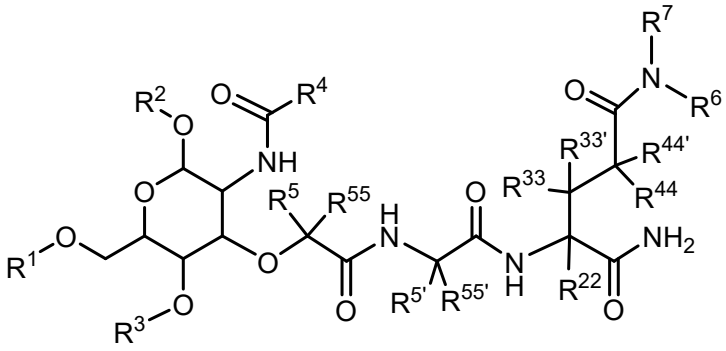
CLAIMS

1. A compound of formula (I):



(I),

or a pharmaceutically acceptable salt thereof,

wherein:

R^1 is –H or -C(O)-R^X;

R^2 and R^3 are each independently selected from the group consisting of -H, alkyl, aryl, alkylene-aryl, -C(O)-alkyl, and -C(O)-aryl;

R^4, R^5, and $R^{5'}$ are each alkyl;

R^6 and R^{11} are each independently –H or alkyl;

R^7 is -Y-triazolyl-L;

Y is alkylene;

L is selected from the group consisting of a fatty acid chain, -alkylene-C(O)-W, -alkylene-O-C(O)-W, –alkylene-N-(alkylene-C(O)-NR^{11}-alkylene-NR^{11}-C(O)-W)$_2$, and –alkylene-N-(alkylene-C(O)-W)$_2$;

W is a fatty acid chain, -O-alkylene-C(H)(OR^8)-alkylene-OR^9, a phospholipid, or a sterol;

R^8 and R^9 are each independently R^X or -C(O)-R^X;

R^{22}, R^{33}, $R^{33'}$, R^{44}, $R^{44'}$, R^{55}, and $R^{55'}$ are each independently H or R^A;

R^X is a fatty acid chain;

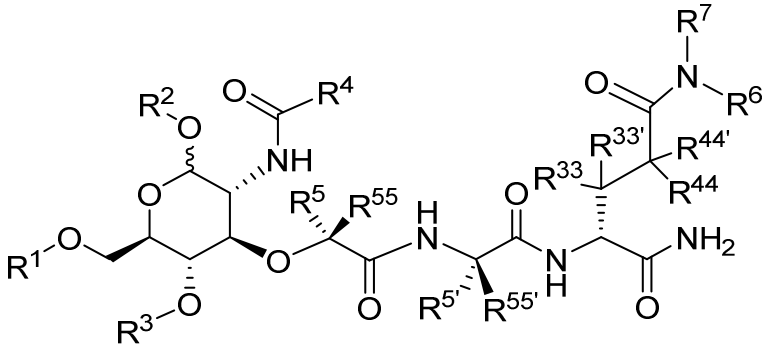
wherein each aforementioned alkyl, alkylene, alkylene-aryl, aryl, and triazolyl is optionally substituted with one or more R^A, wherein R^A is independently selected for each occurrence from the group consisting of hydrogen, halo, alkoxy, haloalkoxy, cyano,

hydroxyl, -N(R^C)(R^D), -C(O)N(R^C)(R^D), -N(R^C)C(O)R^B, -OC(O)N$R^C R^D$, -NR^CC(O)OR^B, -OC(O)R^B, -C(O)OR^B, -C(O)R^B , -CO_2H, -NO_2, -SH, S(O)$_X R^B$, aryl, arylalkyl, heteroaryl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, and R^B; wherein X is 0, 1, or 2,

R^C and R^D are independently selected for each occurrence from the group consisting of hydrogen, alkyl, haloalkyl -C(O)R^B, and -C(O)OR^B; or R^C and R^D are taken together with the nitrogen to which they are attached to form a heterocyclic ring optionally substituted with R^A; and

R^B is alkyl, alkenyl, or alkynyl optionally substituted with one or more fluoro.

2. The compound of claim 1, wherein the compound of formula (I) is a compound of formula (IA):



(IA),

or a pharmaceutically acceptable salt thereof.

3. The compound of claim 1, wherein R^2 is –H or benzyl.

4. The compound of claim 1, wherein R^2 is –H.

5. The compound of claim 1, wherein R^{22}, R^{33}, $R^{33'}$, R^{44}, $R^{44'}$, R^{55}, and $R^{55'}$ are each –H.

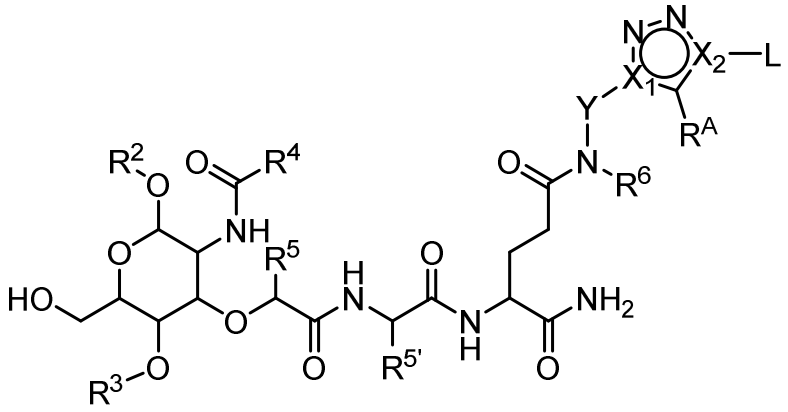
6. The compound of claim 1, wherein R^4 is alkyl.

7. The compound of claim 4, wherein R^4 is methyl.

8. The compound of claim 1, wherein R^3 and R^6 are both –H.

9. The compound of claim 1, wherein Y is $–CH_2–$.

10. The compound of claim 1, wherein the compound of formula (I) is a compound of formula (II):



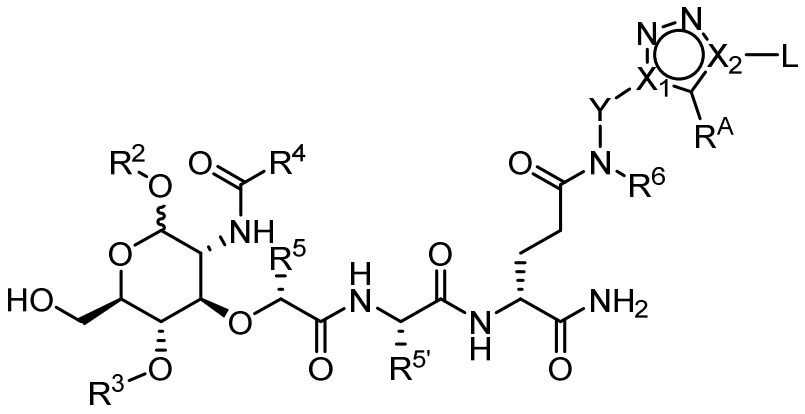
(II),

or a pharmaceutically acceptable salt thereof,

wherein:

X_1 is -N- and X_2 is -C-; or X_1 is -C- and X_2 is -N-.

11. The compound of claim 10, wherein the compound of formula (II) is a compound of formula (IIA):



(IIA),

or a pharmaceutically acceptable salt thereof.

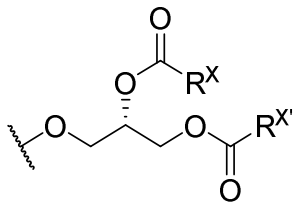
12. The compound of claim 10, wherein Y is C_{1-6} alkylene.

13. The compound of claim 10, wherein R^A is -H.

14. The compound of claim 1, wherein L is $–CH_2$-C(O)-W.

15. The compound of claim 1, wherein W is a -C_{8-30} alkyl.

16. The compound of claim 1, wherein W is:

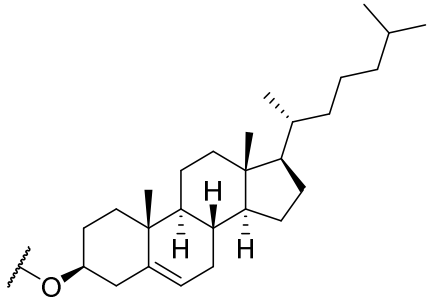


, wherein R^X and $R^{X'}$ are each independently a -C_{8-30} fatty acid chain.

17. The compound of claim 16, wherein R^X and $R^{X'}$ are each independently a -C_{8-30} alkyl.

18. The compound of claim 17, wherein R^X and $R^{X'}$ are both -$(CH_2CH_2)_8$-CH_3.

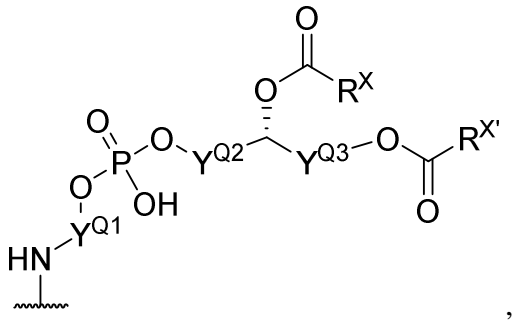
19. The compound of claim 1, wherein W is cholesterol:



(cholesterol).

20. The compound of claim 1, wherein W is a phospholipid.

21. The compound of claim 20, wherein W is a phospholipid having the structure:



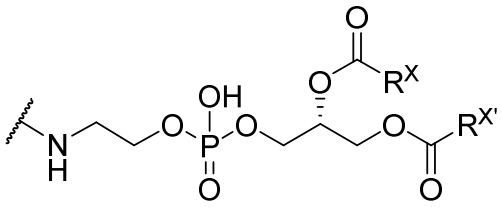
,

wherein

Y^{Q1}, Y^{Q2}, and Y^{Q3} are each independently alkylene and R^X and $R^{X'}$ are each independently a fatty acid chain having at least 15 carbons.

22. The compound of claim 21, wherein R^X and $R^{X'}$ are each independently a -C_{15-20} alkyl or a -C_{15-20} alkenyl.

23. The compound of claim 20, wherein W is a phospholipid having the structure:



, or a pharmaceutically acceptable salt thereof;

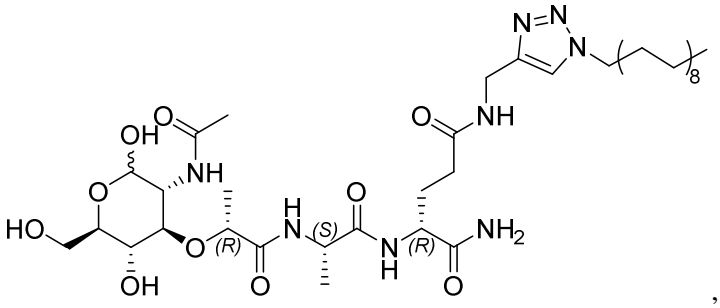
wherein R^X and $R^{X'}$ are each independently a C_{8-30} fatty acid chain.

24. The compound of claim 23, wherein R^X and $R^{X'}$ are each independently a C_{12-18} fatty acid chain.

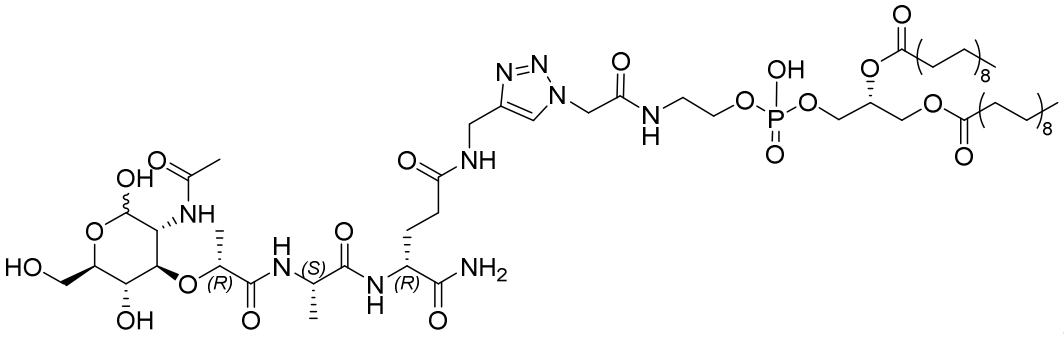
25. The compound of claim 23, wherein the fatty acid chain is saturated.

26. The compound of claim 23, wherein R^X and $R^{X'}$ are both -$(CH_2CH_2)_8$-CH_3.

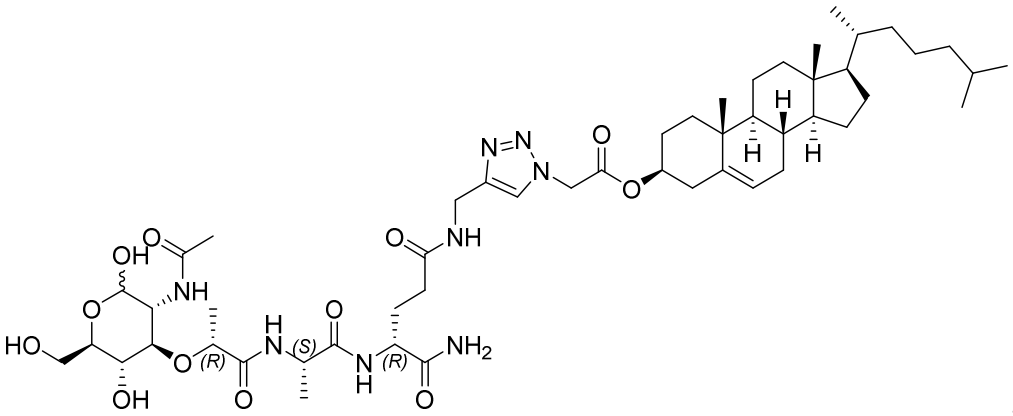
27. The compound of claim 1, selected from the group consisting of:



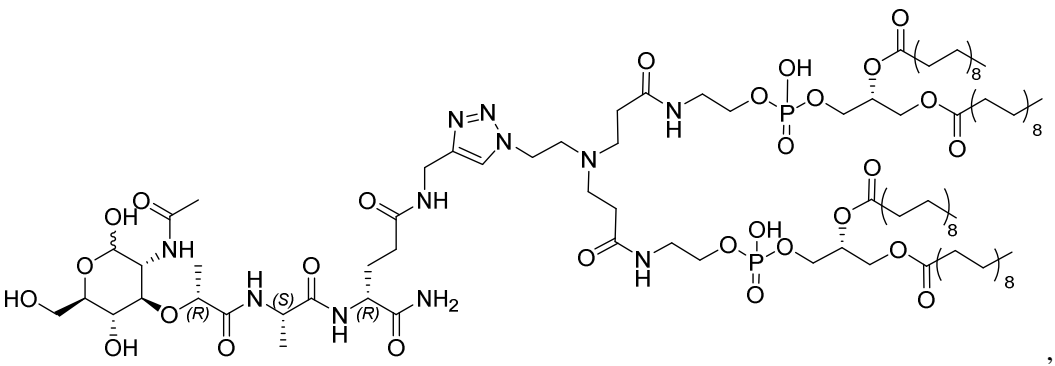
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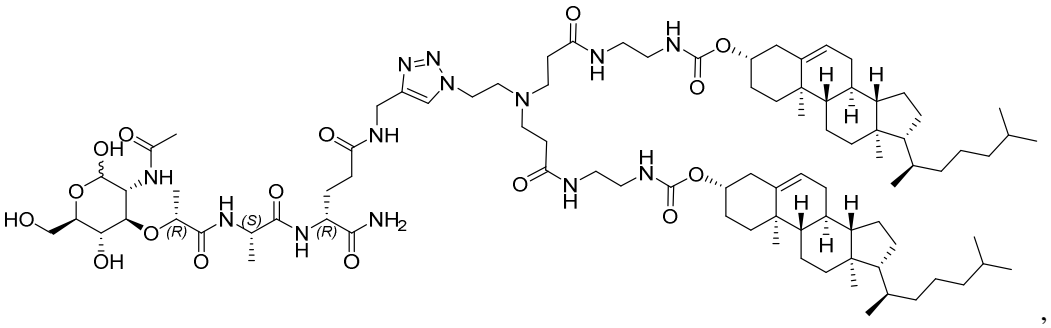
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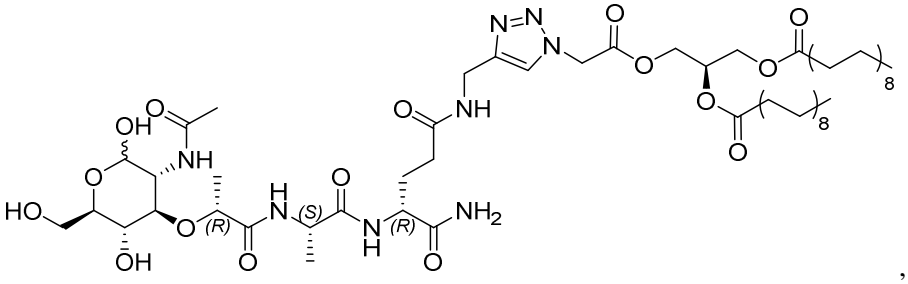
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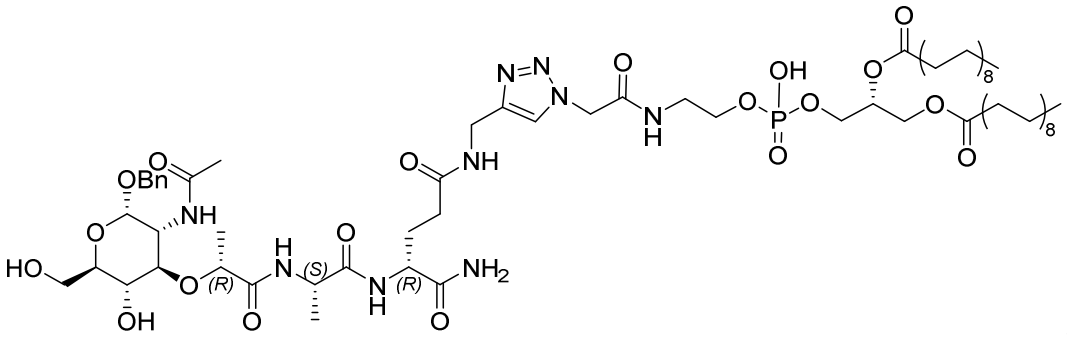
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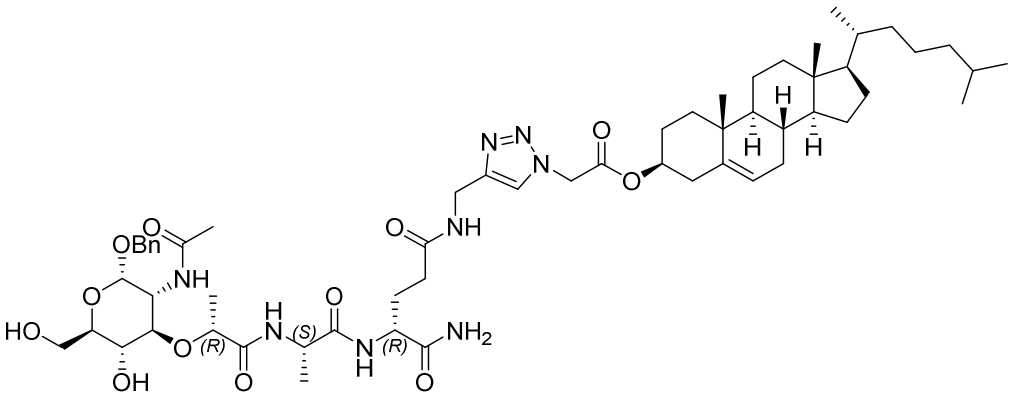
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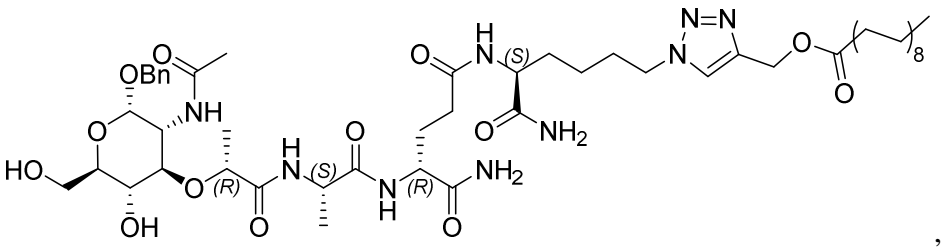


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and a pharmaceutically acceptable salt thereof, wherein Bn is a benzyl group.

28. A nanobiologic composition, comprising a high-density lipoprotein (HDL)-derived nanoparticle wherein the nanoparticle comprises one or more phospholipids, and a compound of claim 1.

29. The nanobiologic composition of claim 28, wherein the phospholipid is independently selected from the group consisting of a phosphatidylcholine, a phosphatidylethanolamine, a phosphatidylinositol, a phosphatidylserine, a sphingomyelin or other ceramide, a phospholipid-containing oil, a phosphatidylglycerol, a phosphatidic acid, a lysophosphatidylcholine, and combinations thereof.

30. The nanobiologic composition of claim 28, wherein the phospholipid is selected from the group consisting of l,2-dimyristoyl-sn-glycero-3-phosphatidylcholine (DMPC) and 1-palmitoyl-2-oleoyl-sn-glycero-3-phosphocholine (POPC), and further comprising a lysolipid selected from the group consisting of l-myristoyl-2-hydroxy-sn-glycero-phosphocholine (MHPC), and 1-palmitoyl-2-hydroxy-sn-glycero-3-phosphocholine (PHPC).

31. The nanobiologic composition of claim 28, wherein the HDL-derived nanoparticle further comprises apoA-I or a peptide mimetic of apoA-I.

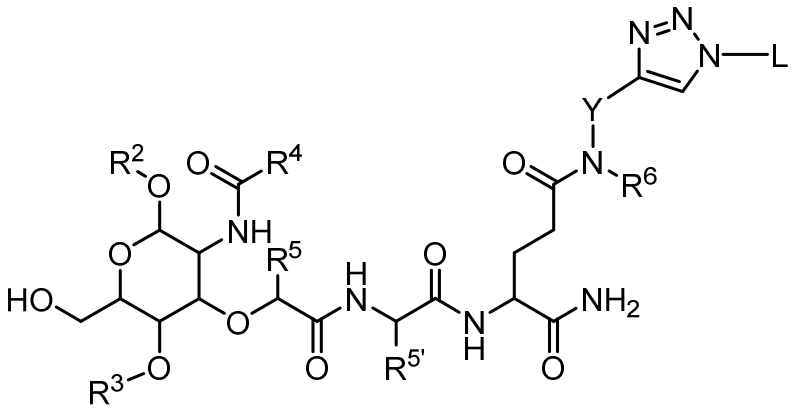
32. The nanobiologic composition of claim 28, wherein the HDL-derived nanoparticle further comprises cholesterol.

33. The nanobiologic composition of claim 32, wherein the HDL-derived nanoparticle comprises one or more phospholipids and cholesterol in a molar ratio in the range of about 1:0.05 to about 1:0.25.

34. A pharmaceutical composition comprising a compound of claim 1 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

35. A method for activating a NOD2 receptor in a subject in need thereof, comprising administering to the subject an effective amount of the nanobiologic composition of claim 28.

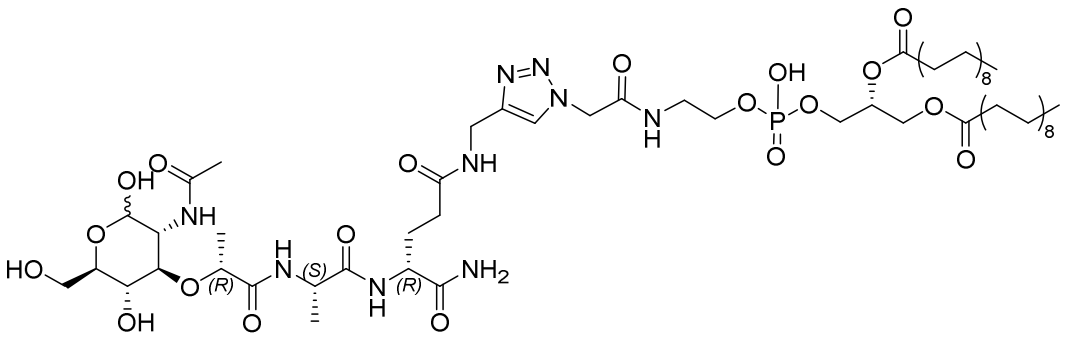
36. The compound of claim 10, wherein the compound of formula (II) is a compound of formula (II-1):



(II-1),

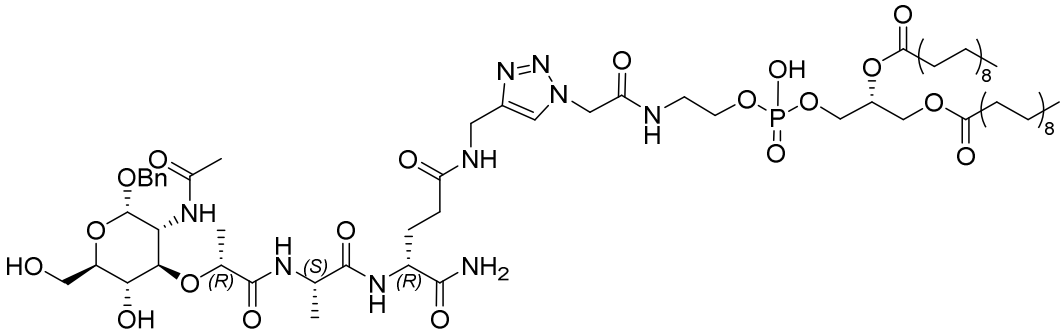
or a pharmaceutically acceptable salt thereof.

37. The compound of claim 27, wherein the compound is:



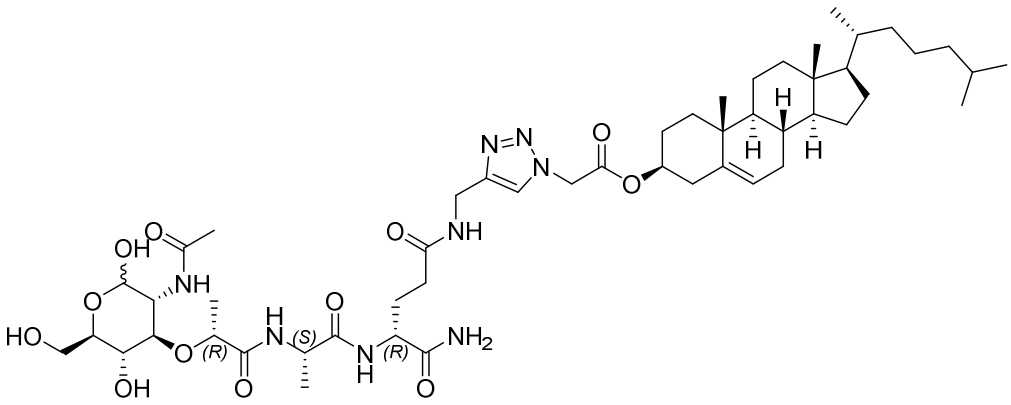
or a pharmaceutically acceptable salt thereof.

38. The compound of claim 27, wherein the compound is:



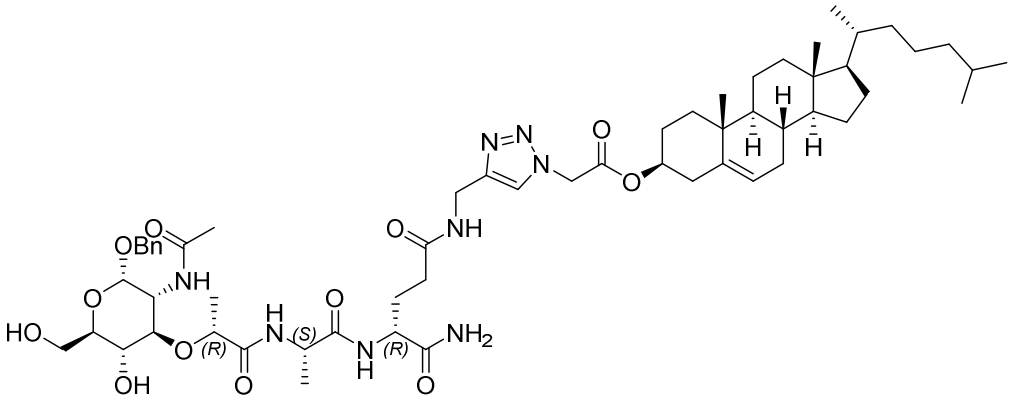
or a pharmaceutically acceptable salt thereof.

39. The compound of claim 27, wherein the compound is:



or a pharmaceutically acceptable salt thereof.

40. The compound of claim 27, wherein the compound is:



or a pharmaceutically acceptable salt thereof.