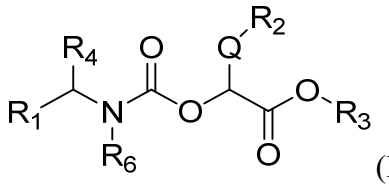
CLAIMS:

1. A compound of Formula (I'):



(I'),

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

R_1 is C_3-C_{16} cycloalkyl, 5- to 10-membered heteroaryl, or C_5-C_{10} aryl, wherein the C_3-C_{16} cycloalkyl, 5- or 6-membered heteroaryl, or C_5-C_{10} aryl is optionally substituted with one or more R_{1S};

each R_{1S} is independently C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 alkoxy, halo, or CN; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_{10} aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, or C_1-C_6 alkoxy is optionally substituted with one or more R_{1SS};

each R_{1SS} is independently C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, -O-(C_3-C_8 cycloalkyl), -O-(C_5-C_6 aryl), -O-(5- or 6-membered heteroaryl), -O-(C_3-C_8 heterocycloalkyl), C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo;

Q is C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl; wherein C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo;

R_2 is 5- to 10-membered heteroaryl or 4- to 8-membered heterocycloalkyl; wherein the 5- to 10-membered heteroaryl or 4- to 8-membered heterocycloalkyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo;

R_3 is H, C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, oxo, or R_{3S};

each R_{3S} is independently selected from –OC(=O)R_{3Sa} or 5- to 6- membered heterocycloalkyl; wherein the 5- or 6-membered heterocycloalkyl is optionally substituted with one or more –OH, halo, -CN, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo;

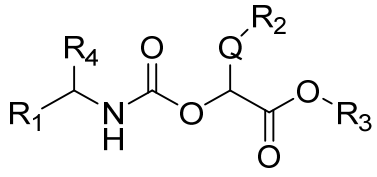
R_{3Sa} is C_1-C_6 alkyl optionally substituted with one or more –OH, halo, -CN, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, oxo, or –C(=O)OR_{3Sb};

R_{3Sb} is 4- to 8-membered heterocycloalkyl or –(C_1-C_6 alkyl)-(4- to 8-membered heterocycloalkyl); wherein the 4- to 8-membered heterocycloalkyl or –(C_1-C_6 alkyl)-(4- to 8-membered heterocycloalkyl) is optionally substituted with one or more -OH, halo, -CN, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo;

R_4 is C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo; and

R_6 is H, C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, -NH_2, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo.

2. The compound of claim 1, wherein the compound is of Formula (II’):



(II’),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof.

3. The compound of any one of the preceding claims, wherein X is O.

4. The compound of any one of the preceding claims, wherein R_1 is C_3-C_{16} cycloalkyl optionally substituted with one or more R_{1S}.

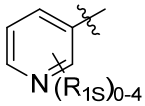
5. The compound of any one of the preceding claims, wherein R_1 is 5- to 10-membered heteroaryl optionally substituted with one or more R_{1S}.

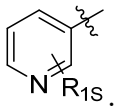
6. The compound of any one of the preceding claims, wherein R_1 is 5- or 6-membered heteroaryl optionally substituted with one or more R_{1S}.

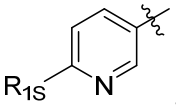
7. The compound of any one of the preceding claims, wherein R_1 is 6-membered heteroaryl optionally substituted with one or more R_{1S}.

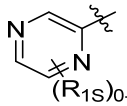
8. The compound of any one of the preceding claims, wherein R_1 is pyridinyl optionally substituted with one or more R_{1S}.

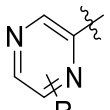
9. The compound of any one of the preceding claims, wherein R_1 is pyrazinyl optionally substituted with one or more R_{1S}.

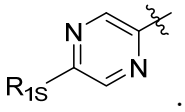
10. The compound of any one of the preceding claims, wherein R_1 is .

11. The compound of any one of the preceding claims, wherein R_1 is .

12. The compound of any one of the preceding claims, wherein R_1 is .

13. The compound of any one of the preceding claims, wherein R_1 is .

14. The compound of any one of the preceding claims, wherein R_1 is .

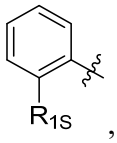
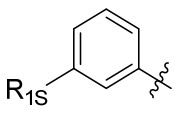
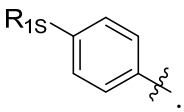
15. The compound of any one of the preceding claims, wherein R_1 is .

16. The compound of any one of the preceding claims, wherein R_1 is C_5-C_{10} aryl optionally substituted with one or more R_{1S}.

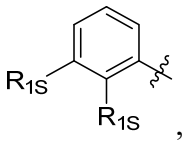
17. The compound of any one of the preceding claims, wherein R_1 is C_5-C_6 monocyclic aryl optionally substituted with one or more R_{1S}.

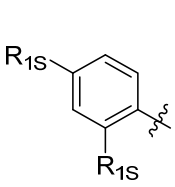
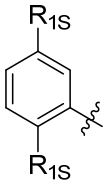
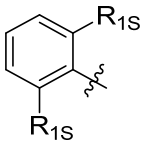
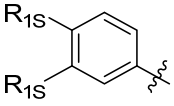
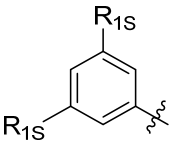
18. The compound of any one of the preceding claims, wherein R_1 is phenyl optionally substituted with one or more R_{1S}.

19. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one R_{1S}.

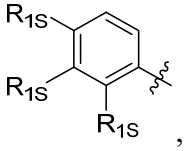
20. The compound of any one of the preceding claims, wherein R_1 is , , or .

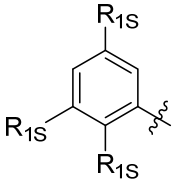
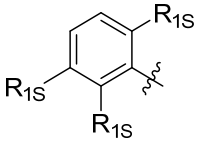
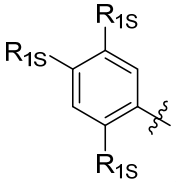
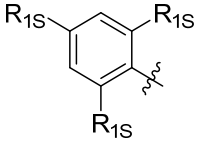
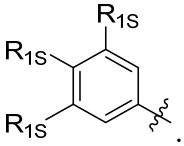
21. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with two R_{1S}.

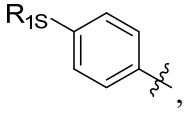
22. The compound of any one of the preceding claims, wherein R_1 is ,

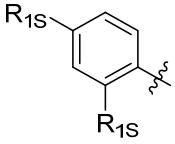
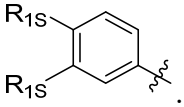
, , , , or .

23. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with three R_{1S}.

24. The compound of any one of the preceding claims, wherein R_1 is ,

, , , , or .

25. The compound of any one of the preceding claims, wherein R_1 is ,

, or .

26. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more substituents independently selected from C_1-C_6 alkyl, C_3-C_8 cycloalkyl, C_1-C_6 alkoxy, halo, or CN.

27. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more substituents independently selected from methyl, ethyl, isopropyl, tert-butyl, ethoxy, cyclopropyl, chloro, or –CN.

28. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkyl optionally substituted with one or more R_{1SS}.

29. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkyl.

30. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkyl substituted with one or more C_1-C_6 alkyl.

31. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkyl substituted with one or more -O-(C_5-C_6 aryl).

32. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkyl substituted with one or more halo.

33. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkyl substituted with one, two, or three F.

34. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_2-C_6 alkenyl optionally substituted with one or more R_{1SS}.

35. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_2-C_6 alkenyl.

36. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_2-C_6 alkynyl optionally substituted with one or more R_{1SS}.

37. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_2-C_6 alkynyl.

38. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_3-C_8 cycloalkyl optionally substituted with one or more R_{1SS}.

39. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_3-C_8 cycloalkyl.

40. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_5-C_6 aryl optionally substituted with one or more R_{1SS}.

41. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_5-C_6 aryl.

42. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more 5- or 6-membered heteroaryl optionally substituted with one or more R_{1SS}.

43. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more 5- or 6-membered heteroaryl.

44. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_3-C_8 heterocycloalkyl optionally substituted with one or more R_{1SS}.

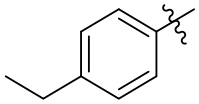
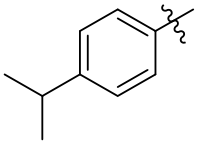
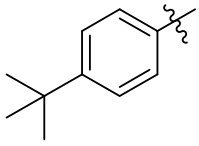
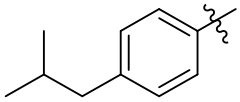
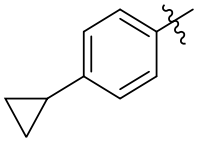
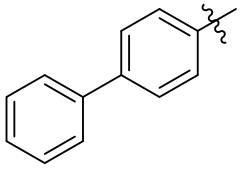
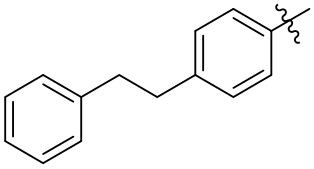
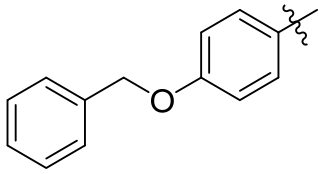
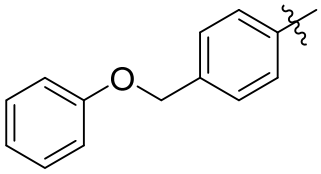
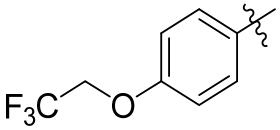
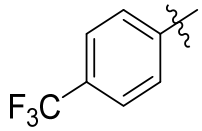
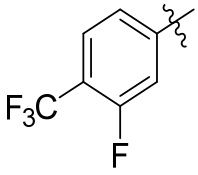
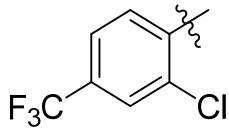
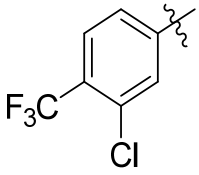
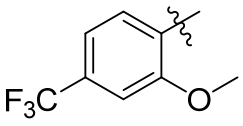
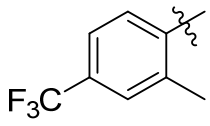
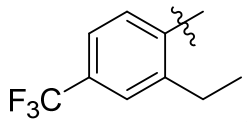
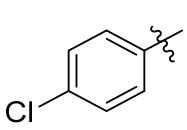
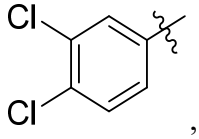
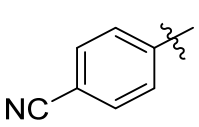
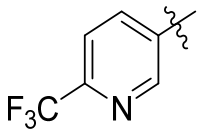
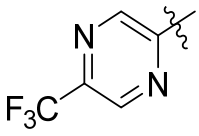
45. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or C_3-C_8 heterocycloalkyl.

46. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkoxy optionally substituted with one or more R_{1SS}.

47. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or C_1-C_6 alkoxy.

48. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkoxy substituted with one or more C_5-C_6 aryl.

49. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or more C_1-C_6 alkoxy substituted with one or more C_1-C_6 haloalkyl.

50. The compound of any one of the preceding claims, wherein R_1 is , , , , , , , , , , , , , , , , , , , , , or .

51. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_1-C_6 alkyl.

52. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_1-C_6 alkoxy.

53. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_5-C_6 aryl.

54. The compound of any one of the preceding claims, wherein at least one R_{1S} is 5- or 6-membered heteroaryl.

55. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_3-C_8 heterocycloalkyl.

56. The compound of any one of the preceding claims, wherein at least one R_{1S} is halo or CN.

57. The compound of any one of the preceding claims, wherein at least one R_{1SS} is C_1-C_6 alkyl.

58. The compound of any one of the preceding claims, wherein at least one R_{1SS} is C_5-C_6 aryl.

59. The compound of any one of the preceding claims, wherein at least one R_{1SS} is phenyl.

60. The compound of any one of the preceding claims, wherein at least one R_{1SS} 5- or 6-membered heteroaryl.

61. The compound of any one of the preceding claims, wherein at least one R_{1SS} C_3-C_8 heterocycloalkyl.

62. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(C_5-C_6 aryl).

63. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(phenyl).

64. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(5- or 6-membered heteroaryl).

65. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(C_3-C_8 heterocycloalkyl).

66. The compound of any one of the preceding claims, wherein at least one R_{1SS} is C_1-C_6 haloalkyl, C_1-C_6 alkoxy, or C_1-C_6 haloalkoxy.

67. The compound of any one of the preceding claims, wherein at least one R_{1SS} is halo, -CN, or oxo.

68. The compound of any one of the preceding claims, wherein at least one R_{1SS} is $-NH_2$, -NH(C_1-C_6 alkyl), or -N(C_1-C_6 alkyl)$_2$.

69. The compound of any one of the preceding claims, wherein Q is methyl optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo.

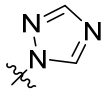
70. The compound of any one of the preceding claims, wherein Q is methyl.

71. The compound of any one of the preceding claims, wherein R_2 is 5- to 10-membered heteroaryl optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo.

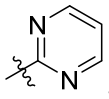
72. The compound of any one of the preceding claims, wherein R_2 is pyrazolyl optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl)$_2$, or oxo.

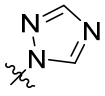
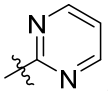
73. The compound of any one of the preceding claims, wherein R_2 is .

74. The compound of any one of the preceding claims, wherein R_2 is triazolyl optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl)$_2$, or oxo.

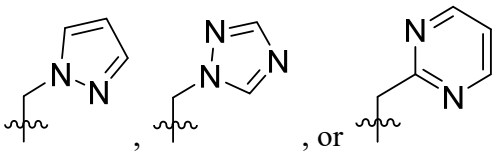
75. The compound of any one of the preceding claims, wherein R_2 is .

76. The compound of any one of the preceding claims, wherein R_2 is pyrimidinyl optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl)$_2$, or oxo.

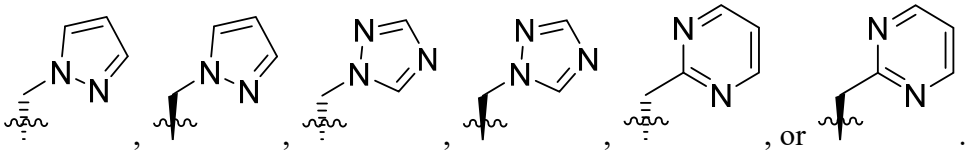
77. The compound of any one of the preceding claims, wherein R_2 is .

78. The compound of any one of the preceding claims, wherein R_2 is , , or .

79. The compound of any one of the preceding claims, wherein Q and R_2 together forms



80. The compound of any one of the preceding claims, wherein Q and R_2 together forms



81. The compound of any one of the preceding claims, wherein R_3 is H, C_1-C_6 alkyl, C_3-C_6 alkenyl, or C_3-C_6 alkynyl; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl)$_2$, oxo, or R_{3S}.

82. The compound of any one of the preceding claims, wherein R_3 is H, C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl)$_2$, or oxo.

83. The compound of any one of the preceding claims, wherein R_3 is H.

84. The compound of any one of the preceding claims, wherein R_3 is C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl)$_2$, or oxo.

85. The compound of any one of the preceding claims, wherein R_3 is C_1-C_6 alkyl.

86. The compound of any one of the preceding claims, wherein R_3 is ethyl.

87. The compound of any one of the preceding claims, wherein R_3 is propyl.

88. The compound of any one of the preceding claims, wherein R_3 is C_1-C_6 alkyl optionally substituted with one or more R_{3S}.

89. The compound of any one of the preceding claims, wherein R_{3S} is $–OC(=O)R_{3Sa}$.

90. The compound of any one of the preceding claims, wherein R_{3S} is 5- to 6- membered heterocycloalkyl optionally substituted with one or more –OH, halo, -CN, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl$)_2$, or oxo.

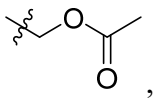
91. The compound of any one of the preceding claims, wherein R_{3S} is 5- to 6- membered heterocycloalkyl optionally substituted with one or more –OH.

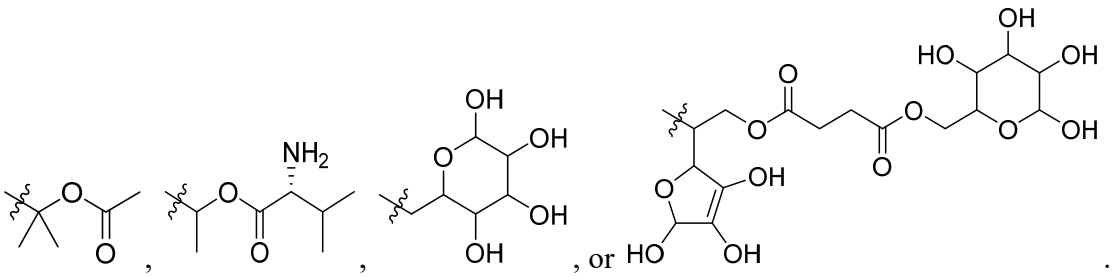
92. The compound of any one of the preceding claims, wherein R_{3Sa} is C_1-C_6 alkyl optionally substituted with one or more $–C(=O)OR_{3Sb}$.

93. The compound of any one of the preceding claims, wherein R_{3Sb} is 4- to 8-membered heterocycloalkyl optionally substituted with one or more -OH, halo, -CN, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl$)_2$, or oxo.

94. The compound of any one of the preceding claims, wherein R_{3Sb} is $–(C_1$-C_6 alkyl)-(4- to 8-membered heterocycloalkyl) optionally substituted with one or more –OH, halo, -CN, $-NH_2$, $-NH(C_1$-C_6 alkyl), $-N(C_1$-C_6 alkyl$)_2$, or oxo.

95. The compound of any one of the preceding claims, wherein R_{3Sb} is $–(C_1$-C_6 alkyl)-(4- to 8-membered heterocycloalkyl) optionally substituted with one or more –OH.

96. The compound of any one of the preceding claims, wherein R_3 is ,

.

97. The compound of any one of the preceding claims, wherein R_4 is C_1-C_6 alkyl, C_2-C_6 alkenyl or C_2-C_6 alkynyl.

98. The compound of any one of the preceding claims, wherein R_4 is C_1-C_6 alkyl.

99. The compound of any one of the preceding claims, wherein R_4 is methyl.

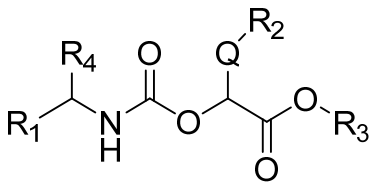
100. The compound of any one of the preceding claims, wherein R_4 is  or .

101. The compound of any one of the preceding claims, wherein R_5 is H.

102. The compound of any one of the preceding claims, wherein R_5 is C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl; wherein the C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl is optionally substituted with one or more C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, halo, -CN, -OH, $-NH_2$, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, or oxo.

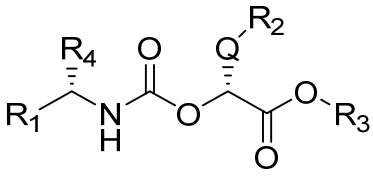
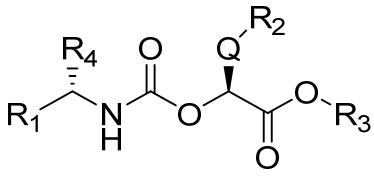
103. The compound of any one of the preceding claims, wherein R_6 is C_1-C_6 alkyl, C_2-C_6 alkenyl, or C_2-C_6 alkynyl.

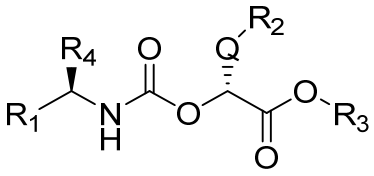
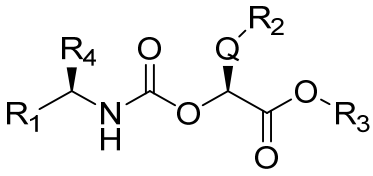
104. The compound of any one of the preceding claims, wherein the compound is of Formula (I-a):


(I-a),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_3, R_4, and Q are as described herein.

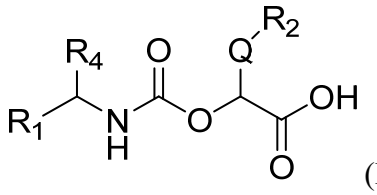
105. The compound of any one of the preceding claims, wherein the compound is of Formula (I-a1), (I-a2), (I-a3), or (I-a4):


(I-a1);

(I-a2);


(I-a3); or

(I-a4),

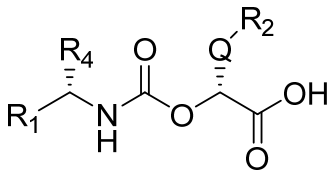
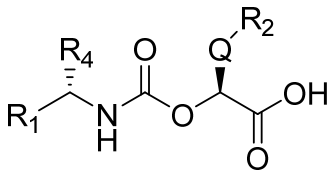
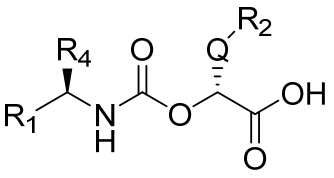
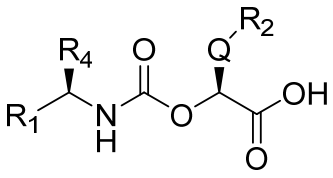
or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_3, R_4, and Q are as described herein.

106. The compound of any one of the preceding claims, wherein the compound is of Formula (I-a5):


(I-a5),

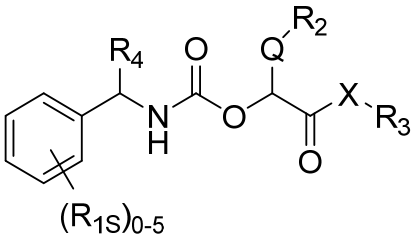
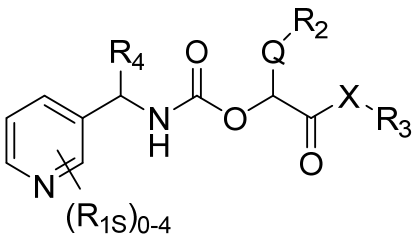
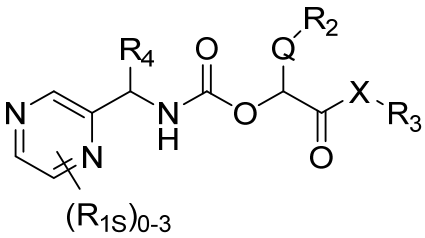
or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_4, and Q are as described herein.

107. The compound of any one of the preceding claims, wherein the compound is of Formula (I-a6), (I-a7), (I-a8), or (I-a9):


(I-a6);

(I-a7);

(I-a8); or

(I-a9),

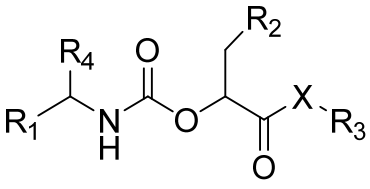
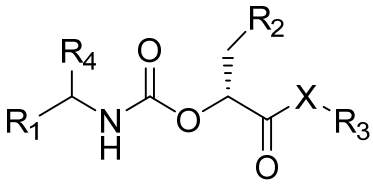
or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_4, and Q are as described herein.

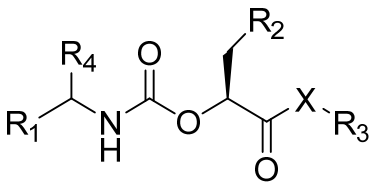
108. The compound of any one of the preceding claims, wherein the compound is of Formula (I-c), (I-d), or (I-e):


(I-c);

(I-d); or

(I-e),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, R_3, R_4, X, and Q are as described herein.

109. The compound of any one of the preceding claims, wherein the compound is of Formula (I-f), (I-g), or (I-h):

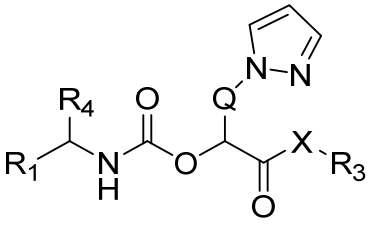

(I-f);

(I-g); or



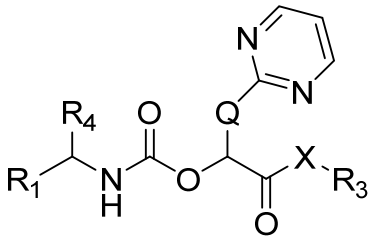
(I-h),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_3, R_4, and X are as described herein.

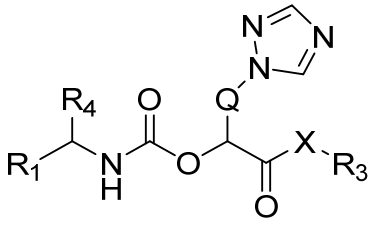
110. The compound of any one of the preceding claims, wherein the compound is of Formula (I-i), (I-j), or (I-k):



(I-i);



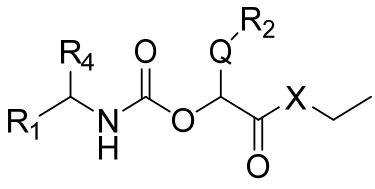
(I-j); or



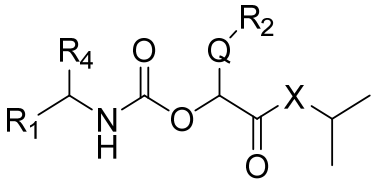
(I-k),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_3, R_4, X, and Q are as described herein.

111. The compound of any one of the preceding claims, wherein the compound is of Formula (I-l) or (I-m):



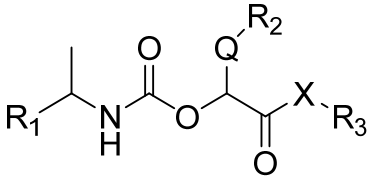
(I-l); or

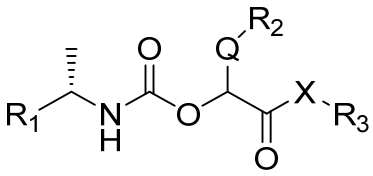


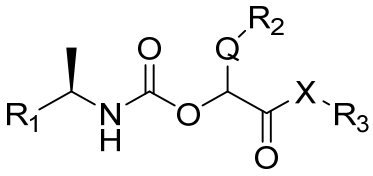
(I-m),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_4, X, and Q are as described herein.

112. The compound of any one of the preceding claims, wherein the compound is of Formula (I-n), (I-o), or (I-p):

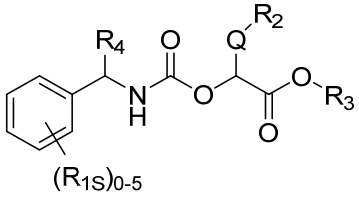

(I-n);


(I-o); or


(I-p),

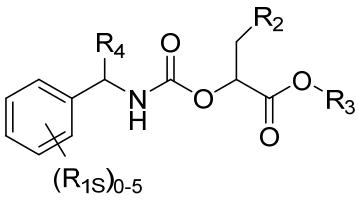
or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_3, X, and Q are as described herein.

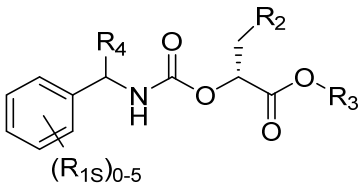
113. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-a):

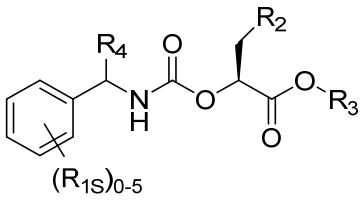

(Ia-a),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, R_3, R_4, and Q are as described herein.

114. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-b), (Ia-c) or (Ia-d):


(Ia-b);

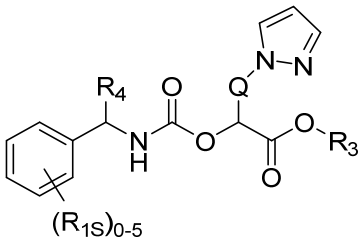

(Ia-c); or



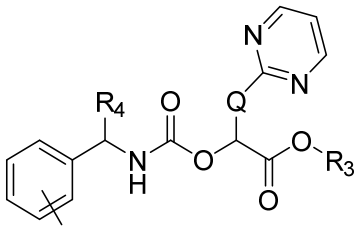
(Ia-c),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, R_3, and R_4 are as described herein.

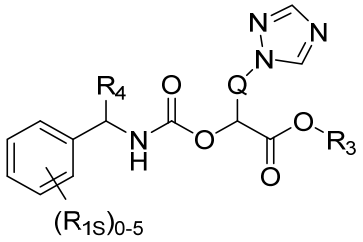
115. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-e), (Ia-f), or (Ia-g):



(Ia-e);



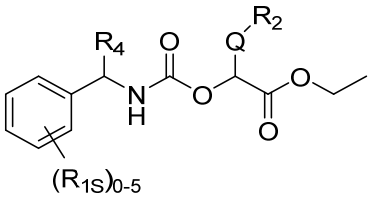
(Ia-f); or



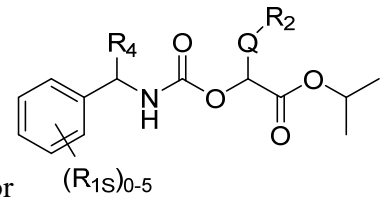
(Ia-g),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_3, R_4, and Q are as described herein.

116. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-h), or (Ia-i):



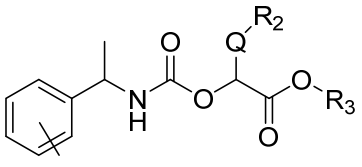
(Ia-h); or



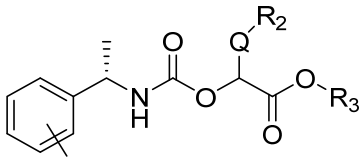
(Ia-i),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, R_4, and Q are as described herein.

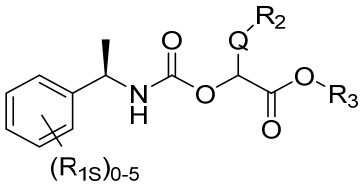
117. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-j), (Ia-k), or (Ia-l):



(Ia-j);



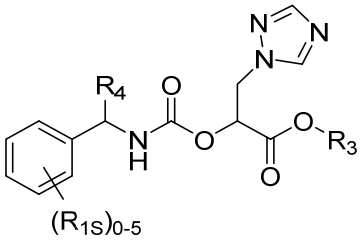
(Ia-k); or



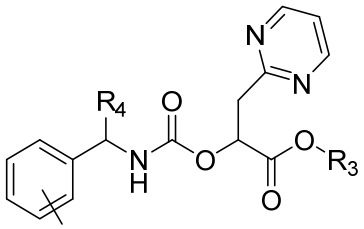
(Ia-l),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, R_3, and Q are as described herein.

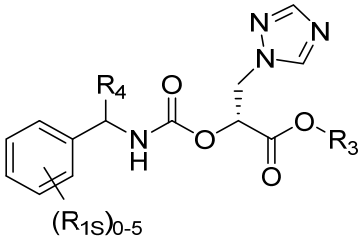
118. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-m), (Ia-n), (Ia-o), or (Ia-p):



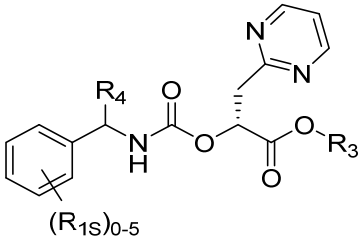
(Ia-m);



(Ia-n);



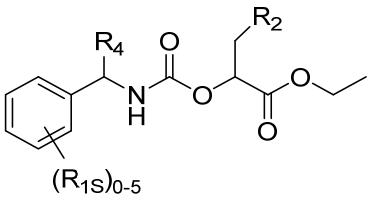
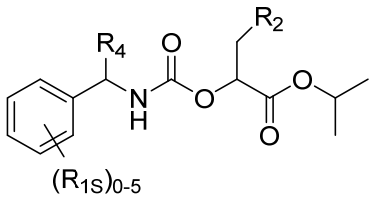
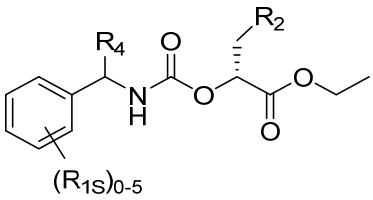
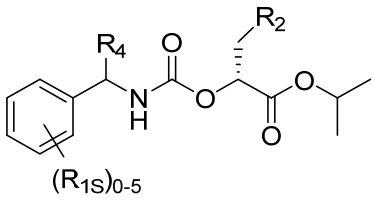
(Ia-o); or



(Ia-p),

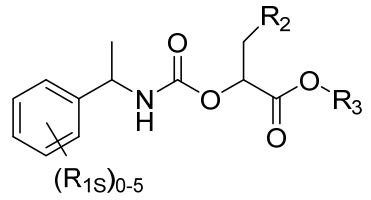
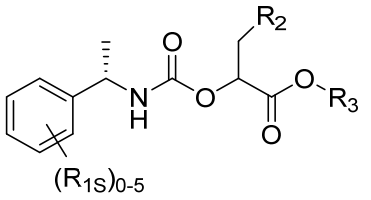
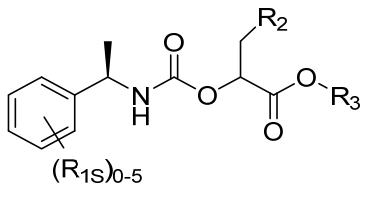
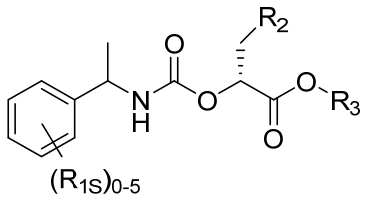
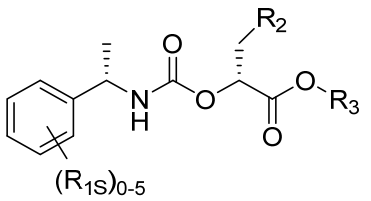
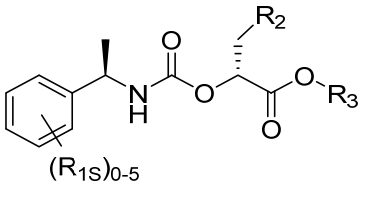
or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_3, and R_4 are as described herein.

119. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-q), (Ia-r), (Ia-s), or (Ia-t):


(Ia-q);

(Ia-r);

(Ia-s); or

(Ia-t),

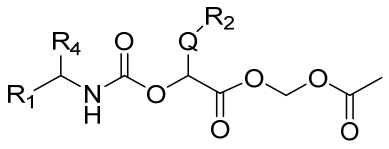
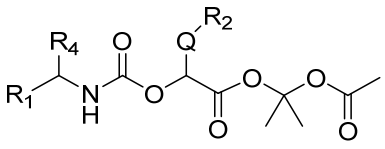
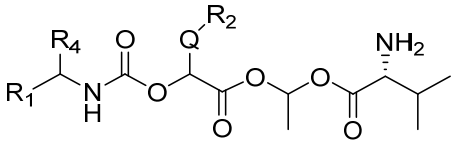
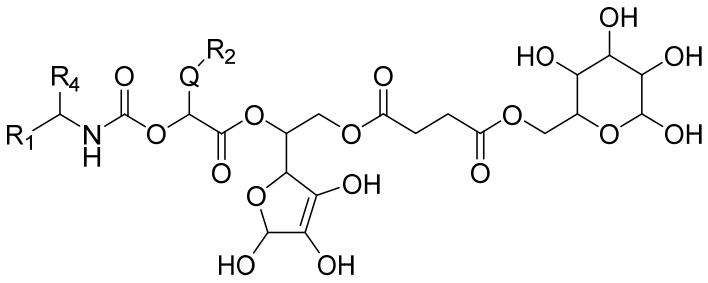
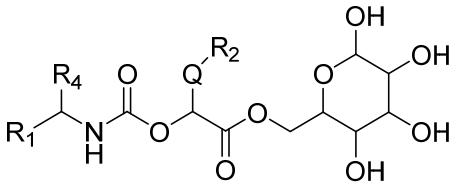
or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, and R_4 are as described herein.

120. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-u), (Ia-v), (Ia-w) (Ia-x), (Ia-y), or (Ia-z):


(Ia-u);

(Ia-v);

(Ia-w);

(Ia-x);

(Ia-y); or

(Ia-z),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, and R_3 are as described herein.

121. The compound of any of the preceding claims, being of Formula (Ic-a), (Ic-b), (Ic-c), (Ic-d), or (Ic-e):


(Ic-a);

(Ic-b);

(Ic-c);

(Ic-d); or

(Ic-e),

or a prodrug, solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_4, Q, and R_2 are as described herein.

122. The compound of any one of the claims 1-121, being selected from Compound Nos. 1-32 and prodrugs and pharmaceutically acceptable salts thereof.

123. The compound of any one of claims 1-121, being selected from Compound Nos. 1-32 and pharmaceutically acceptable salts thereof.

124. The compound of any one of claims 1-121, being selected from Compound Nos. 1-32.

125. A compound being an isotopic derivative of the compound of any one of claims 1-124.

126. The compound of claim 125, being a deuterium labeled compound of any one of Compound Nos. 1-32 and prodrugs and pharmaceutically acceptable salts thereof.

127. The compound of claim 125, being a deuterium labeled compound of any one of Compound Nos. 1-32.

128. A compound obtainable by, or obtained by, a method described herein;
optionally, the method comprises one or more steps described in Scheme 1 or Scheme 2.

129. A pharmaceutical composition comprising the compound of any one of claims 1-128 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable diluent or carrier.

130. The pharmaceutical composition of claim 129, wherein the compound is selected from Compound Nos. 1-32.

131. The compound of any one of claims 1-128 or the pharmaceutical composition of any one of claims 129 or 130, for use in inhibiting inflammasome activity; optionally, the inflammasome is NLRP3 inflammasome, and the activity is *in vitro* or *in vivo*.

132. The compound of any one of claims 1-128, or the pharmaceutical composition of any one of claims 129 or 130, for use in treating or preventing a disease or disorder.

133. The compound or pharmaceutical composition of claim 132, wherein the disease or disorder is associated with an implicated inflammasome activity; optionally, the disease or disorder is a disease or disorder in which inflammasome activity is implicated.

134. The compound or pharmaceutical composition of claim 132 or claim 133, wherein the disease or disorder is an inflammatory disorder, an autoinflammatory disorder, an autoimmune disorder, a neurodegenerative disease, or cancer.

135. The compound or pharmaceutical composition of any one of claims 132-134, wherein the disease or disorder is an inflammatory disorder, an autoinflammatory disorder or an autoimmune disorder; optionally, the disease or disorder is selected from cryopyrin-associated autoinflammatory syndrome (CAPS; e.g., familial cold autoinflammatory syndrome (FCAS), Muckle-Wells syndrome (MWS), chronic infantile neurological cutaneous and articular (CINCA) syndrome/ neonatal-onset multisystem inflammatory disease (NOMID)), familial Mediterranean fever (FMF), nonalcoholic fatty liver disease (NAFLD), non-alcoholic steatohepatitis (NASH), gout, rheumatoid arthritis, osteoarthritis, Crohn's disease, chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD), fibrosis, obesity, type 2 diabetes, multiple sclerosis, dermatological diseases (e.g., acne) and neuroinflammation occurring in protein misfolding diseases (e.g., Prion diseases).

136. The compound or pharmaceutical composition of any one of claims 132-134, wherein disease or disorder is a neurodegenerative disease; optionally, the disease or disorder is Parkinson's disease or Alzheimer's disease.

137. The compound or pharmaceutical composition of any one of claims 132-134, wherein the disease or disorder is cancer; optionally, the cancer is metastasising cancer, gastrointestinal cancer, brain cancer, skin cancer, non-small-cell lung carcinoma, head and neck squamous cell carcinoma or colorectal adenocarcinoma.

138. Use of the compound of any one of claims 1-128 or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for inhibiting inflammasome activity; optionally, the inflammasome is NLRP3 inflammasome, and the activity is *in vitro* or *in vivo*.

139. Use of the compound of any one of claims 1-128 or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for treating or preventing a disease or disorder.

140. The use of claim 139, wherein the disease or disorder is associated with an implicated inflammasome activity; optionally, the disease or disorder is a disease or disorder in which inflammasome activity is implicated.

141. The use of claim 139 or claim 140, wherein the disease or disorder is an inflammatory disorder, an autoinflammatory disorder, an autoimmune disorder, a neurodegenerative disease, or cancer.

142. The use of any one of claims 139-141, wherein the disease or disorder is an inflammatory disorder, an autoinflammatory disorder or an autoimmune disorder;optionally, the disease or disorder is selected from cryopyrin-associated autoinflammatory syndrome (CAPS; e.g., familial cold autoinflammatory syndrome (FCAS), Muckle-Wells syndrome (MWS), chronic infantile neurological cutaneous and articular (CINCA) syndrome/ neonatal-onset multisystem inflammatory disease (NOMID)), familial Mediterranean fever (FMF), nonalcoholic fatty liver disease (NAFLD), non-alcoholic steatohepatitis (NASH), gout, rheumatoid arthritis, osteoarthritis, Crohn's disease, chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD), fibrosis, obesity, type 2 diabetes, multiple sclerosis, dermatological diseases (e.g., acne) and neuroinflammation occurring in protein misfolding diseases (e.g., Prion diseases).

143. The use of any one of claims 139-141, wherein the disease or disorder is a neurodegenerative disease; optionally, the disease or disorder is Parkinson's disease or Alzheimer's disease.

144. The use of any one of claims 139-141 wherein the disease or disorder is a dermatological disease; optionally, the disease or disorder is acne.

145. The use of any one of claims 139-141, wherein the disease or disorder is cancer; optionally, the cancer is metastasising cancer, brain cancer, gastrointestinal cancer, skin cancer, non-small-cell lung carcinoma, head and neck squamous cell carcinoma or colorectal adenocarcinoma.