (IX-S), (IX-T), (IX-U), (IX-V), (IX-W), (IX-X), (IX-Y), (IX-Z), or (IX-AA):



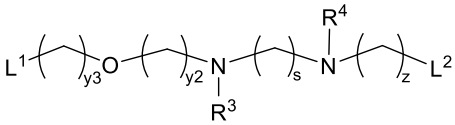
(IX-A),



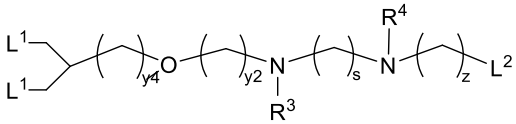
(IX-B),



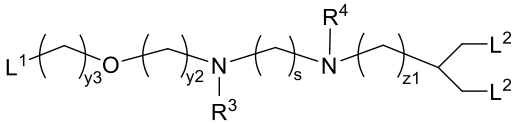
(IX-C),



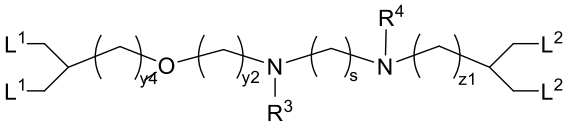
(IX-D),



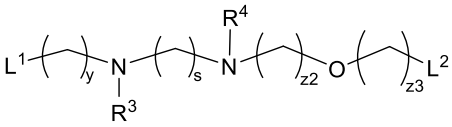
(IX-E),



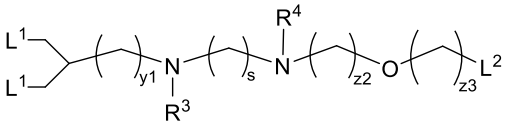
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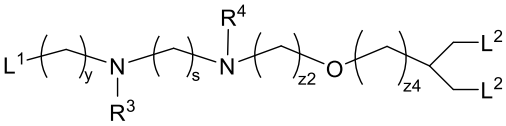
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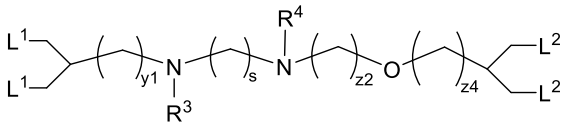
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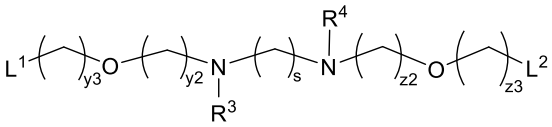
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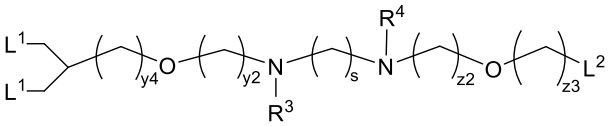
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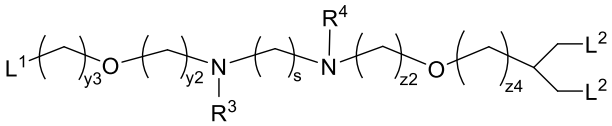
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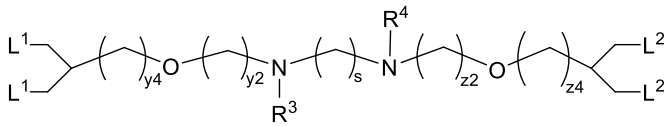
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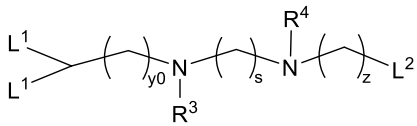
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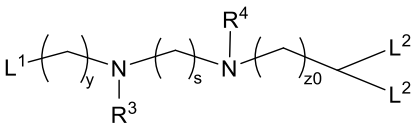
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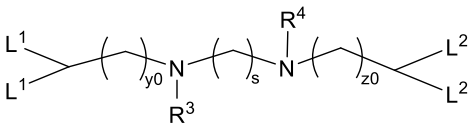
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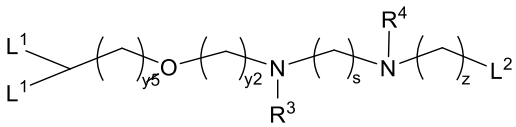
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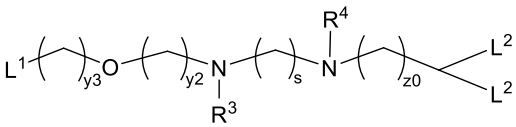
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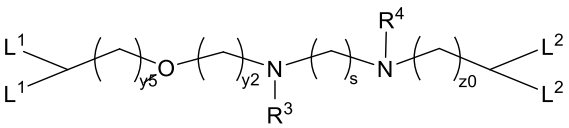
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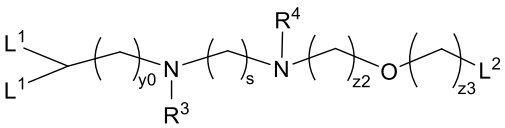
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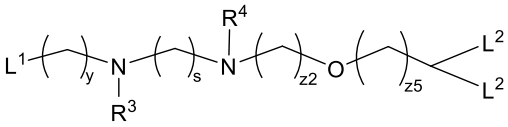
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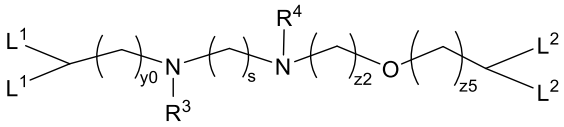
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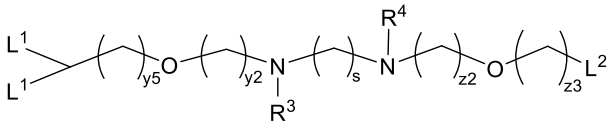
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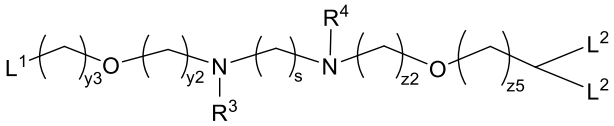
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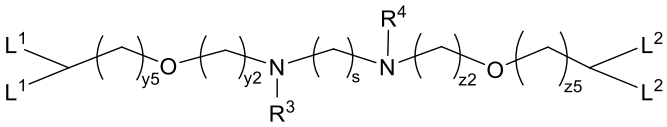
(IX-X),



(IX-Y),



(IX-Z), or



(IX-AA),

wherein s is an integer from 2 to 12,

y is an integer from 2 to 12;

z is an integer from 2 to 12;

y0 is an integer from 1 to 11;

z0 is an integer from 1 to 11;

y1 is an integer from 0 to 9;

z1 is an integer from 0 to 9;

y2 is an integer from 2 to 5;

y3 is an integer from 2 to 6;

y4 is an integer from 0 to 3;

y5 is an integer from 1 to 5;

z2 is an integer from 2 to 5;

z3 is an integer from 2 to 6;

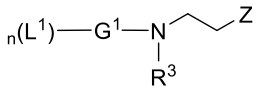
z4 is an integer from 0 to 3; and

z5 is an integer from 1 to 5;

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

15. A compound in Table 1 or Table 1A, or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof.

16. A compound of Formula (X):



(X),

or a pharmaceutically acceptable salt, prodrug or stereoisomer thereof, wherein:

G^1 is a bond, C_2-C_{12} alkylene, or C_2-C_{12} alkenylene;

each L^1 is independently –OC(=O)R^1, -C(=O)OR^1, -OC(=O)OR^1, -C(=O)R^1, -OR^1, -S(O)$_x$$R^1$, -S-S$R^1$, -C(=O)S$R^1$, -SC(=O)$R^1$, -N$R^a$C(=O)$R^1$, -C(=O)N$R^b$$R^c$, -N$R^a$C(=O)N$R^b$$R^c$, -OC(=O)N$R^b$$R^c$, -N$R^a$C(=O)O$R^1$, -SC(=S)$R^1$, -C(=S)S$R^1$, -C(=S)$R^1$, -CH(OH)$R^1$, -P(=O)(O$R^b$)(O$R^c$), -($C_6$-$C_{10}$ arylene)-R^1, -(6- to 10-membered heteroarylene)-R^1, or R^1;

R^1 is C_6-C_{24} alkyl or C_6-C_{24} alkenyl;

R^a and R^b are each independently H, C_1-C_{12} alkyl, or C_2-C_{12} alkenyl;

R^c is C_1-C_{24} alkyl or C_2-C_{24} alkenyl;

R^3 is hydrogen, C_1-C_{12} alkyl, C_2-C_{12} alkenyl, C_2-C_{12} alkynyl, C_3-C_8 cycloalkyl, C_3-C_8 cycloalkenyl, C_3-C_8 cycloalkynyl, 4- to 8-membered heterocyclyl, C_6-C_{10} aryl, or 5- to 10-membered heteroaryl; or R^3, G^1 or part of G^1, together with the nitrogen to which they are attached form a cyclic moiety;

x is 0, 1, or 2;

n is 1 or 2; and

Z is -OH or halogen;

wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, cycloalkynyl, heterocyclyl, aryl, heteroaryl, alkylene, alkenylene, cycloalkylene, cycloalkenylene, cycloalkynylene, heterocyclylene, arylene, heteroarylene, and cyclic moiety is independently optionally substituted.

17. A composition comprising the compound of any one of claims 1 to 16, and a therapeutic or prophylactic agent.

18. A lipid nanoparticle comprising the compound of claim 1.

19. A pharmaceutical composition comprising the compound of claim 1, a pharmaceutically acceptable excipient or diluent.