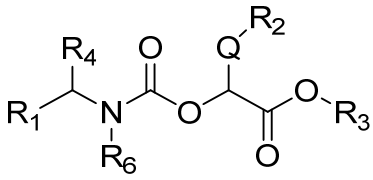
CLAIMS:

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 or, 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;

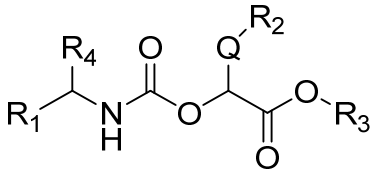
R_{3Sa} is C_1-C_6 alkyl optionally substituted with one or more –OH, halo, -CN, $-NH_2$, -NH(C_1-C_6 alkyl), -N(C_1-C_6 alkyl)$_2$, oxo, or –C(=O)OR_{3Sb};

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 or, 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~~3. The compound of ~~any one of the preceding~~ claim 1 or claim 2~~s~~, wherein R_1 is C_3-C_{16} cycloalkyl optionally substituted with one or more R_{1S}.

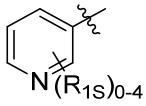
~~5~~4. The compound of any one of the preceding claims, wherein R_1 is 5- to 10-membered heteroaryl optionally substituted with one or more R_{1S}.

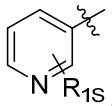
~~6~~5. The compound of any one of the preceding claims, wherein R_1 is 5- or 6-membered heteroaryl optionally substituted with one or more R_{1S}.

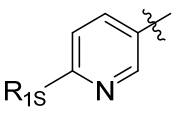
~~7~~6. The compound of any one of the preceding claims, wherein R_1 is 6-membered heteroaryl optionally substituted with one or more R_{1S}.

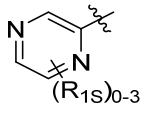
~~8~~7. The compound of any one of the preceding claims, wherein R_1 is pyridinyl optionally substituted with one or more R_{1S}.

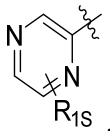
~~9~~8. The compound of any one of the preceding claims, wherein R_1 is pyrazinyl optionally substituted with one or more R_{1S}.

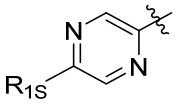
~~10~~9. The compound of any one of the preceding claims, wherein R_1 is .

~~11~~10. The compound of any one of the preceding claims, wherein R_1 is .

~~12~~11. The compound of any one of the preceding claims, wherein R_1 is .

~~13~~12. The compound of any one of the preceding claims, wherein R_1 is .

~~14~~13. The compound of any one of the preceding claims, wherein R_1 is .

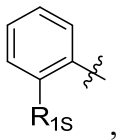
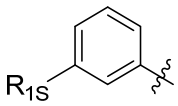
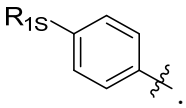
~~15~~14. The compound of any one of the preceding claims, wherein R_1 is .

~~16~~15. 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}.

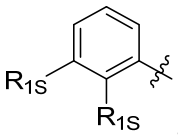
~~17~~16. The compound of any one of the preceding claims, wherein R_1 is C_5-C_6 monocyclic aryl optionally substituted with one or more R_{1S}.

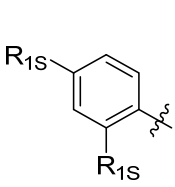
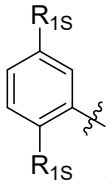
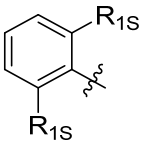
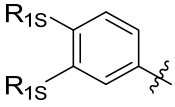
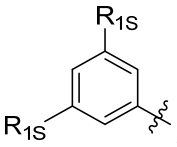
~~18~~17. The compound of any one of the preceding claims, wherein R_1 is phenyl optionally substituted with one or more R_{1S}.

~~19~~18. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one R_{1S}.

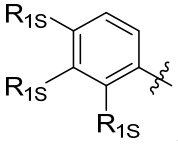
~~20~~19. The compound of any one of the preceding claims, wherein R_1 is , , or .

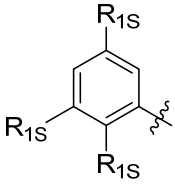
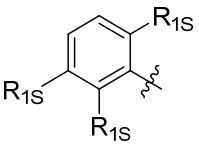
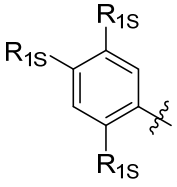
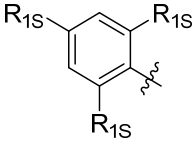
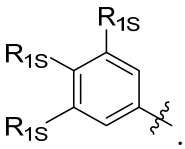
~~21~~20. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with two R_{1S}.

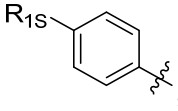
~~22~~21. The compound of any one of the preceding claims, wherein R_1 is ,

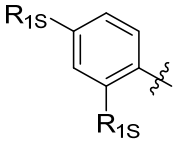
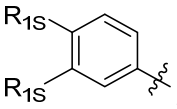
, , , , or .

~~23~~22. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with three R_{1S}.

~~24~~23. The compound of any one of the preceding claims, wherein R_1 is ,

, , , , or .

~~25~~24. The compound of any one of the preceding claims, wherein R_1 is ,

, or .

~~26~~25. 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~~26. 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~~27. 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~~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.

~~30~~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 substituted with one or more C_1-C_6 alkyl.

~~31~~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 -O-(C_5-C_6 aryl).

~~32~~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 halo.

~~33~~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, 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~~33. 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~~34. 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~~35. 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~~36. 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~~37. 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~~38. 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~~39. 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}.

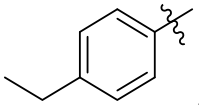
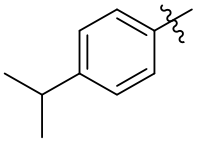
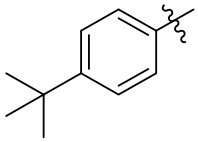
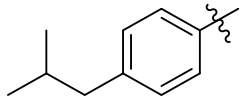
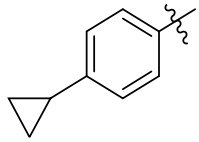
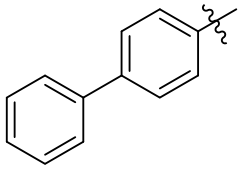
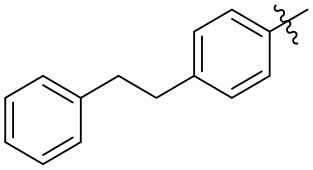
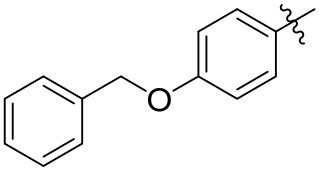
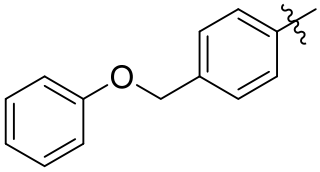
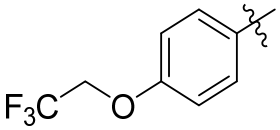
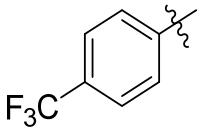
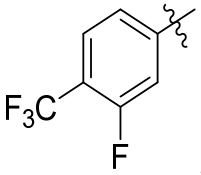
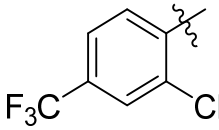
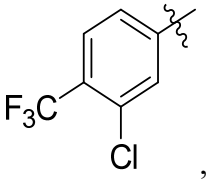
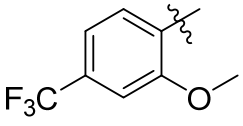
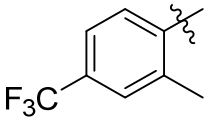
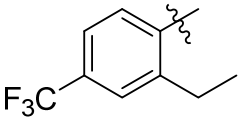
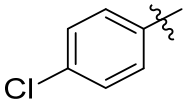
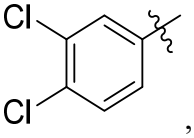
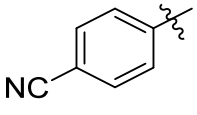
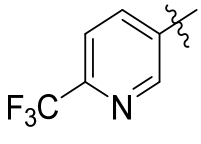
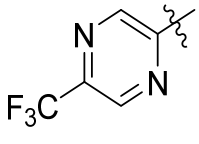
~~45~~40. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or C_3-C_8 heterocycloalkyl.

~~46~~41. 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~~42. The compound of any one of the preceding claims, wherein R_1 is phenyl substituted with one or C_1-C_6 alkoxy.

~~48~~43. 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~~44. 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~~45. The compound of any one of the preceding claims, wherein R_1 is , , , , , , , , , , , , , , , , , , , , , or .

~~51~~46. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_1-C_6 alkyl.

~~52~~47. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_1-C_6 alkoxy.

~~53~~48. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_5-C_6 aryl.

~~54~~49. The compound of any one of the preceding claims, wherein at least one R_{1S} is 5- or 6-membered heteroaryl.

~~55~~50. The compound of any one of the preceding claims, wherein at least one R_{1S} is C_3-C_8 heterocycloalkyl.

~~56~~51. The compound of any one of the preceding claims, wherein at least one R_{1S} is halo or CN.

~~57~~52. The compound of any one of the preceding claims, wherein at least one R_{1SS} is C_1-C_6 alkyl.

~~58~~53. The compound of any one of the preceding claims, wherein at least one R_{1SS} is C_5-C_6 aryl.

~~59~~54. The compound of any one of the preceding claims, wherein at least one R_{1SS} is phenyl.

~~60~~55. The compound of any one of the preceding claims, wherein at least one R_{1SS} 5- or 6-membered heteroaryl.

~~61~~56. The compound of any one of the preceding claims, wherein at least one R_{1SS} C_3-C_8 heterocycloalkyl.

~~62~~57. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(C_5-C_6 aryl).

~~63~~58. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(phenyl).

~~64~~59. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(5- or 6-membered heteroaryl).

~~65~~60. The compound of any one of the preceding claims, wherein at least one R_{1SS} is -O-(C_3-C_8 heterocycloalkyl).

~~66~~61. 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~~62. The compound of any one of the preceding claims, wherein at least one R_{1SS} is halo, -CN, or oxo.

~~68~~63. 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~~64. 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.

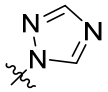
~~70~~65. The compound of any one of the preceding claims, wherein Q is methyl.

~~71~~66. 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.

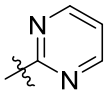
~~72~~67. The compound of any one of the preceding claims, wherein R_2 is pyrazolyl optionally substituted with one or more C_1-C_6 alkyl, ~~C_2-C_6 alkenyl, C_2-C_6 alkynyl,~~ C_3-C_8 cycloalkyl, C_5-C_6 aryl, 5- or 6-membered heteroaryl, C_3-C_8 heterocycloalkyl, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, 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.

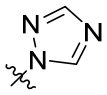
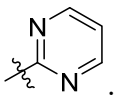
~~73~~68. The compound of any one of the preceding claims, wherein R_2 is .

~~74~~69. 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.

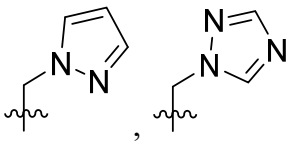
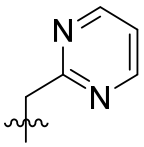
~~75~~70. The compound of any one of the preceding claims, wherein R_2 is .

~~76~~71. 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.

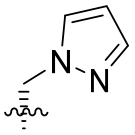
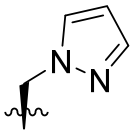
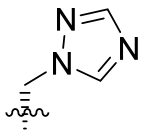
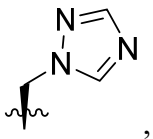
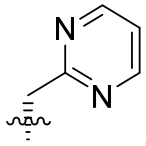
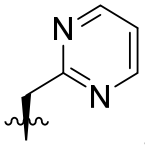
~~77~~72. The compound of any one of the preceding claims, wherein R_2 is .

~~78~~73. The compound of any one of the preceding claims, wherein R_2 is , , or .

~~79~~74. The compound of any one of the preceding claims, wherein Q and R_2 together forms

, , or .

~~80~~75. The compound of any one of the preceding claims, wherein Q and R_2 together forms

, , , , , or .

~~81~~76. The compound of any one of the preceding claims, wherein R_3 is H or~~,~~ 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~~77. The compound of any one of the preceding claims, wherein R_3 is H or~~,~~ 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~~78. The compound of any one of the preceding claims, wherein R_3 is H.

~~84~~79. 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~~80. The compound of any one of the preceding claims, wherein R_3 is C_1-C_6 alkyl.

~~86~~81. The compound of any one of the preceding claims, wherein R_3 is ethyl.

~~87~~82. The compound of any one of the preceding claims, wherein R_3 is propyl.

~~88~~83. 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~~84. The compound of any one of the preceding claims, wherein R_{3S} is –OC(=O)R_{3Sa}.

~~90~~85. 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.

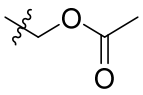
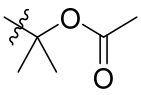
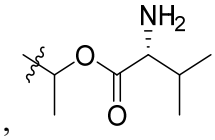
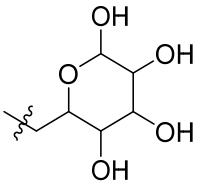
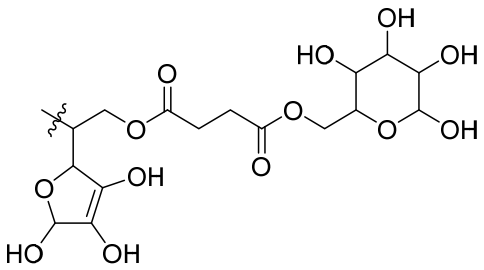
~~91~~86. The compound of any one of the preceding claims, wherein R_{3S} is 5- to 6- membered heterocycloalkyl optionally substituted with one or more –OH.

~~92~~87. 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~~88. 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~~89. 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~~90. 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~~91. The compound of any one of the preceding claims, wherein R_3 is  ,  ,  ,  , or  .

~~97~~92. 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~~93. The compound of any one of the preceding claims, wherein R_4 is methyl.

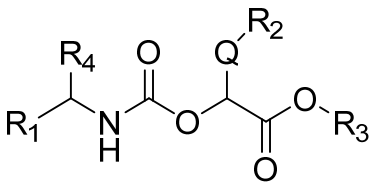
~~100~~94. The compound of any one of the preceding claims, wherein R_4 is  or  .

~~101~~95. The compound of any one of the preceding claims, wherein R_5 is H.

~~102~~96. 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~~97. 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~~.

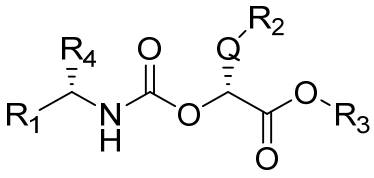
~~104~~98. The compound of any one of the preceding claims, wherein the compound is of Formula (I-a):



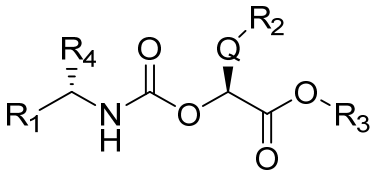
(I-a),

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

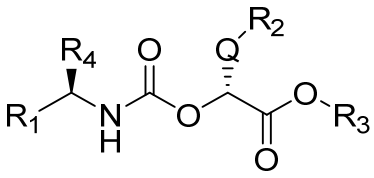
~~105~~99. The compound of any one of the preceding claims, wherein the compound is of Formula (I-a1), (I-a2), (I-a3), or (I-a4):



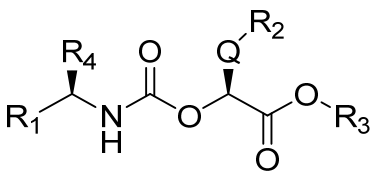
(I-a1);



(I-a2);



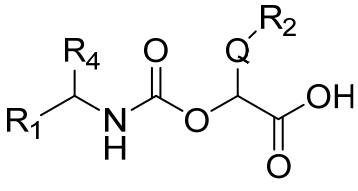
(I-a3); or



(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.

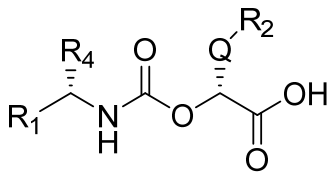
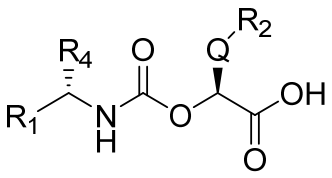
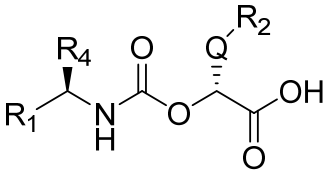
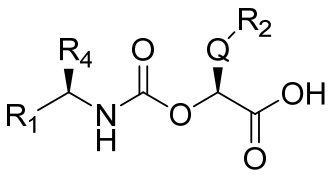
~~106~~100. The compound of any one of the preceding claims, wherein the compound is of Formula (I-a5):



(I-a5),

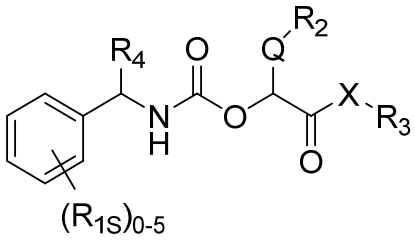
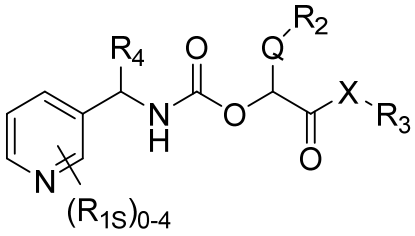
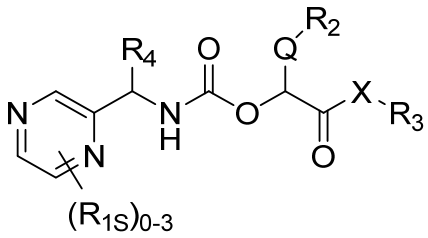
or a ~~prodrug,~~ solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_4, and Q are as described herein.

~~107~~101. 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),

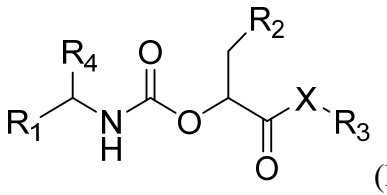
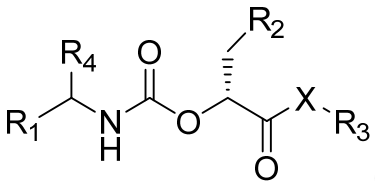
or a ~~prodrug,~~ solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_4, and Q are as described herein.

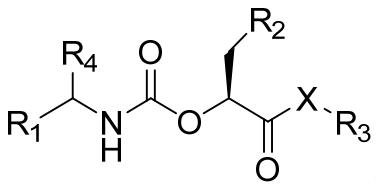
~~108~~102. The compound of any one of the preceding claims, wherein the compound is of Formula (I-c), (I-d), or (I-e):


(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~~103. The compound of any one of the preceding claims, wherein the compound is of Formula (I-f), (I-g), or (I-h):

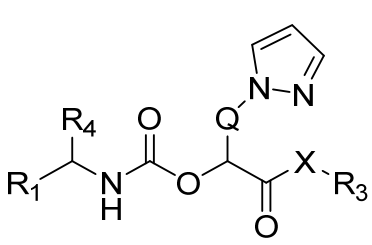

(I-f);

(I-g); or



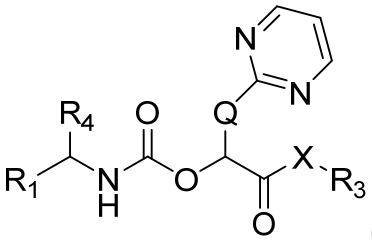
(I-h),

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

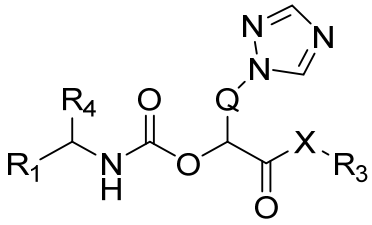
~~110~~104. The compound of any one of the preceding claims, wherein the compound is of Formula (I-i), (I-j), or (I-k):



(I-i);



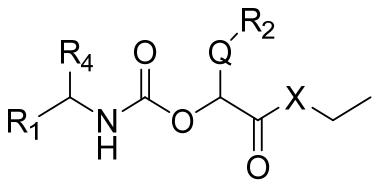
(I-j); or



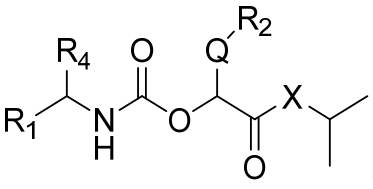
(I-k),

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

~~111~~105. The compound of any one of the preceding claims, wherein the compound is of Formula (I-l) or (I-m):



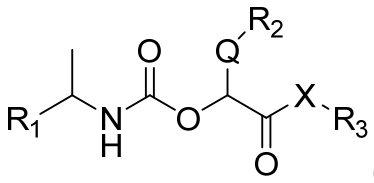
(I-l); or

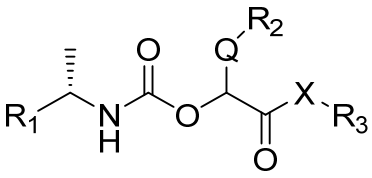


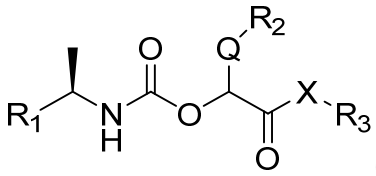
(I-m),

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

~~112~~106. The compound of any one of the preceding claims, wherein the compound is of Formula (I-n), (I-o), or (I-p):

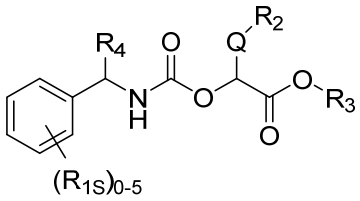

(I-n);


(I-o); or


(I-p),

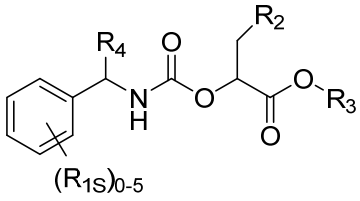
or a ~~prodrug,~~ solvate, or pharmaceutically acceptable salt thereof, wherein R_1, R_2, R_3, X, and Q are as described herein.

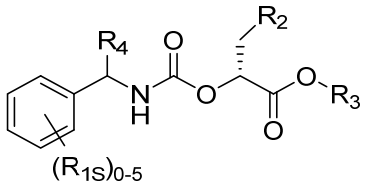
~~113~~107. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-a):

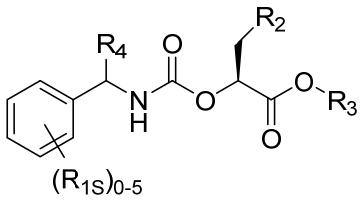

(Ia-a),

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


(Ia-b);

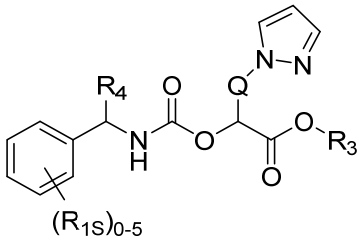

(Ia-c); or



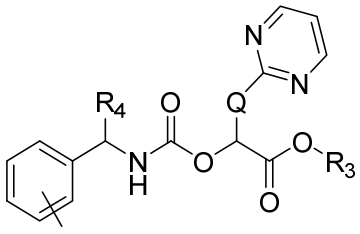
(Ia-c),

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

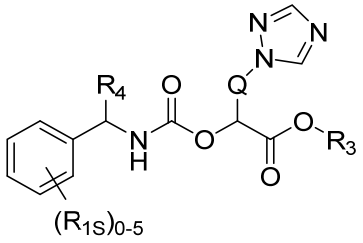
~~115~~109. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-e), (Ia-f), or (Ia-g):



(Ia-e);



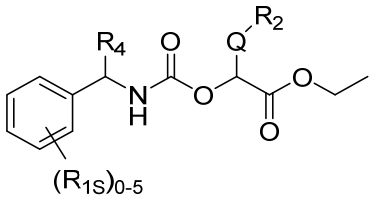
(Ia-f); or



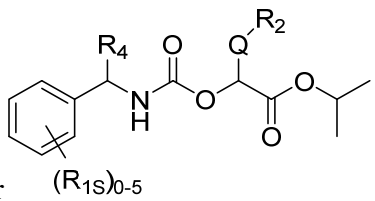
(Ia-g),

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

~~116~~110. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-h), or (Ia-i):



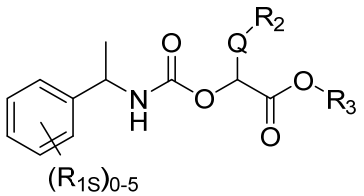
(Ia-h); or



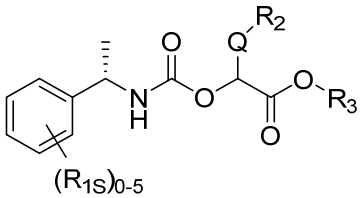
(Ia-i),

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

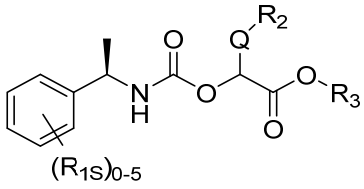
~~117~~111. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-j), (Ia-k), or (Ia-l):



(Ia-j);



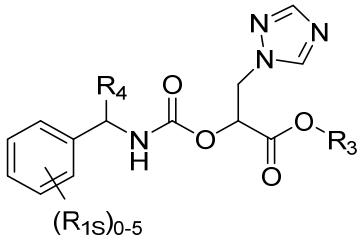
(Ia-k); or



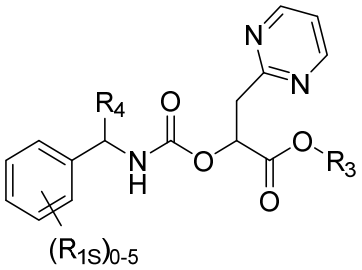
(Ia-l),

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

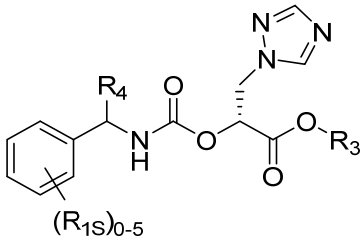
~~118~~112. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-m), (Ia-n), (Ia-o), or (Ia-p):



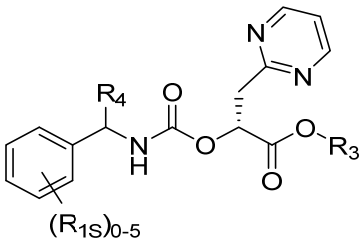
(Ia-m);



(Ia-n);



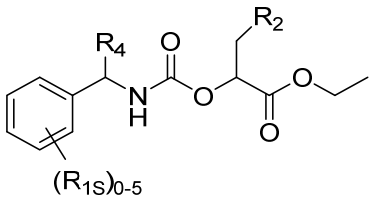
(Ia-o); or

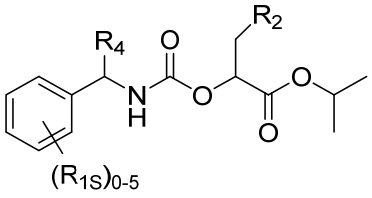


(Ia-p),

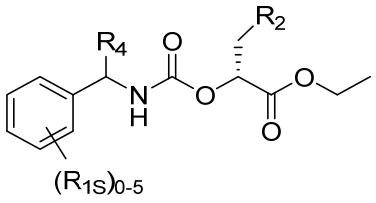
or a ~~prodrug,~~ solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_3, and R_4 are as described herein.

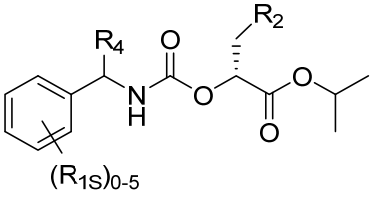
~~119~~113. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-q), (Ia-r), (Ia-s), or (Ia-t):



(Ia-q);


(Ia-r);

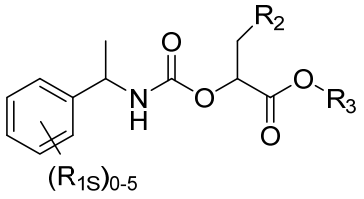


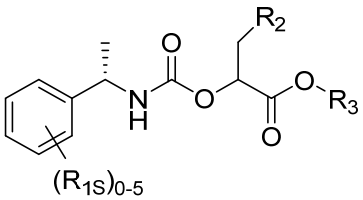
(Ia-s); or


(Ia-t),

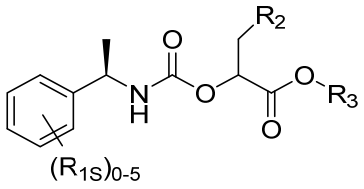
or a ~~prodrug,~~ solvate, or pharmaceutically acceptable salt thereof, wherein R_{1S}, R_2, and R_4 are as described herein.

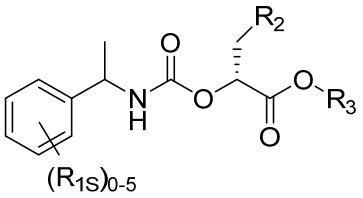
~~120~~114. The compound of any one of the preceding claims, wherein the compound is of Formula (Ia-u), (Ia-v), (Ia-w) (Ia-x), (Ia-y), or (Ia-z):



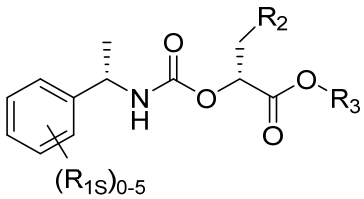
(Ia-u);


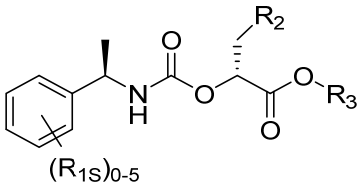
(Ia-v);



(Ia-w);


(Ia-x);

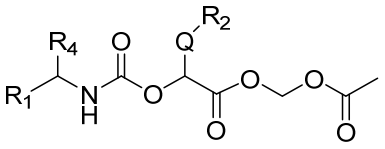
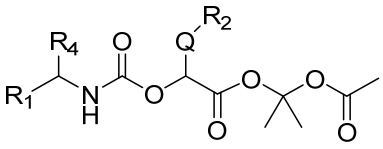
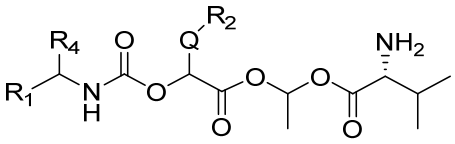
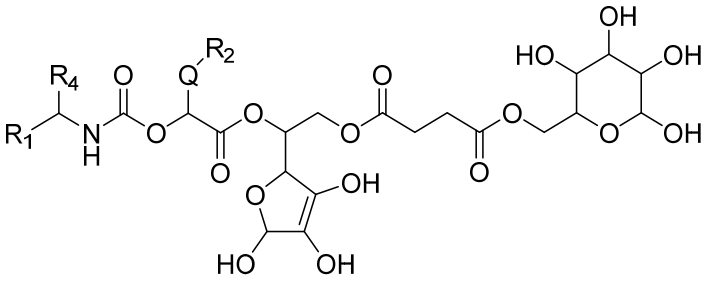
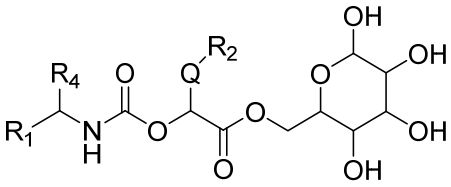


(Ia-y); or


(Ia-z),

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

~~121~~115. 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~~116. The compound of any one of the claims 1-~~121~~115, being selected from Compound Nos. 1-32 and ~~prodrugs and~~ pharmaceutically acceptable salts thereof.

~~123~~117. The compound of any one of claims 1-~~121~~115, being selected from Compound Nos. 1-32 and pharmaceutically acceptable salts thereof.

~~124~~118. The compound of any one of claims 1-~~121~~115, being selected from Compound Nos. 1-32.

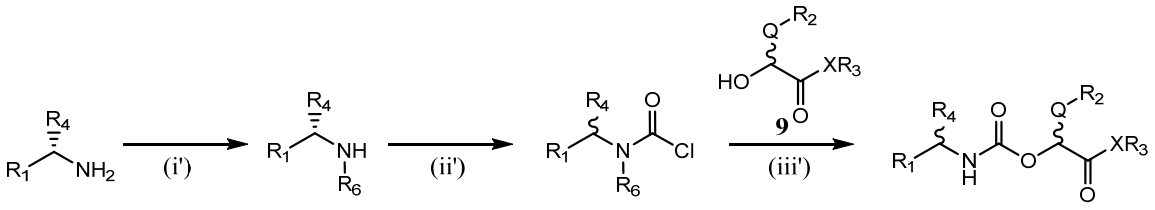
~~125~~119. A compound being an isotopic derivative of the compound of any one of claims 1-~~124~~118.

~~126~~120. The compound of claim ~~125~~119, being a deuterium labeled compound of any one of Compound Nos. 1-32 and ~~prodrugs and~~ pharmaceutically acceptable salts thereof.

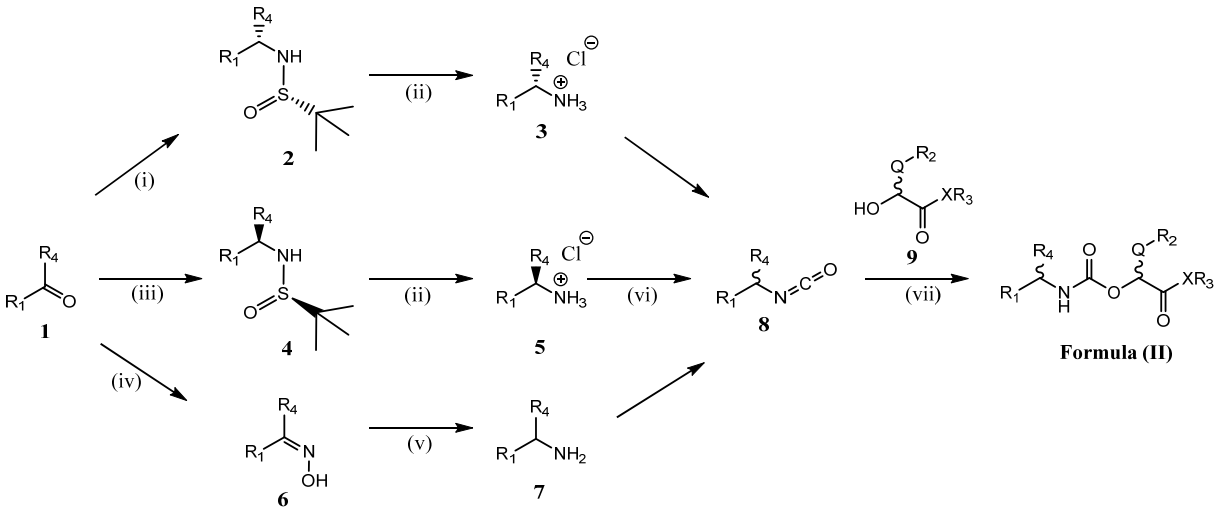
~~127~~121. The compound of claim ~~125~~119, being a deuterium labeled compound of any one of Compound Nos. 1-32.

~~128~~122. A process for preparing a compound of any one of claims 1 to 121 which comprises ~~obtainable by, or obtained by, a method described herein; optionally, the method comprises one or more steps described in~~ Scheme 1 or Scheme 2:

Scheme 1



Scheme 2



.

~~129~~123. A pharmaceutical composition comprising the compound of any one of claims 1-~~128~~ 121 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable diluent or carrier.

~~130~~124. The pharmaceutical composition of claim ~~129~~123, wherein the compound is selected from Compound Nos. 1-32.

~~131~~125. The compound of any one of claims 1-~~128~~ 121 or the pharmaceutical composition of any one of claims ~~129~~ 123 or ~~130~~124, for use in inhibiting inflammasome activity; optionally, the inflammasome is NLRP3 inflammasome, and the activity is *in vitro* or *in vivo*.

~~132~~126. The compound of any one of claims 1-~~128~~121, or the pharmaceutical composition of any one of claims ~~129~~ 123 or ~~130~~124, for use in treating or preventing a disease or disorder.

~~133~~127. The compound or pharmaceutical composition for use of claim ~~132~~126, 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~~128. The compound or pharmaceutical composition for use of claim ~~132~~126 ~~or claim 133~~, wherein the disease or disorder is an inflammatory disorder, an autoinflammatory disorder, an autoimmune disorder, a neurodegenerative disease, or cancer.

~~135~~129. The compound or pharmaceutical composition for use of any one of claims 126-128~~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~~130. The compound or pharmaceutical composition for use of any one of claims 126-~~128~~132-134, wherein disease or disorder is a neurodegenerative disease; optionally, the disease or disorder is Parkinson's disease or Alzheimer's disease.

~~137~~131. The compound or pharmaceutical composition for use of any one of claims 126-~~128~~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~~132. Use of the compound of any one of claims 1-~~128~~121 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*~~ treating or preventing a disease or disorder selected from an inflammatory disorder, an autoinflammatory disorder, an autoimmune disorder, a neurodegenerative disease, or cancer.

~~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~~133. The use of ~~any one of~~ claim~~s~~ ~~139~~132-~~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~~134. The use of ~~any one of~~ claim~~s~~ ~~139~~132~~-141~~, wherein the disease or disorder is a neurodegenerative disease; optionally, the disease or disorder is Parkinson's disease or Alzheimer's disease.

~~144~~135. The use of ~~any one of~~ claim~~s~~ ~~139~~132~~-141~~ wherein the disease or disorder is a dermatological disease; optionally, the disease or disorder is acne.

~~145~~136. The use of ~~any one of~~ claim~~s~~ ~~139~~132~~-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.