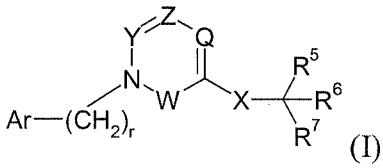
CLAIMS

WHAT IS CLAIMED IS:

1. A compound of formula I:

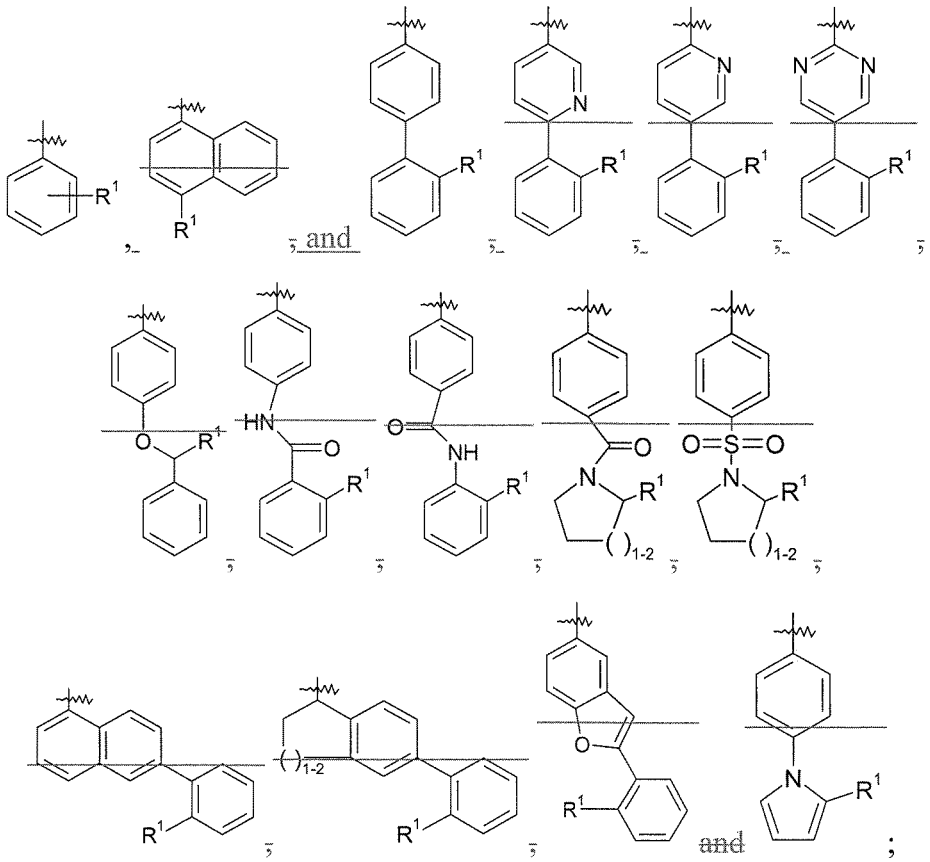


(I)

wherein:

r is 1;

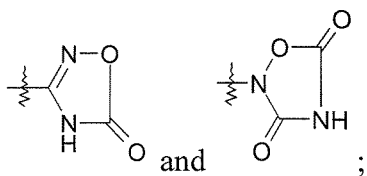
Ar is selected from:



and

;

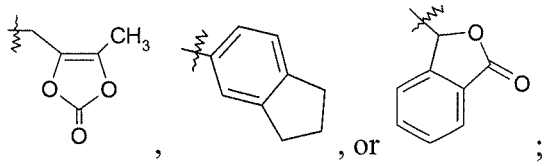
R^1 is selected from -$COOR^{1a}$, -$NHSO_2R^{1b}$, -SO_2NHR^{1d}, -SO_2OH, -C(O)NH-SO_2R^{1c}, -$P(O)(OH)_2$, -CN, -O-$CH(R^{1e})$-COOH, tetrazol-5-yl,



and

;

R^{1a} is H, -C_{1-6}alkyl, -C_{1-3}alkylenearyl, -C_{1-3}alkyleneheteroaryl, -C_{3-7}cycloalkyl, -$CH(C_{1-4}alkyl)OC(O)R^{1aa}$, -$C_{0-6}$alkylenemorpholine,


, , or ;

R^{1aa} is -O-C_{1-6}alkyl, -O-C_{3-7}cycloalkyl, -$NR^{1ab}R^{1ac}$, or -$CH(NH_2)CH_2COOCH_3$; R^{1ab} and R^{1ac} are independently selected from H, -C_{1-6}alkyl, and benzyl, or are taken together as -$(CH_2)_{3-6}$-; R^{1b} is R^{1c} or -$NHC(O)R^{1c}$; R^{1c} is -C_{1-6}alkyl, -C_{0-6}alkylene-O-R^{1ca}, -C_{1-5}alkylene-$NR^{1cb}R^{1cc}$, -C_{0-4}alkylenearyl or -C_{0-4}alkyleneheteroaryl; R^{1ca} is H, -C_{1-6}alkyl, or -C_{1-6}alkylene-O-C_{1-6}alkyl; R^{1cb} and R^{1cc} are independently selected from H and -C_{1-6}alkyl, or are taken together as -$(CH_2)_2$-O-$(CH_2)_2$- or -$(CH_2)_2$-$N[C(O)CH_3]$-$(CH_2)_2$-; R^{1d} is H, R^{1c}, -$C(O)R^{1c}$, or -$C(O)NHR^{1c}$; R^{1e} is -C_{1-4}alkyl or aryl;

Y is -$C(R^3)$-, Z is -N-, Q is -$C(R^2)$- and W is a bond; Y is -N-, Z is -$C(R^3)$-, Q is -$C(R^2)$- and W is a bond; ~~Y is -$C(R^3)$-, Z is -N-, Q is -N- and W is a bond; or~~ Y is -$C(R^3)$-, Z is -CH-, Q is -N- and W is a bond; ~~or Y is -$C(R^3)$-, Z is -CH-, Q is -$C(R^2)$- and W is -C(O)-;~~

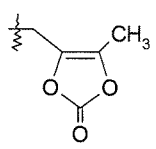
R^2 is selected from H, halo, -NO_2, -C_{1-6}alkyl, -C_{2-6}alkenyl, -C_{3-6}cycloalkyl, -CN, -$C(O)R^{2a}$, -C_{0-5}alkylene-OR^{2b}, -C_{0-5}alkylene-$NR^{2c}R^{2d}$, -C_{0-3}alkylenearyl, and -C_{0-3}alkylene-heteroaryl; where R^{2a} is selected from H, -C_{1-6}alkyl, -C_{3-6}cycloalkyl, -OR^{2b} and -$NR^{2c}R^{2d}$; R^{2b} is selected from H, -C_{1-6}alkyl, -C_{3-6}cycloalkyl, and -C_{0-1}alkylenearyl; and R^{2c} and R^{2d} are independently selected from H, -C_{1-4}alkyl, and -C_{0-1}alkylenearyl;

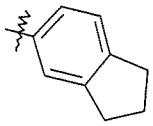
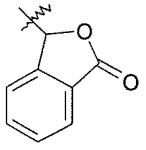
R^3 is selected from -C_{1-10}alkyl, -C_{2-10}alkenyl, -C_{3-10}alkynyl, -C_{0-3}alkylene-C_{3-7}cycloalkyl, -C_{2-3}alkenylene-C_{3-7}cycloalkyl, -C_{2-3}alkynylene-C_{3-7}cycloalkyl, -C_{0-5}alkylene-NR^{3a}-C_{0-5}alkylene-R^{3b}, -C_{0-5}alkylene-O-C_{0-5}alkylene-R^{3b}, -C_{0-5}alkylene-S-C_{1-5}alkylene-R^{3b}, and -C_{0-3}alkylenearyl; where R^{3a} is selected from H, -C_{1-6}alkyl, -C_{3-7}cycloalkyl, and -C_{0-3}alkylenearyl; and R^{3b} is selected from H, -C_{1-6}alkyl, -C_{3-7}cycloalkyl, -C_{2-4}alkenyl, -C_{2-4}alkynyl, and aryl;

X is -C_{1-12}alkylene-, where at least one -CH_2- moiety in the alkylene is replaced with a -NR^{4a}-C(O)- or -C(O)-NR^{4a}- moiety, where R^{4a} is selected from H, -OH, and -C_{1-4}alkyl;

R^5 is selected from -C_{0-3}alkylene-SR^{5a}, -C_{0-3}alkylene-$C(O)NR^{5b}R^{5c}$, -C_{0-3}alkylene-NR^{5b}-$C(O)R^{5d}$, -NH-C_{0-1}alkylene-$P(O)(OR^{5e})_2$, -C_{0-3}alkylene-$P(O)OR^{5e}R^{5f}$, -C_{0-2}alkylene-CHR^{5g}-COOH, -C_{0-3}alkylene-$C(O)NR^{5h}$-CHR^{5i}-COOH, and -C_{0-3}alkylene-S-SR^{5j}; R^{5a} is H or -C(O)-R^{5aa}; R^{5aa} is -C_{1-6}alkyl, -C_{0-6}alkylene-C_{3-7}cycloalkyl,

-C_{0-6}alkylenearyl, -C_{0-6}alkyleneheteroaryl, -C_{0-6}alkylenemorpholine, -C_{0-6}alkylenepiperazine-CH_3, ~~-CH[N(R^{5ab})$_2$]-aa where aa is an amino acid side chain-~~ $CH(NH_2)$-$CH(CH_3)_2$, -2-pyrrolidine, -C_{0-6}alkylene-OR^{5ab}, -O-C_{0-6}alkylenearyl, -C_{1-2}alkylene-OC(O)-C_{1-6}alkyl, -C_{1-2}alkylene-OC(O)-C_{0-6}alkylenearyl, or -O-C_{1-2}alkylene-OC(O)O-C_{1-6}alkyl; R^{5ab} is H or -C_{1-6}alkyl; R^{5b} is H, -OH, -OC(O)R^{5ba}, -CH_2COOH, -O-benzyl, -pyridyl, or -OC(S)$NR^{5bb}R^{5bc}$; R^{5ba} is H, -C_{1-6}alkyl, aryl, -OCH_2-aryl, -CH_2O-aryl, or -$NR^{5bb}R^{5bc}$; R^{5bb} and R^{5bc} are independently selected from H and -C_{1-4}alkyl; R^{5c} is H, -C_{1-6}alkyl, or -C(O)-R^{5ca}; R^{5ca} is H, -C_{1-6}alkyl, -C_{3-7}cycloalkyl, aryl, or heteroaryl; R^{5d} is H, -C_{1-4}alkyl, -C_{0-3}alkylenearyl, -$NR^{5da}R^{5db}$, -CH_2SH, or -O-C_{1-6}alkyl; R^{5da} and R^{5db} are independently selected from H and -C_{1-4}alkyl; R^{5e} is H, -C_{1-6}alkyl, -C_{1-3}alkylenearyl, -C_{1-3}alkyleneheteroaryl, -C_{3-7}cycloalkyl, -$CH(CH_3)$-O-C(O)R^{5ea},



,

, or


;

R^{5ea} is -O-C_{1-6}alkyl, -O-C_{3-7}cycloalkyl, -$NR^{5eb}R^{5ec}$, or -$CH(NH_2)CH_2COOCH_3$; R^{5eb} and R^{5ec} are independently selected from H, -C_{1-4}alkyl, and -C_{1-3}alkylenearyl, or are taken together as -$(CH_2)_{3-6}$-; R^{5f} is H, -C_{1-4}alkyl, -C_{0-3}alkylenearyl, -C_{1-3}alkylene-$NR^{5fa}R^{5fb}$, or -C_{1-3}alkylene(aryl)-C_{0-3}alkylene-$NR^{5fa}R^{5fb}$; R^{5fa} and R^{5fb} are independently selected from H and -C_{1-4}alkyl; R^{5g} is H, -C_{1-6}alkyl, -C_{1-3}alkylenearyl, or -CH_2-O-$(CH_2)_2$-O-CH_3; R^{5h} is H or -C_{1-4}alkyl; R^{5i} is H, -C_{1-4}alkyl, or -C_{0-3}alkylenearyl; and R^{5j} is -C_{1-6}alkyl, aryl, or -$CH_2CH(NH_2)COOH$;

R^6 is selected from -C_{1-6}alkyl, -$CH_2O(CH_2)_2$-O-CH_3, -C_{1-6}alkylene-O-C_{1-6}alkyl, -C_{0-3}alkylenearyl, -C_{0-3}alkyleneheteroaryl, and -C_{0-3}alkylene-C_{3-7}cycloalkyl; and

R^7 is H or is taken together with R^6 to form -C_{3-8}cycloalkyl;

wherein:

each -CH_2- group in -$(CH_2)_r$- is optionally substituted with 1 or 2 substituents independently selected from -C_{1-4}alkyl and fluoro;

each ring in Ar and each aryl and heteroaryl in R^{1-3} and R^{5-6} is optionally substituted with 1 to 3 substituents independently selected from -OH, -C_{1-6}alkyl, -C_{2-4}alkenyl, -C_{2-4}alkynyl, -CN, halo, -O-C_{1-6}alkyl, -S-C_{1-6}alkyl, -S(O)-C_{1-6}alkyl, -$S(O)_2$-C_{1-4}alkyl, -phenyl, -NO_2, -NH_2, -NH-C_{1-6}alkyl and -$N(C_{1-6}alkyl)_2$, wherein each alkyl, alkenyl and alkynyl is optionally substituted with 1 to 5 fluoro atoms;

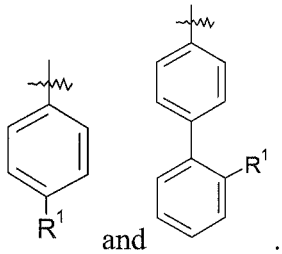
each carbon atom in X is optionally substituted with one or more R^{4b} groups and one $-CH_2-$ moiety in X may be replaced with a group selected from $-C_{4-8}$cycloalkylene-, $-CR^{4d}=CH-$, and $-CH=CR^{4d}-$; wherein R^{4b} is selected from $-C_{0-5}$alkylene-$COOR^{4c}$, $-C_{1-6}$alkyl, $-C_{0-1}$alkylene-$CONH_2$, $-C_{1-2}$alkylene-OH, $-C_{0-3}$alkylene-C_{3-7}cycloalkyl, 1H-indol-3-yl, benzyl, and hydroxybenzyl, where R^{4c} is H or $-C_{1-4}$alkyl; and R^{4d} is selected from $-CH_2$-2-thiophene and phenyl;

each alkyl and each aryl in R^{1-3}, R^{4a-4d}, and R^{5-6} is optionally substituted with 1 to 7 fluoro atoms;

wherein each aryl in R^1, R^2, R^3, R^5, and R^6 contains 6 to 10 carbon ring atoms; and each heteroaryl in R^1, R^2, R^5, and R^6 contains 2 to 9 carbon ring atoms and 1 to 3 heteroatoms selected from nitrogen, oxygen, and sulfur;

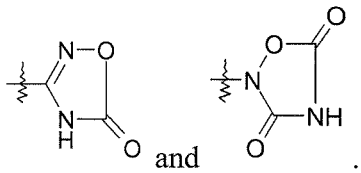
and pharmaceutically acceptable salts thereof.

2. The compound of Claim 1, wherein Ar is selected from:



and .

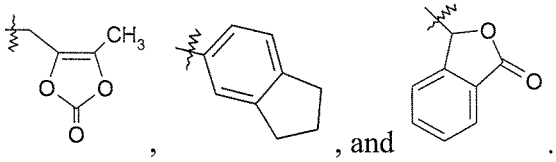
3. The compound of Claim 1, wherein R^1 is selected from -COOH, $-NHSO_2R^{1b}$, $-SO_2NHR^{1d}$, $-SO_2OH$, $-C(O)NH-SO_2R^{1c}$, $-P(O)(OH)_2$, -CN, $-O-CH(R^{1e})$-COOH, tetrazol-5-yl,



and .

4. The compound of Claim 3, wherein R^1 is selected from -COOH, $-SO_2NHR^{1d}$, and tetrazol-5-yl.

5. The compound of Claim 1, wherein R^1 is $-COOR^{1a}$, where R^{1a} is selected from $-C_{1-6}$alkyl, $-C_{1-3}$alkylenearyl, $-C_{1-3}$alkyleneheteroaryl, $-C_{3-7}$cycloalkyl, $-CH(C_{1-4}$alkyl$)OC(O)R^{1aa}$, $-C_{0-6}$alkylenemorpholine,



, , and .

6. The compound of Claim 1, wherein Y represents $-C(R^3)-$, Z is -N-, Q is $-C(R^2)-$ and

W is a bond.

~~7. The compound of Claim 1, wherein Y represents -C(R^3)-, Z is -N-, Q is -N- and W is a bond.~~

~~8. The compound of Claim 1, wherein Y represents -C(R^3)-, Z is -CH-, Q is -C(R^2)- and W is -C(O)-.~~

97. The compound of Claim 1, wherein Y represents -N-, Z is -C(R^3)-, Q is -C(R^2)- and W is a bond.

~~10~~8. The compound of Claim 1, wherein Y represents -C(R^3)-, Z is -CH-, Q is -N- and W is a bond.

~~11~~9. The compound of Claim 1, wherein R^2 is selected from H, halo, -C_{1-6}alkyl, -C_{3-6}cycloalkyl, and -C_{0-5}alkylene-OR^{2b}.

~~12~~10. The compound of Claim 1, wherein R^3 is selected from -C_{1-10}alkyl and -C_{0-5}alkylene-O-C_{0-5}alkylene-R^{3b}, where R^{3b} is -C_{1-6}alkyl.

~~13~~11. The compound of Claim ~~12~~10, wherein R^3 is selected from -C_{2-5}alkyl and -O-C_{1-5}alkyl.

~~14~~12. The compound of Claim 1, wherein X is -C_{1-11}alkylene-, 1 to 4 -CH_2- moieties in the alkylene are replaced with a -NR^{4a}-C(O)- or -C(O)-NR^{4a}- moiety, and R^{4a} is selected from H and -OH.

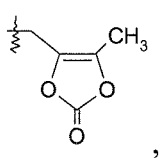
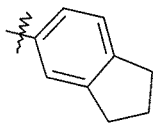
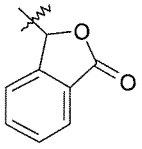
~~15~~13. The compound of Claim ~~14~~12 wherein X is selected from: -C(O)NH-; -CH_2-NHC(O)-; -C(O)NH-CH_2-; -C(O)NH-NHC(O)-; -CH=C(-CH_2-2-thiophene)-C(O)NH-; -$(CH_2)_2$-NHC(O)-; -C(O)NH-CH_2-CH(COOH)-CH_2-; -C(O)NH-CH(benzyl)-CH_2-NHC(O)-; -C(O)NH-CH(benzyl)-CH_2-C(O)NH-; -CH_2-NHC(O)-CH_2-NHC(O)-; -CH_2-NHC(O)-cyclohexylene-NHC(O)-; -CH_2-N(OH)C(O)-cyclohexylene-NHC(O)-; -CH_2-NHC(O)-CH_2-CH(COOH)-NHC(O)-; -CH_2-NHC(O)-$(CH_2)_2$-NHC(O)-; -C(O)NH-$(CH_2)_2$-C(O)N(OH)-CH_2-; -C(O)NH-$(CH_2)_2$-CH(COOH)-NHC(O)-; -C(O)NH-$(CH_2)_4$-NHC(O)-; -CH_2-NHC(O)-$(CH_2)_2$-CH(COOH)-NHC(O)-; -C(O)NH-$(CH_2)_3$-CH(COOH)-NHC(O)-; -C(O)NH-$(CH_2)_2$-NHC(O)-CH_2-NHC(O)-; -C(O)NH-$(CH_2)_2$-NHC(O)-cyclohexylene-NHC(O)-; -CH_2-NHC(O)-$(CH_2)_4$-NHC(O)-; -C(O)NH-$(CH_2)_4$-CH(COOH)-NHC(O)-; -CH_2-NHC(O)-$(CH_2)_2$-NHC(O)-cyclohexylene-NHC(O)-; -CH_2-C(O)NH-$(CH_2)_2$-NHC(O)-cyclohexylene-NHC(O)-; -C(O)NH-$(CH_2)_4$-NHC(O)-CH_2-NHC(O)-; -C(O)NH-$(CH_2)_4$-NHC(O)-cyclohexylene-NHC(O)-; -CH_2-NHC(O)-$(CH_2)_6$-NHC(O)-; -CH_2-NHC(O)-$(CH_2)_4$-NHC(O)-cyclohexylene-NHC(O)-; -C(O)NH-$(CH_2)_6$-NHC(O)-cyclohexylene-NHC(O)-; and

-CH_2-NHC(O)-$(CH_2)_6$-NHC(O)-cyclohexylene-NHC(O)-.

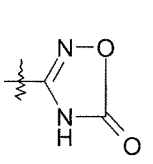
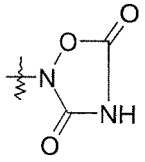
~~16~~14. The compound of Claim ~~15~~13, wherein X is selected from -C(O)NH- and -CH_2-NHC(O)-.

~~17~~15. The compound of Claim 1, wherein R^5 is selected from -C_{0-3}alkylene-SR^{5a}, -C_{0-3}alkylene-$C(O)NR^{5b}R^{5c}$, -C_{0-3}alkylene-NR^{5b}-$C(O)R^{5d}$, -NH-C_{0-1}alkylene-$P(O)(OR^{5e})_2$, -C_{0-3}alkylene-$P(O)OR^{5e}R^{5f}$, -C_{0-2}alkylene-CHR^{5g}-COOH, and -C_{0-3}alkylene-$C(O)NR^{5h}$-CHR^{5i}-COOH; R^{5a} is H, R^{5b} is -OH, R^{5c} is H, R^{5d} is H, R^{5e} is H.

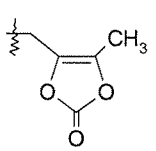
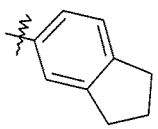
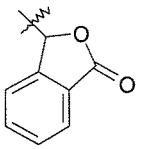
~~18~~16. The compound of Claim 1, wherein R^5 is selected from -C_{0-3}alkylene-SR^{5a}, -C_{0-3}alkylene-$C(O)NR^{5b}R^{5c}$, -C_{0-3}alkylene-NR^{5b}-$C(O)R^{5d}$, -NH-C_{0-1}alkylene-$P(O)(OR^{5e})_2$, -C_{0-3}alkylene-$P(O)OR^{5e}R^{5f}$, and -C_{0-3}alkylene-S-SR^{5j}; where R^{5a} is -C(O)-R^{5aa}; R^{5b} is H, -$OC(O)R^{5ba}$, -CH_2COOH, -O-benzyl, -pyridyl, or -$OC(S)NR^{5bb}R^{5bc}$; R^{5e} is -C_{1-6}alkyl, -C_{1-3}alkylenearyl, -C_{1-3}alkyleneheteroaryl, -C_{3-7}cycloalkyl, -$CH(CH_3)$-O-$C(O)R^{5ea}$,


, 
, or 
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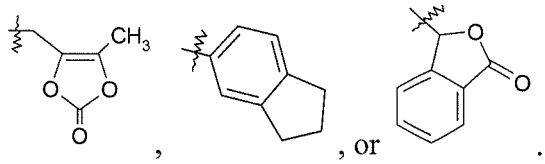
~~19~~17. The compound of Claim ~~17~~15, wherein R^1 is selected from -COOH, -$NHSO_2R^{1b}$, -SO_2NHR^{1d}, -SO_2OH, -C(O)NH-SO_2R^{1c}, -$P(O)(OH)_2$, -CN, -O-$CH(R^{1e})$-COOH, tetrazol-5-yl,


and 
.

~~20~~18. The compound of Claim ~~18~~16, wherein R^1 is -$COOR^{1a}$, where R^{1a} is -C_{1-6}alkyl, -C_{1-3}alkylenearyl, -C_{1-3}alkyleneheteroaryl, -C_{3-7}cycloalkyl, -$CH(C_{1-4}alkyl)OC(O)R^{1aa}$, -$C_{0-6}$alkylenemorpholine,

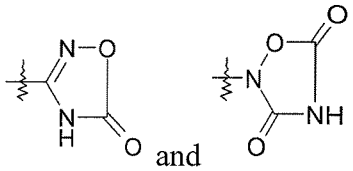

, 
, or 
.

~~21~~19. The compound of Claim ~~17~~15, wherein R^1 is -$COOR^{1a}$, and R^{1a} is -C_{1-6}alkyl, -C_{1-3}alkylenearyl, -C_{1-3}alkyleneheteroaryl, -C_{3-7}cycloalkyl, -$CH(C_{1-4}alkyl)OC(O)R^{1aa}$, -$C_{0-6}$alkylenemorpholine,



, , or .

~~22~~20. The compound of Claim ~~18~~16, wherein R^1 is selected from -COOH, -$NHSO_2R^{1b}$, -SO_2NHR^{1d}, -SO_2OH, -C(O)NH-SO_2R^{1c}, -$P(O)(OH)_2$, -CN, -O-$CH(R^{1e})$-COOH, tetrazol-5-yl,

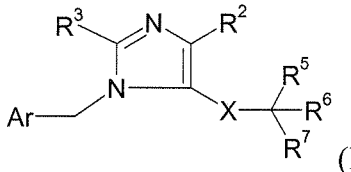


and .

~~23~~21. The compound of Claim 1, wherein R^6 is selected from -C_{1-6}alkyl, -C_{0-3}alkylenearyl, -C_{0-3}alkyleneheteroaryl, and -C_{0-3}alkylene-C_{3-7}cycloalkyl.

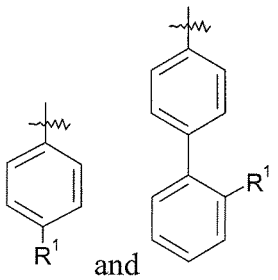
~~25~~22. The compound of Claim 1, wherein R^7 is H or is taken together with R^6 to form cyclopentyl.

~~25~~23. The compound of Claim 6, having formula IIa:



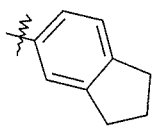
(IIa).

~~26~~24. The compound of Claim ~~25~~23, wherein Ar is selected from:



and ;

R^1 is selected from -$COOR^{1a}$, -$NHSO_2R^{1b}$, -SO_2NHR^{1d}, -SO_2OH, -O-$CH(R^{1e})$-COOH, and tetrazol-5-yl; where R^{1a} is H, -C_{1-6}alkyl, -C_{1-3}alkylenearyl, -C_{1-3}alkyleneheteroaryl, -C_{3-7}cycloalkyl, -$CH(C_{1-4}alkyl)OC(O)R^{1aa}$, or



;

R^{1aa} is -O-C_{1-6}alkyl or -O-C_{3-7}cycloalkyl; R^{1b} is R^{1c}; R^{1c} is -C_{1-6}alkyl or -C_{0-4}alkylenearyl; R^{1d} is H, -$C(O)R^{1c}$, or -$C(O)NHR^{1c}$; R^{1e} is -C_{1-4}alkyl;

R^2 is selected from H, halo, -C_{1-6}alkyl, -C_{3-6}cycloalkyl, and -C_{0-5}alkylene-OR^{2b}; where R^{2b} is selected from H and -C_{1-6}alkyl;

R^3 is selected from -C_{1-10}alkyl and -C_{0-5}alkylene-O-C_{0-5}alkylene-C_{1-6}alkyl;

X is -C_{1-11}alkylene-, where 1 to 4 -CH_2- moieties in the alkylene are replaced with a -NR^{4a}-C(O)- or -C(O)-NR^{4a}- moiety, where R^{4a} is selected from H and -OH;

R^5 is selected from -C_{0-3}alkylene-SR^{5a}, -C_{0-3}alkylene-$C(O)NR^{5b}R^{5c}$, -NH-C_{0-1}alkylene-$P(O)(OR^{5e})_2$, -C_{0-2}alkylene-CHR^{5g}-COOH and -C_{0-3}alkylene-$C(O)NR^{5h}$-CHR^{5i}-COOH; R^{5a} is H or -C(O)-R^{5aa}; R^{5aa} is -C_{1-6}alkyl, -C_{0-6}alkylene-C_{3-7}cycloalkyl, -C_{0-6}alkylenearyl, or -C_{0-6}alkylenemorpholine; R^{5b} is H, -OH, -$OC(O)R^{5ba}$, -CH_2COOH, or -$OC(S)NR^{5bb}R^{5bc}$; R^{5ba} is -OCH_2-aryl or -CH_2O-aryl; R^{5bb} and R^{5bc} are independently -C_{1-4}alkyl; R^{5c} is H; R^{5e} is H; R^{5g} is -CH_2-O-$(CH_2)_2$-O-CH_3; R^{5h} is H; and R^{5i} is -C_{0-3}alkylenearyl;

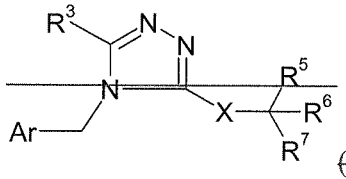
R^6 is selected from -C_{1-6}alkyl, -C_{0-3}alkylenearyl, -C_{0-3}alkyleneheteroaryl, and -C_{0-3}alkylene-C_{3-7}cycloalkyl; and

R^7 is H or is taken together with R^6 to form cyclopentyl.

~~27~~25. The compound of Claim ~~26~~24, wherein R^1 is selected from -COOH, -CO(O)(C_{1-6}alkyl), -$NHSO_2$(C_{1-6}alkyl), and -SO_2NH[-C(O)(C_{1-6}alkyl)]; R^2 is selected from H, halo, -C_{1-6}alkyl, -C_{3-6}cycloalkyl, and -C_{0-5}alkylene-OH; R^3 is -C_{0-5}alkylene-O-C_{0-5}alkylene-C_{1-6}alkyl; X is -C_{1-11}alkylene-, where 1 to 4 -CH_2- moieties in the alkylene are replaced with -NHC(O)- or -C(O)NH-; R^5 is -C_{0-3}alkylene-SR^{5a} or -C_{0-3}alkylene-C(O)NH(OH); R^{5a} is H or -C(O)-R^{5aa}; R^{5aa} is -C_{1-6}alkyl, -C_{0-6}alkylenearyl, or -C_{0-6}alkylenemorpholine; R^6 is selected from -C_{1-6}alkyl, -C_{0-3}alkylenearyl, and -C_{0-3}alkylene-C_{3-7}cycloalkyl; and R^7 is H.

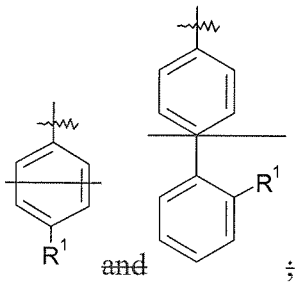
~~28~~26. The compound of Claim ~~27~~25, wherein one ring in Ar is substituted with 1 or 2 fluoro atoms.

~~29. The compound of Claim 7, having formula IIIa:~~



~~(IIIa).~~

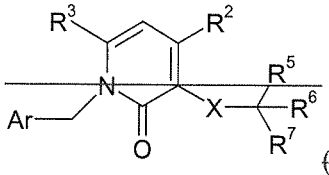
~~30. The compound of Claim 29, wherein Ar is selected from:~~



~~and~~ ;

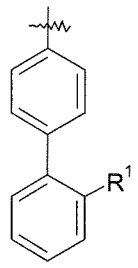
~~R^1 is $-COOR^{1a}$, where R^{1a} is H or $-C_{1-6}$alkyl; R^3 is $-C_{1-10}$alkyl; X is $-CH_2-NHC(O)-$; R^5 is selected from $-C_{0-3}$alkylene-SR^{5a} and $-C_{0-3}$alkylene-C(O)N(OH)H; R^{5a} is H or $-C(O)C_{1-6}$alkyl; R^6 is selected from $-C_{1-6}$alkyl and $-C_{0-3}$alkylenearyl; and R^7 is H.~~

~~31. The compound of Claim 9, having formula IVa:~~



~~(IVa).~~

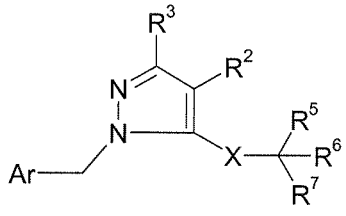
~~32~~27. The compound of Claim ~~31~~7, wherein Ar is:



;

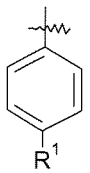
R^1 is $-COOR^{1a}$, where R^{1a} is H or $-C_{1-6}$alkyl; R^2 is H; R^3 is $-C_{1-10}$alkyl; X is $-CH_2-NHC(O)-$; R^5 is selected from $-C_{0-3}$alkylene-SR^{5a} and $-C_{0-3}$alkylene-C(O)N(OH)H; R^{5a} is H or $-C(O)C_{1-6}$alkyl; R^6 is selected from $-C_{1-6}$alkyl and $-C_{0-3}$alkylenearyl; and R^7 is H.

~~33~~28. The compound of Claim ~~9~~7, having formula Va:



(Va).

~~34~~29. The compound of Claim ~~33~~28, wherein Ar is:



;

R^1 is $-COOR^{1a}$, where R^{1a} is H or $-C_{1-6}$alkyl; R^2 is H; R^3 is $-C_{1-10}$alkyl; X is -C(O)NH-; R^5

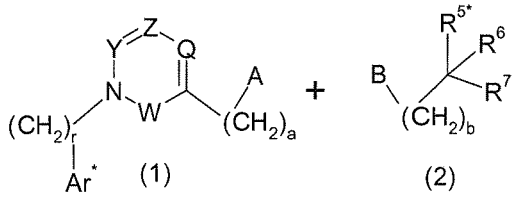
is selected from -C_{0-3}alkylene-SR^{5a} and -C_{0-3}alkylene-C(O)N(OH)H; R^{5a} is H or -C(O)C_{1-6}alkyl; R^6 is -C_{0-3}alkylenearyl; and R^7 is H.

~~35~~30. A pharmaceutical composition comprising the compound of Claim 1 and a pharmaceutically acceptable carrier.

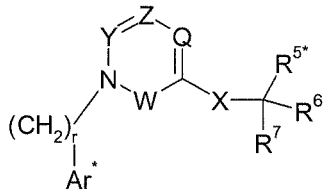
~~36~~31. The pharmaceutical composition of Claim ~~35~~30 further comprising a second therapeutic agent selected from the group consisting of diuretics, β_1 adrenergic receptor blockers, calcium channel blockers, angiotensin-converting enzyme inhibitors, AT_1 receptor antagonists, neprilysin inhibitors, non-steroidal anti-inflammatory agents, prostaglandins, anti-lipid agents, anti-diabetic agents, anti-thrombotic agents, renin inhibitors, endothelin receptor antagonists, endothelin converting enzyme inhibitors, aldosterone antagonists, angiotensin-converting enzyme/neprilysin inhibitors, vasopressin receptor antagonists, and combinations thereof.

~~37~~32. A process for preparing the compound of Claim 1, comprising:

(a) coupling a compound of formula 1 with a compound of formula 2:



to produce a compound having the formula:



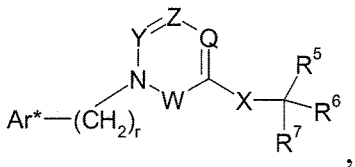
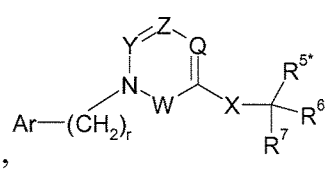
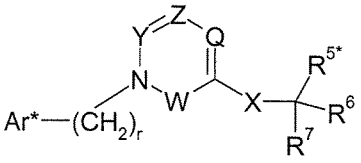
where: A is -NH_2 and B is -COOH or A is -COOH and B is -NH_2; the sum of a and b is in the range of 0 to 11; r is 1; Ar* represents Ar-R^{1*}, where R^{1*} is R^1 or a protected form of R^1; and R^{5*} represents R^5 or a protected form of R^5; the carbon atoms in the -$(CH_2)_a$ and -$(CH_2)_b$ groups may be substituted with one or more R^{4b} groups; and one -CH_2- group in the -$(CH_2)_a$ or the -$(CH_2)_b$ group may be replaced with -C_{4-8}cycloalkylene-, -CR^{4d}=CH-, or -CH=CR^{4d}-; and

(b) when R^{1*} is a protected form of R^1 and/or R^{5*} is a protected form of R^5, deprotecting the product of step (a) to produce a compound of formula I.

~~38~~33. A compound prepared by the process of Claim ~~37~~32.

~~39~~34. An intermediate useful in the synthesis of the compound of Claim 1, selected from

the group comprising:


, 
, and 

wherein: r is 1; Ar* is Ar-R^1*; R^1* is selected from -C(O)O-P^2, -SO_2O-P^5, -SO_2NH-P^6, -P(O)(O-P^7)$_2$, -OCH(CH_3)-C(O)O-P^2, -OCH(aryl)-C(O)O-P^2, and tetrazol-5-yl-P^4; R^{5*} is selected from -C_{0-3}alkylene-S-P^3, -C_{0-3}alkylene-C(O)NH(O-P^5), -C_{0-3}alkylene-N(O-P^5)-C(O)R^{5d}, -C_{0-1}alkylene-NHC(O)CH_2S-P^3, -NH-C_{0-1}alkylene-P(O)(O-P^7)$_2$, -C_{0-3}alkylene-P(O)(O-P^7)-R^{5e}, -C_{0-2}alkylene-CHR^{5f}-C(O)O-P^2 and -C_{0-3}alkylene-C(O)NR^{5g}-CHR^{5h}-C(O)O-P^2; P^2 is a carboxy-protecting group selected from methyl, ethyl, *t*-butyl, benzyl, *p*-methoxybenzyl, 9-fluorenylmethyl, trimethylsilyl, *t*-butyldimethylsilyl, and diphenylmethyl; P^3 is a thiol-protecting group selected from ethers and esters; P^4 is a tetrazole-protecting group selected from trityl and diphenylmethyl; P^5 is a hydroxyl-protecting group selected from C_{1-6}alkyl, silyl groups, esters, and arylmethyl; P^6 is a sulfonamide-protecting group selected from *t*-butyl and acyl groups; and P^7 is a phosphate-protecting group selected from C_{1-4}alkyl, aryl, and substituted aryl; and salts thereof.

~~40~~35. ~~Use of t~~The compound of Claim 1 for use as ~~the manufacture of~~ a medicament.

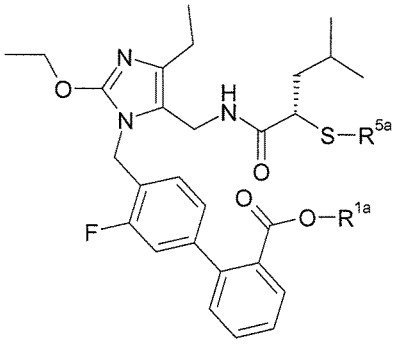
~~41~~36. Use of a~~A~~ compound of Claim 1 ~~useful for~~ in the manufacture of a medicament for the treatment of ~~treating~~ hypertension or heart failure.

~~42~~37. Use of a~~A~~ compound of Claim 1 ~~useful for~~ in the manufacture of a medicament for antagonizing an angiotensin II type 1 receptor in a mammal.

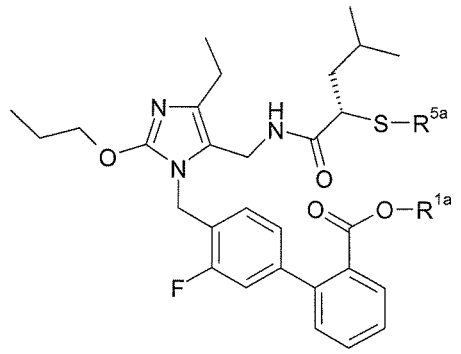
~~43~~38. Use of a~~A~~ compound of Claim 1 ~~useful for~~ in the manufacture of a medicament for inhibiting a neprilysin enzyme in a mammal.

~~44. Use of the compound of Claim 1 as a research tool.~~

39. The compound of Claim 1, wherein the compound is

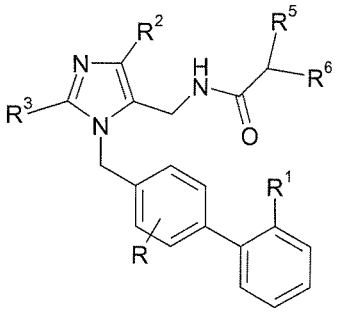

, wherein R^{1a} = H; R^{5a} = H.

40. The compound of Claim 1, wherein the compound is



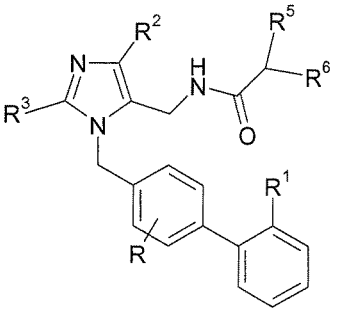
, wherein R^{1a}=H; R^{5a}=H.

41. The compound of Claim 1, wherein the compound is



wherein R is 2'-F; R^1 is –COOH; R^2 is -CH_2CH_3; R^3 is -O-$(CH_2)_2CH_3$; R^5 is –SH; R^6 is -CH_2-$CH(CH_3)_2$.

42. The compound of Claim 1, wherein the compound is



wherein R is 3'-F; R^1 is –COOH; R^2 is cyclo-propyl; R^3 is -O-CH_2CH_3; R^5 is –SH; R^6 is -CH_2-$CH(CH_3)_2$.