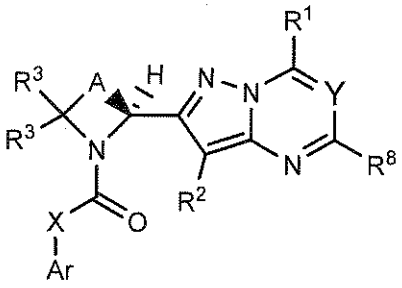
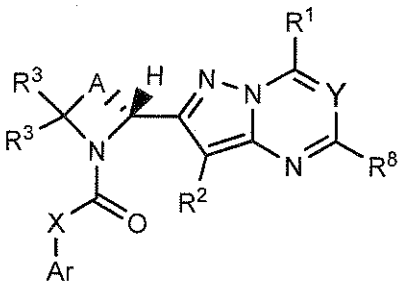
SUMMARY OF THE ~~INVENTION~~DISCLOSURE

Provided are methods and compounds for the treatment of infections caused by the *Pneumovirinae* virus family.

In one aspect, this ~~invention~~disclosure provides a compound of Formula I or Formula II:



Formula I



Formula II

or a pharmaceutically acceptable salt or ester, thereof;

wherein:

A is $-(C(R^4)_2)_n-$ wherein any one $C(R^4)_2$ of said $-(C(R^4)_2)_n-$ may be optionally replaced with -O-, -S-, $-S(O)_p-$, NH or NR^a;

n is 3, 4, 5 or 6;

each p is 1 or 2;

Ar is a C_2–C_{20} heterocyclyl group or a C_6-C_{20} aryl group, wherein the C_2–C_{20} heterocyclyl group or the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6;

X is $-C(R^{13})(R^{14})-$, $-N(CH_2R^{14})-$ or X is absent;

Y is N or CR^7;

each R^1, R^2, R^3, R^4, R^5, R^6, R^7 or R^8 is independently H, oxo, OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, N_3, CN, NO_2, SR^{11}, $S(O)_pR^a$, $NR^{11}S(O)_pR^a$, $-C(=O)R^{11}$, $-C(=O)OR^{11}$, $-C(=O)NR^{11}R^{12}$, $-C(=O)SR^{11}$, $-S(O)_p(OR^{11})$, $-SO_2NR^{11}R^{12}$, $-NR^{11}S(O)_p(OR^{11})$, $-NR^{11}SO_pNR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, $(C_1$–$C_8)$alkyl, $(C_2$–$C_8)$alkenyl, $(C_2$–$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl;

In another embodiment, provided is a method of treating a *Pneumovirinae* infection in a mammal in need thereof by administering a therapeutically effective amount of a compound of Formula I or Formula II or a pharmaceutically acceptable salt or ester thereof in combination with at least one additional therapeutic agent.

In another embodiment, provided is a method of treating a *Pneumovirinae* infection in a mammal in need thereof, by administering a therapeutically effective amount of a combination pharmaceutical agent comprising:

a) a first pharmaceutical composition comprising a compound of Formula I or Formula II; or a pharmaceutically acceptable salt or ester thereof; and

b) a second pharmaceutical composition comprising at least one additional therapeutic agent active against infectious *Pneumovirinae* viruses.

In another embodiment, provided is a method of treating a respiratory syncytial virus infection in a mammal in need thereof, by administering a therapeutically effective amount of a combination pharmaceutical agent comprising:

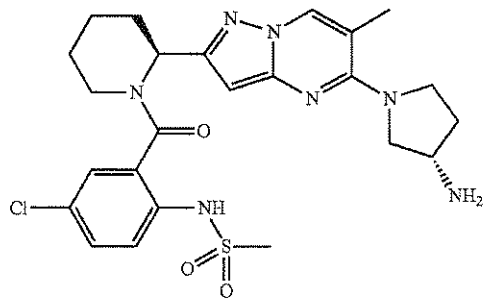
a) a first pharmaceutical composition comprising a compound of Formula I or Formula II; or a pharmaceutically acceptable salt or ester thereof; and

b) a second pharmaceutical composition comprising at least one additional therapeutic agent active against infectious respiratory syncytial viruses.

In another embodiment, provided is the use of a compound of Formula I or Formula II or a pharmaceutically acceptable salt and/or ester thereof to treat a viral infection caused by a *Pneumovirinae* virus or a respiratory syncytial virus.

In another aspect, the ~~invention~~disclosure also provides processes and novel intermediates disclosed herein which are useful for preparing Formula I or Formula II compounds of the ~~invention~~disclosure.

In one aspect, there is provided a compound of formula:



or a pharmaceutically acceptable salt thereof.

In one aspect, there is provided a pharmaceutical composition comprising a therapeutically effective amount of a compound as defined above or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

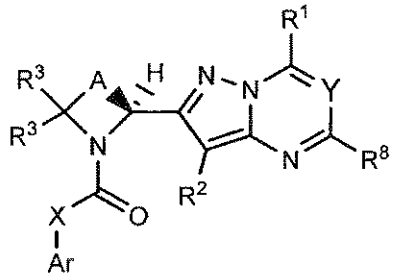
In other aspects, novel methods for synthesis, analysis, separation, isolation, purification, characterization, and testing of the compounds of this ~~invention~~disclosure are provided.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

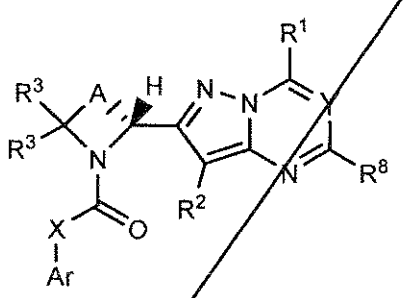
Reference will now be made in detail to certain embodiments of the invention, examples of which are illustrated in the accompanying description, structures and formulas. While the

What is claimed is

1. A compound of Formula I or Formula II:



Formula I



Formula II

or a pharmaceutically acceptable salt or ester, thereof,

wherein:

A is $-(C(R^4)_2)_n-$ wherein any one $C(R^4)_2$ of said $-(C(R^4)_2)_n-$ may be optionally replaced with -O-, -S-, $-S(O)_p-$, NH or NR^a;

n is 3, 4, 5 or 6;

each p is 1 or 2;

Ar is a C_2–C_{20} heterocyclyl group or a C_6-C_{20} aryl group, wherein the C_2–C_{20} heterocyclyl group or the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6;

X is $-C(R^{13})(R^{14})-$, $-N(CH_2R^{14})-$ or X is absent;

Y is N or CR^7;

each R^1, R^2, R^3, R^4, R^5, R^6, R^7 or R^8 is independently H, oxo, OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, N_3, CN, NO_2, SR^{11}, $S(O)_pR^a$, $NR^{11}S(O)_pR^a$, $-C(=O)R^{11}$, $-C(=O)OR^{11}$, $-C(=O)NR^{11}R^{12}$, $-C(=O)SR^{11}$, $-S(O)_p(OR^{11})$, $-SO_2NR^{11}R^{12}$, $-NR^{11}S(O)_p(OR^{11})$, $-NR^{11}SO_pNR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, $(C_1$–$C_8)$alkyl, $(C_2$–$C_8)$alkenyl, $(C_2$–$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl;

two R^4 on adjacent carbon atoms, when taken together, may form a double bond between the two carbons to which they are attached or may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p-$, -NH- or $-NR^a-$;

four R^4 on adjacent carbon atoms, when taken together, may form an optionally substituted C_6 aryl ring;

two R^4 on the same carbon atom, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

two R^6 on adjacent carbon atoms, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^3, may form a bond or a $-(C(R^5)_2)_m$- group wherein m is 1 or 2;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^2, may form a bond;

each R^a is independently $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl wherein any $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl or $(C_2$-$C_8)$alkynyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl, and wherein any aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl or $(C_1$-$C_8)$alkyl;

each R^{11} or R^{12} is independently H, $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl, $(C_4$–$C_8)$carbocyclylalkyl, $-C(=O)R^a$, $-S(O)_pR^a$, or aryl$(C_1$-$C_8)$alkyl; or R^{11} and R^{12} taken together with a nitrogen to which they are both attached form a 3 to 7 membered heterocyclic ring wherein any one carbon atom of said heterocyclic ring can optionally be replaced with -O-, -S-, $-S(O)_p$-, -NH-, $-NR^a$- or -C(O)-;

R^{13} is H or $(C_1$-$C_8)$alkyl;

R^{14} is H, $(C_1$-$C_8)$alkyl, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, $NR^{11}S(O)_pR^a$, $-NR^{11}S(O)_p(OR^{11})$ or $NR^{11}SO_pNR^{11}R^{12}$; and

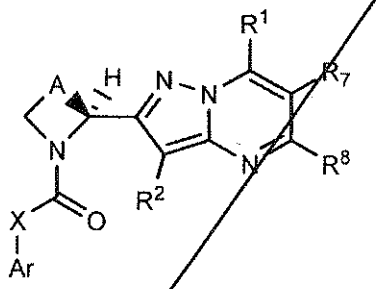
wherein each $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of each R^1, R^2, R^3, R^4,

R^5, R^6, R^7, R^8, R^{11} or R^{12} is, independently, optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

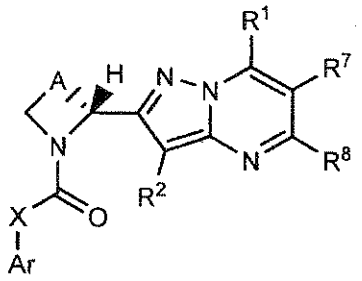
2. The compound of claim 1 which is a compound of Formula I.

3. The compound of claim 1 or claim 2 wherein each R^3 is H.

4. The compound of claim 1 which is a compound of Formula VII or a compound of Formula VIII:



Formula VII



Formula VIII

or a pharmaceutically acceptable salt or ester, thereof.

5. The compound of claim 4 which is a compound of Formula VII.

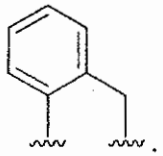
6. The compound of any one of claims 1-5 wherein R^2 is H.

7. The compound of any one of claims 1-6 wherein R^7 is H, halogen or $(C_1$–$C_8)$alkyl.

8. The compound of any one of claims 1-7 wherein n is 3 or 4.

9. The compound of any one of claims 1-8 wherein each R^4 is independently H or optionally substituted (C_1–C_8)alkyl, or four R^4 on adjacent carbon atoms, when taken together, may form an optionally substituted C_6 aryl ring.

10. The compound of any one of claims 1-7 wherein A is $-(CH_2)_3-$, $-(CH_2)_4-$, $-CH_2-O-CH_2-$, $-CH_2-CH(CH_3)-CH_2-$, $-CH_2-CH(CF_3)-CH_2-$, $-CH_2-CH_2-CH(CH_3)-$ or the structure:



11. The compound of any one of claims 1-7 wherein A is $-(CH_2)_3-$.

12. The compound of any one of claims 1-11 wherein X is $-CR^{13}(NR^{11}C(O)OR^{11})-$, $-CR^{13}(NR^{11}R^{12})-$, $-CR^{13}(NR^{11}S(O)_pR^a)-$ or X is absent.

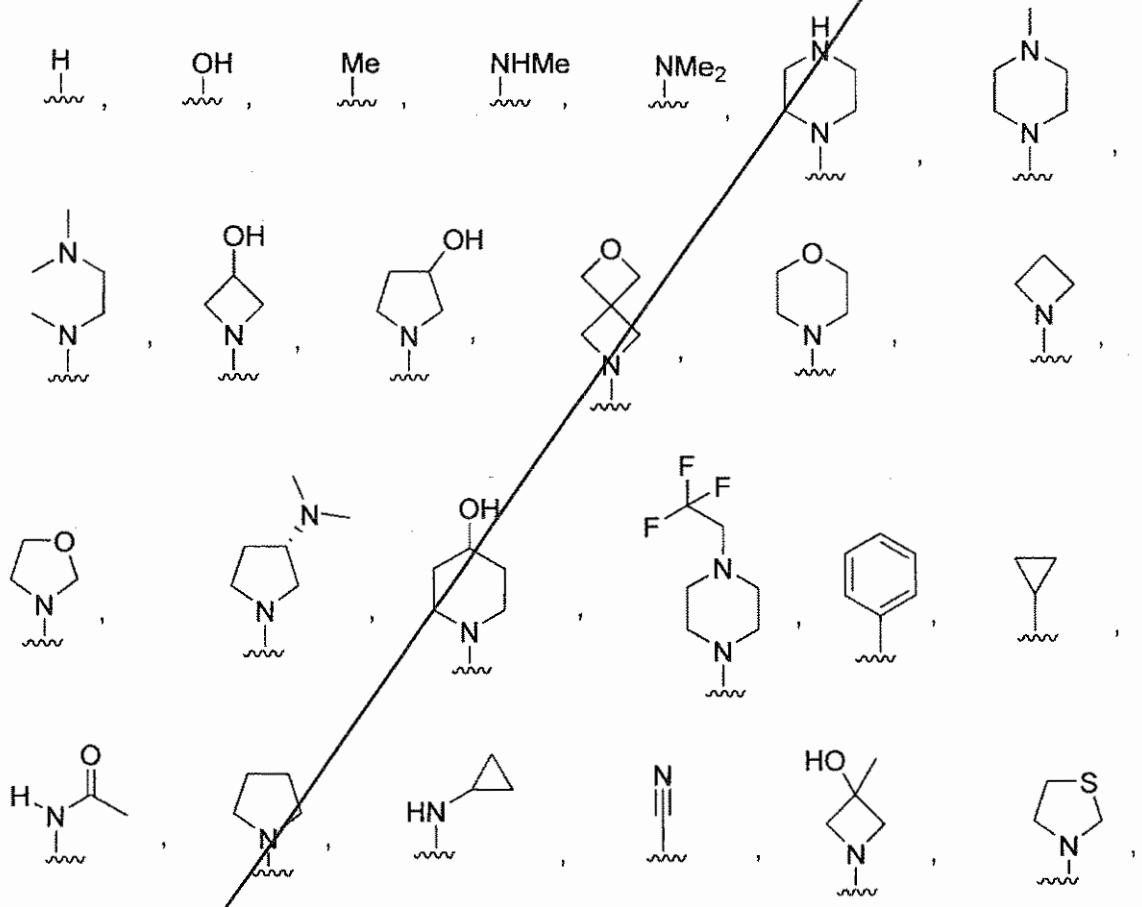
13. The compound of any one of claims 1-11 wherein X is absent.

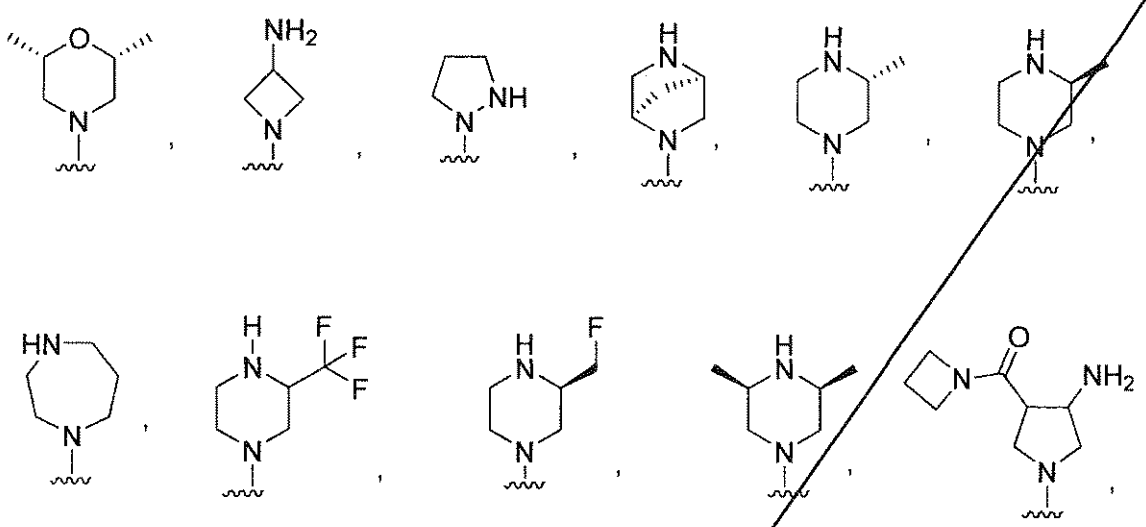
14. The compound of any one of claims 1-13 wherein R^1 is H, OR^{11}, $NR^{11}R^{12}$, CN, (C_1–C_8)alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl or (C_3-C_7)cycloalkyl, wherein any (C_1–C_8)alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl or (C_3-C_7)cycloalkyl of R^1 is optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, (C_1-C_8)alkyl, (C_1-C_8)haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

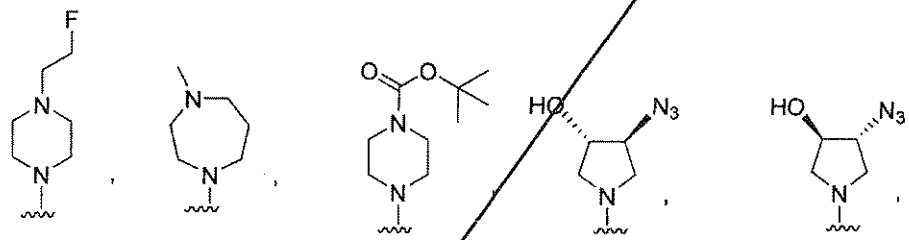
15. The compound of any one of claims 1-13 wherein R^1 is H or C_2–C_{20} heterocyclyl, wherein any C_2–C_{20} heterocyclyl of R^1 is optionally substituted with or more oxo, halogen,

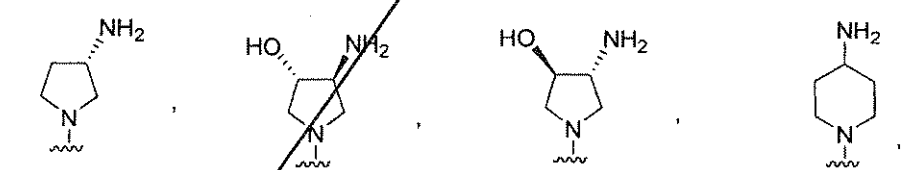
hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, $(C_1\text{-}C_8)$alkyl, $(C_1\text{-}C_8)$haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

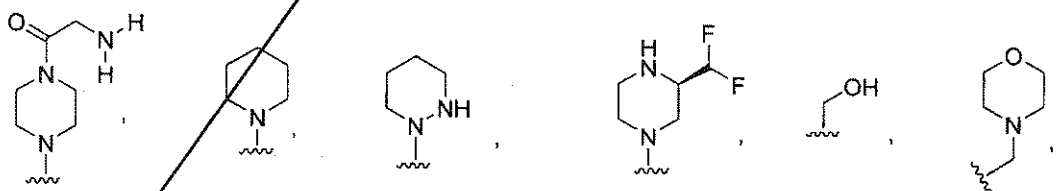
16. The compound of any one of claims 1-13 wherein R^1 is selected from:

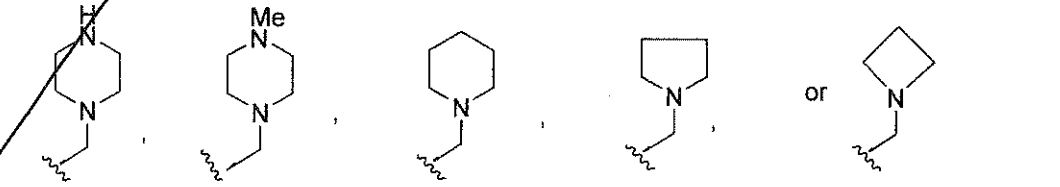


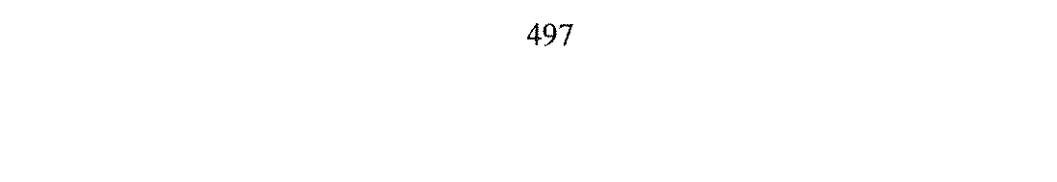




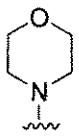








17. The compound of any one of claims 1-13 wherein R^1 is H or:



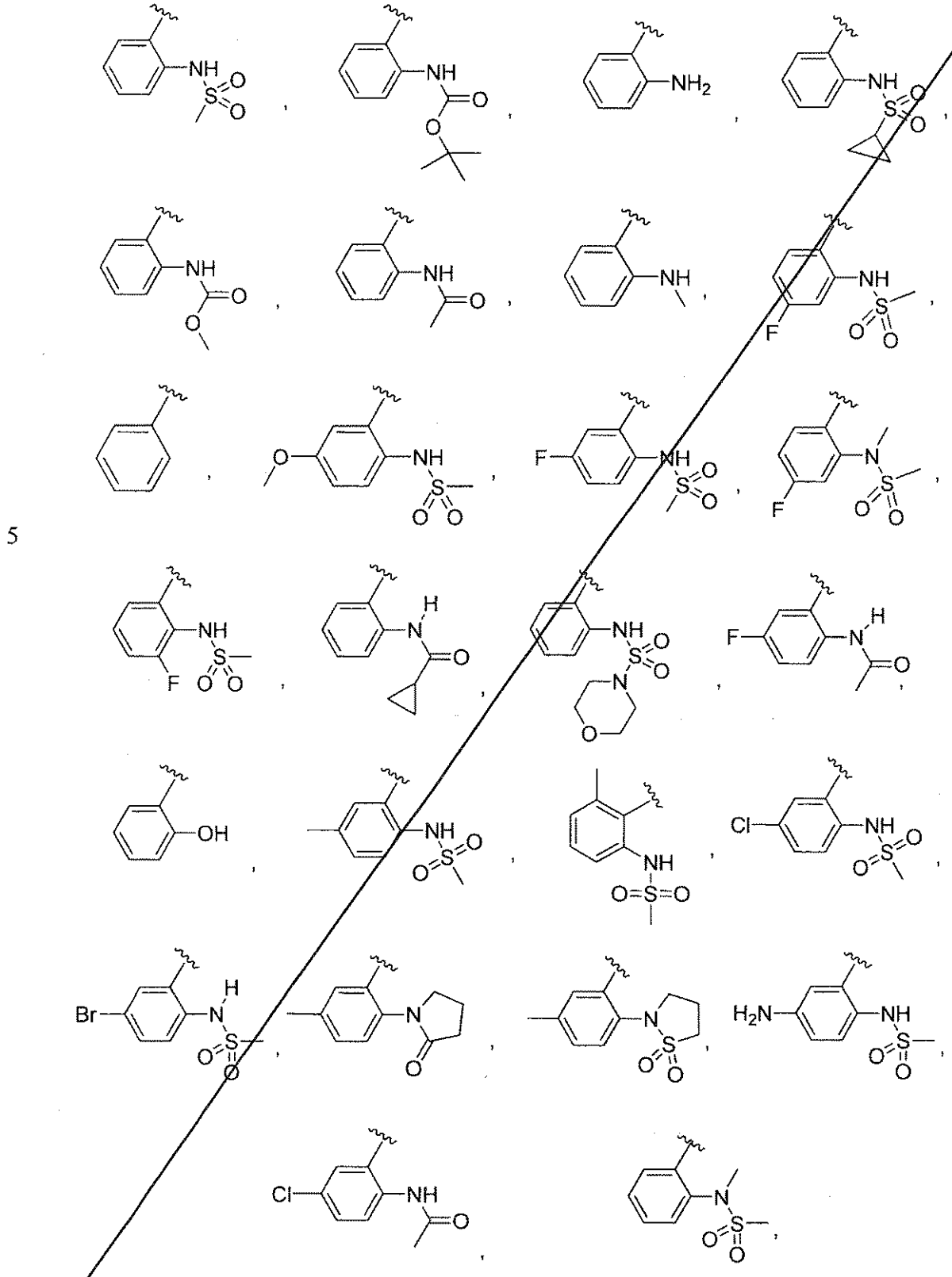
18. The compound of any one of claims 1-17 wherein Ar is a C_6-C_{20} aryl group, wherein the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6.

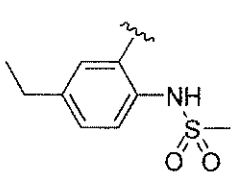
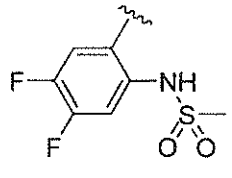
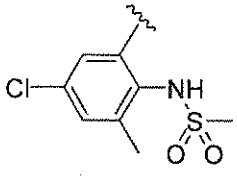
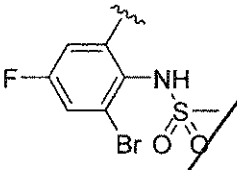
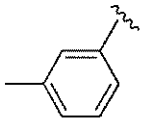
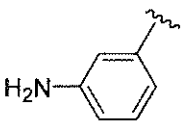
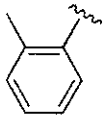
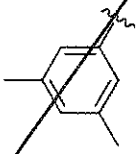
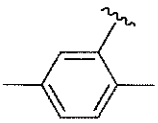
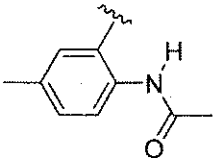
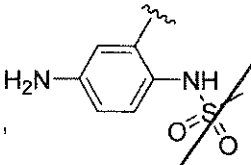
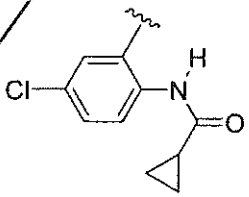
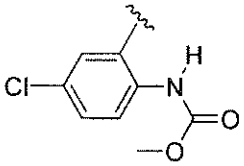
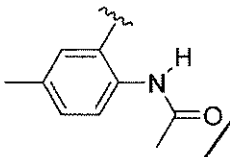
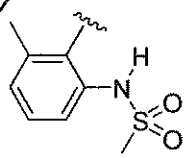
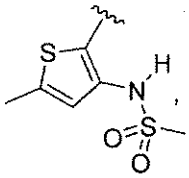
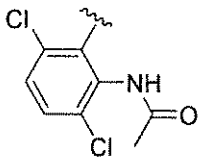
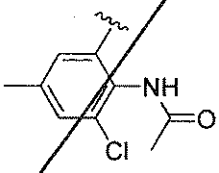
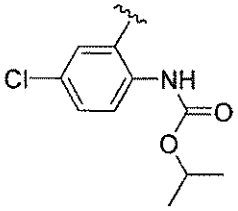
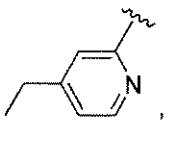
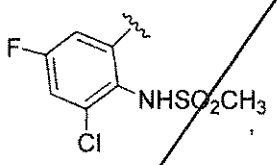
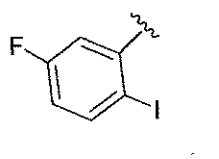
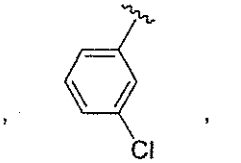
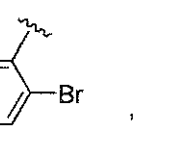
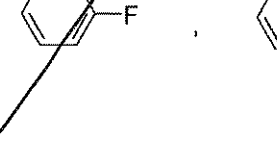
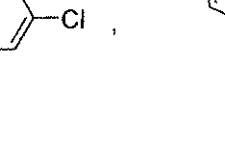
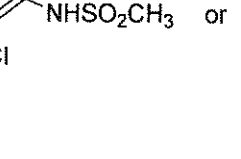
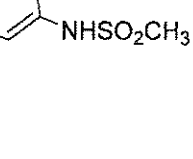
19. The compound of any one of claims 1-17 wherein Ar is phenyl optionally substituted with 1 to 5 R^6.

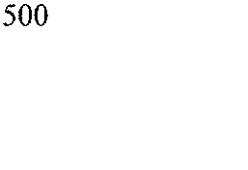
20. The compound of any one of claims 1-19 wherein each R^6 is independently selected from OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, CN, $NR^{11}S(O)_pR^a$, $-C(=O)NR^{11}R^{12}$, $-NR^{11}SO_pNR^{11}R^{12}$, halogen, $(C_1–C_8)$alkyl, $(C_2–C_8)$alkynyl, $C_6–C_{20}$ aryl, $C_2–C_{20}$ heterocyclyl and $(C_3$-$C_7)$cycloalkyl, wherein any $C_1–C_8)$alkyl, $(C_2–C_8)$alkynyl, $C_6–C_{20}$ aryl, $C_2–C_{20}$ heterocyclyl and $(C_3$-$C_7)$cycloalkyl of R^6 is optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

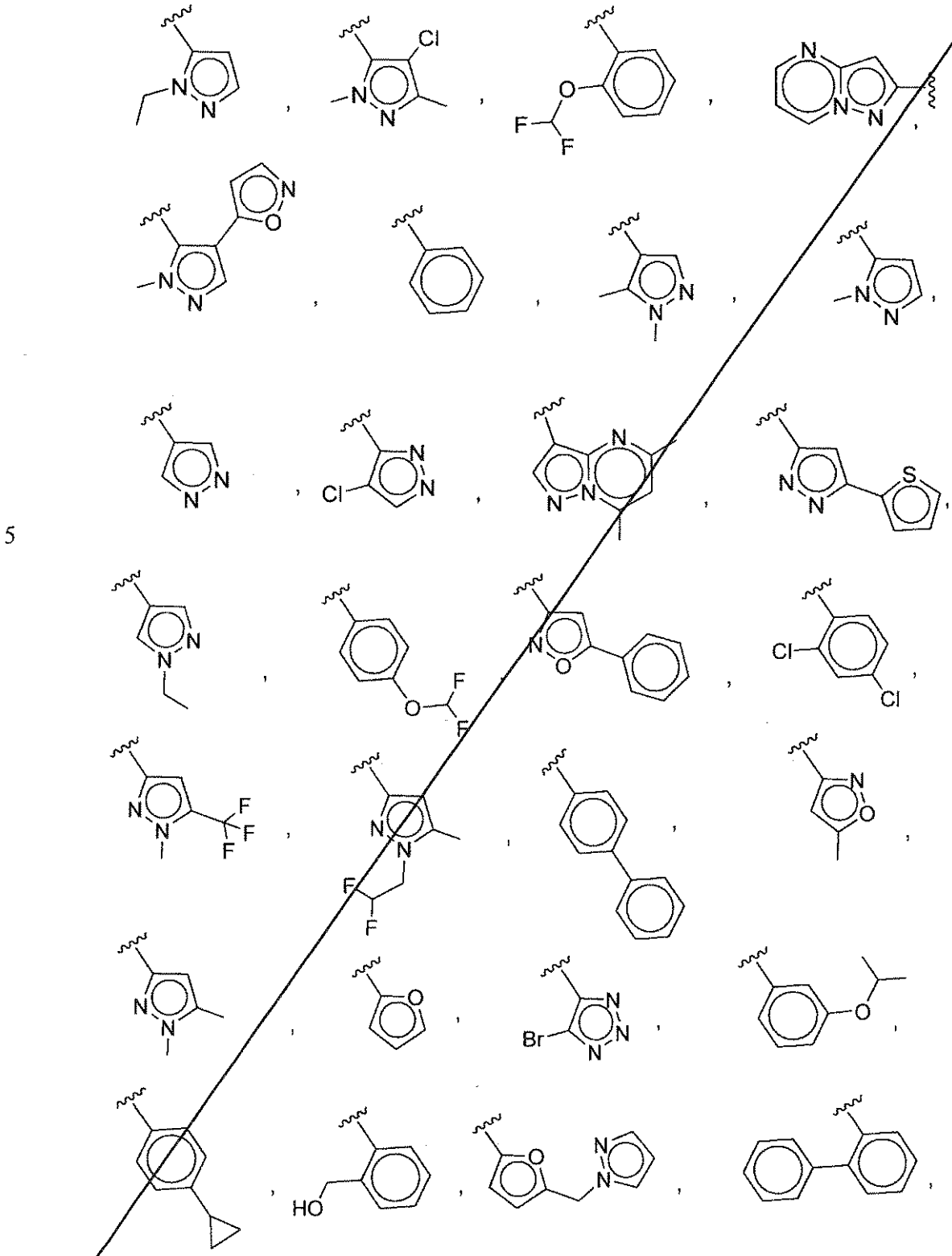
21. The compound of any one of claims 1-19 wherein each R^6 is independently selected from $NR^{11}S(O)_pR^a$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)R^{11}$, $(C_1–C_8)$alkyl and halogen.

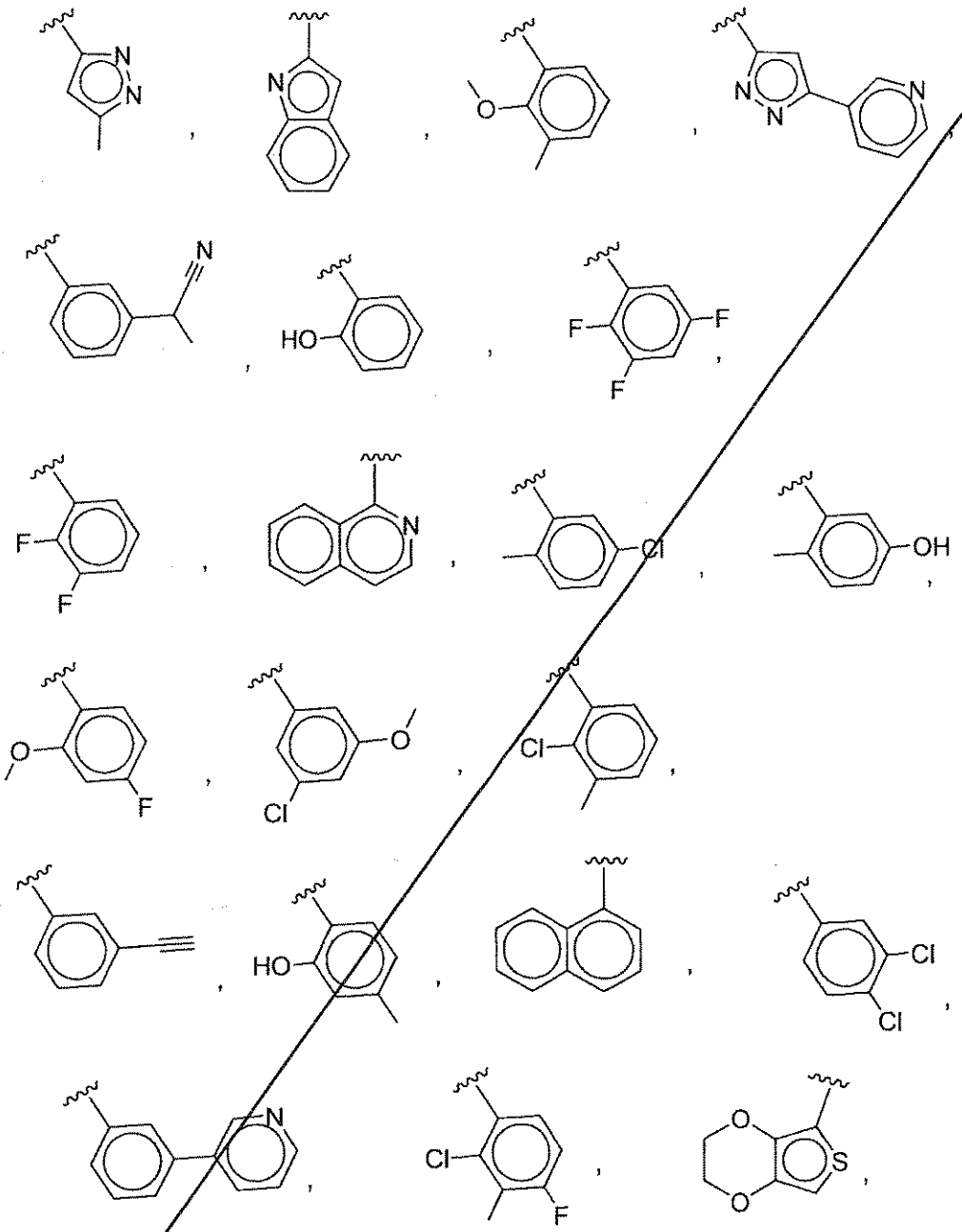
22. The compound of any one of claims 1-17 wherein Ar is:

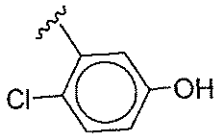
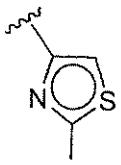
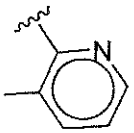
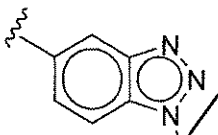
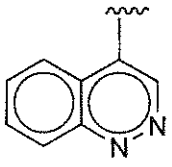
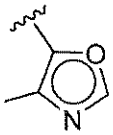
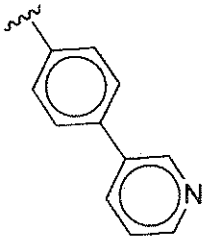
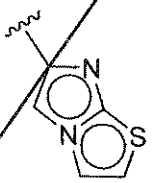
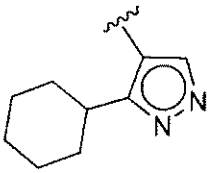
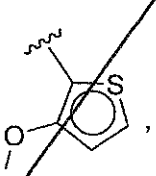
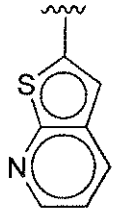
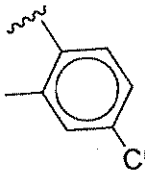
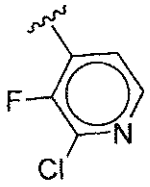
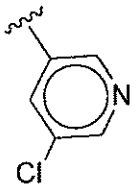
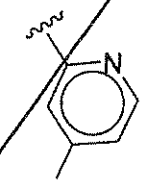
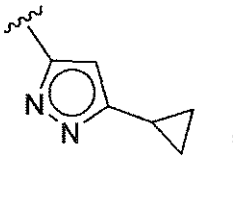
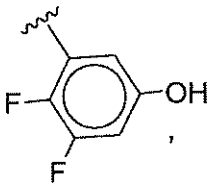
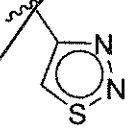
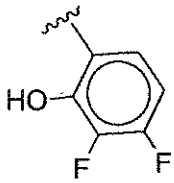
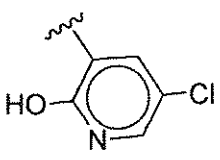


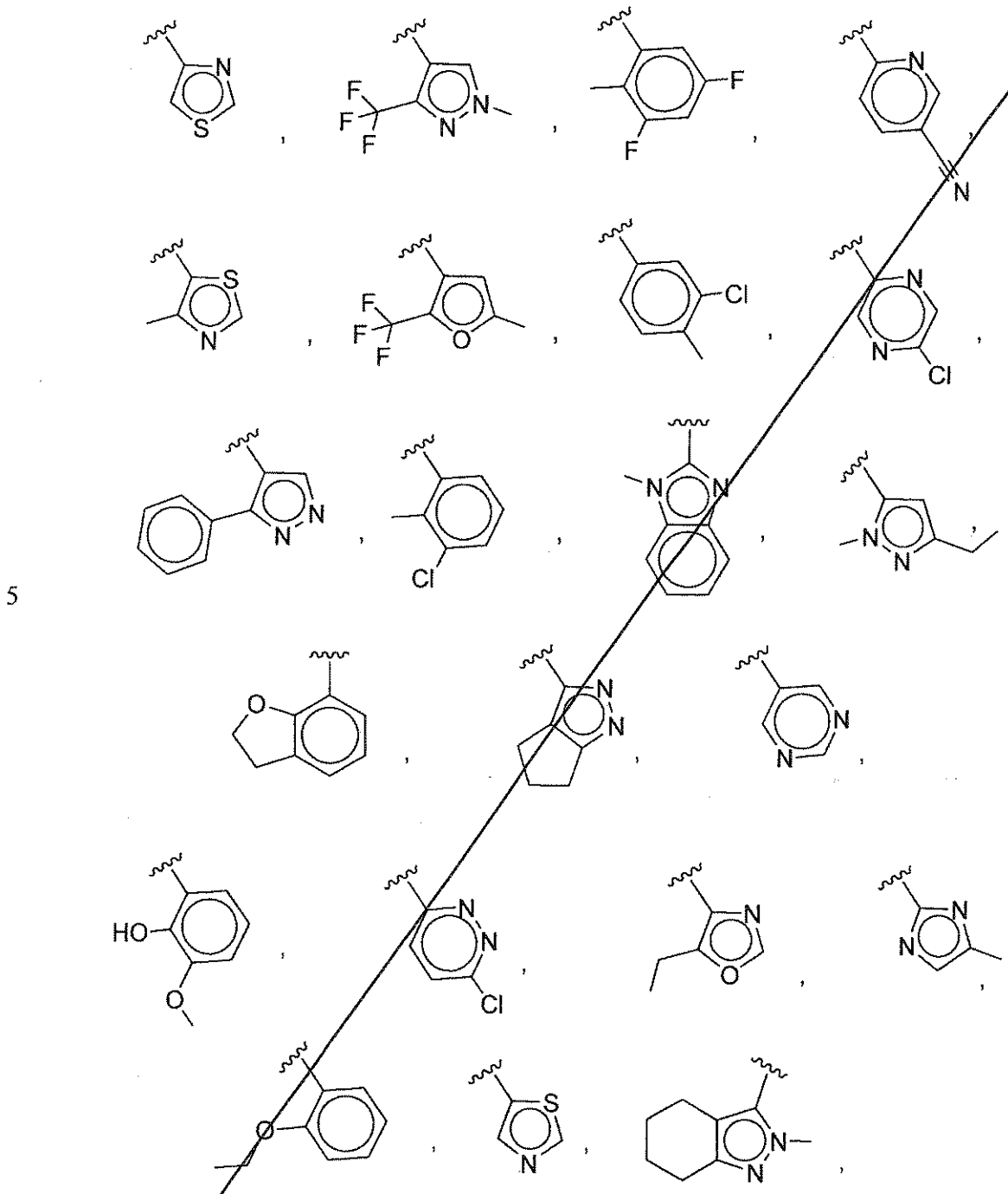












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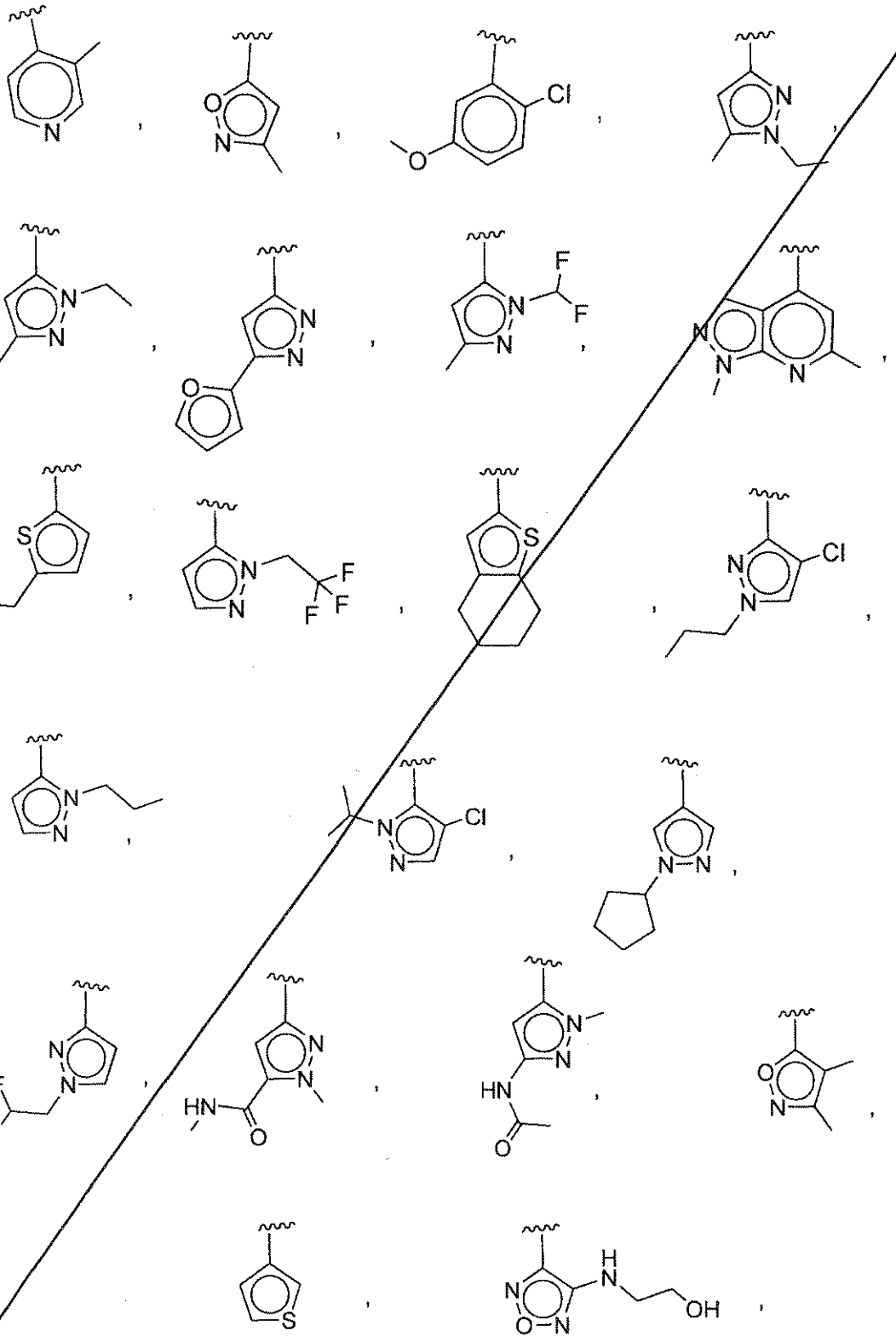


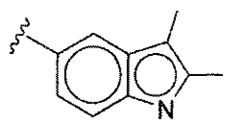
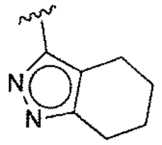
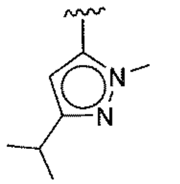
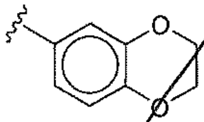


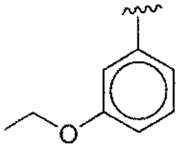
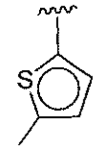
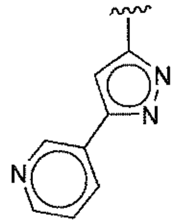
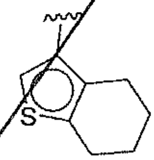


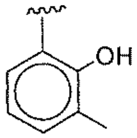
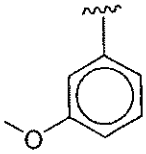





















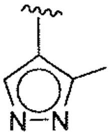
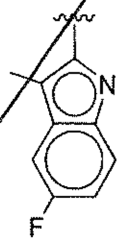


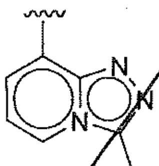
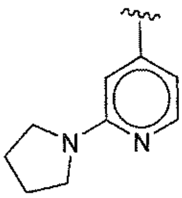
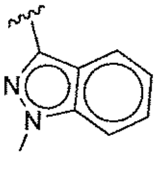


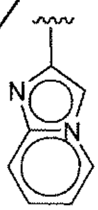
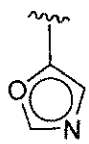
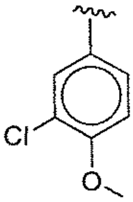
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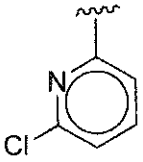
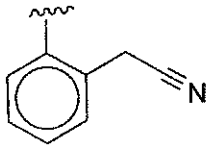
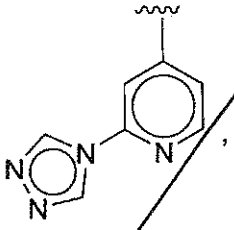
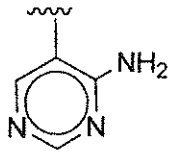
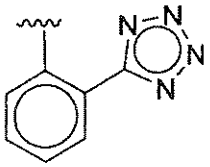
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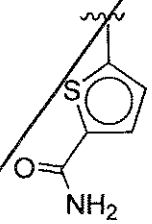
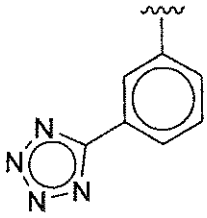
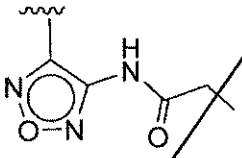
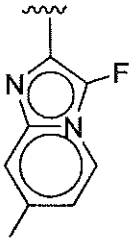
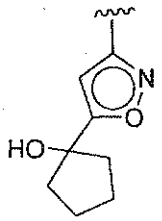
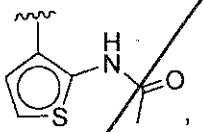
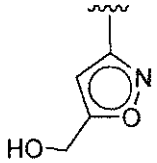
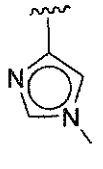
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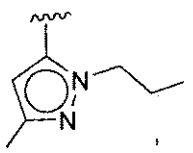
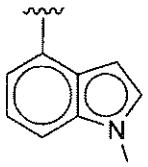
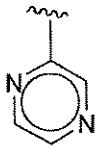
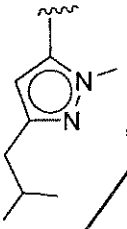
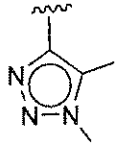
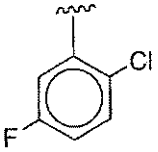
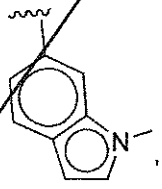
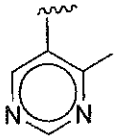
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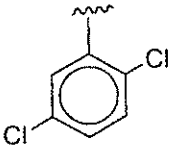
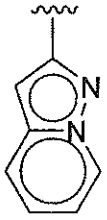
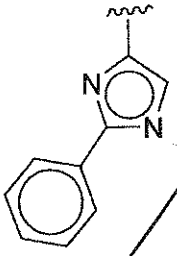
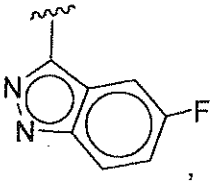
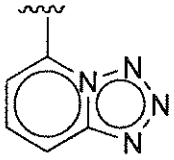
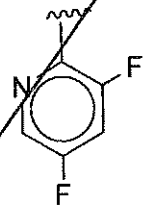
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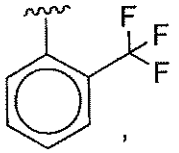
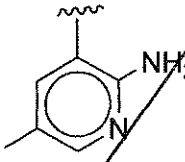
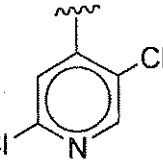
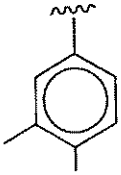
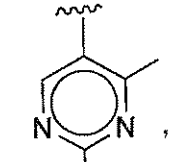
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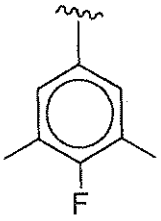
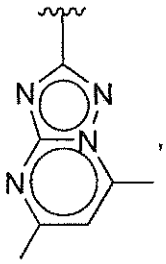
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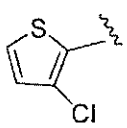
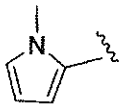
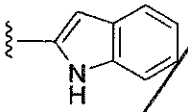
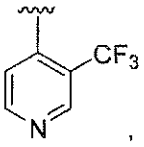
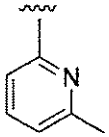
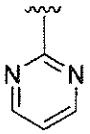
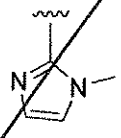
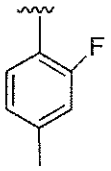
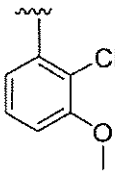
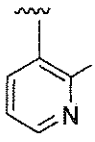
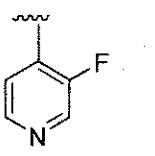
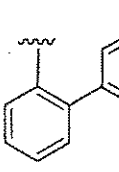
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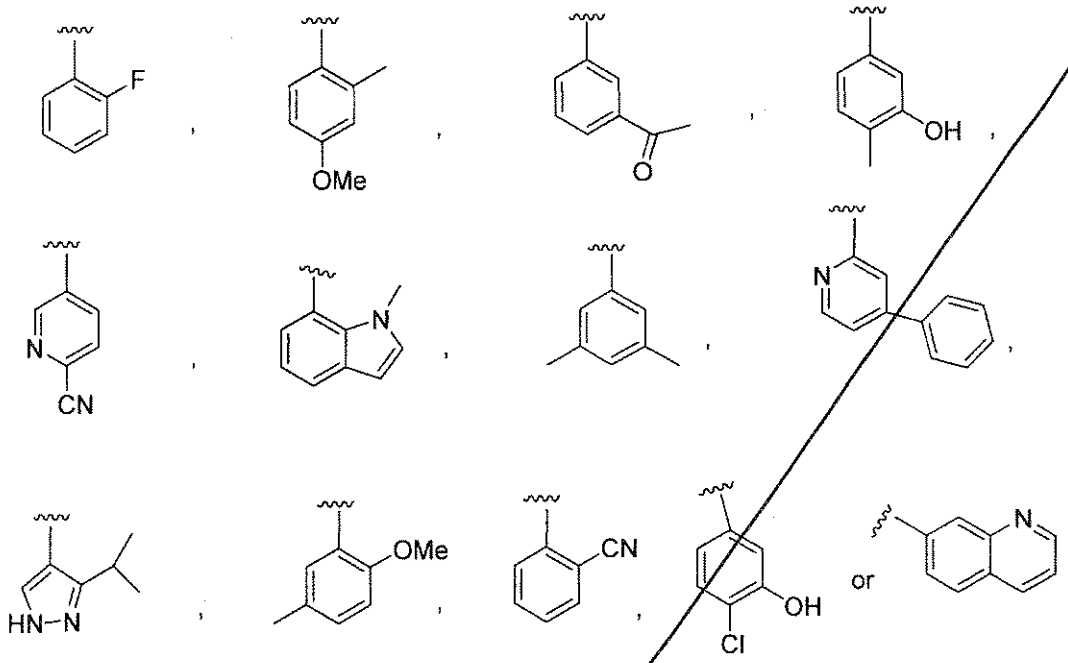
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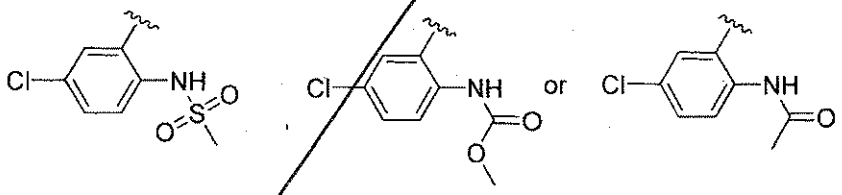



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23. The compound of any one of claims 1-17 wherein Ar is:



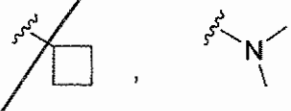
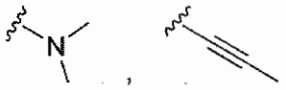
24. The compound of any one of claims 1-23 wherein R^8 is H, $NR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, $(C_1–C_8)$alkyl, $(C_2–C_8)$alkynyl, $C_6–C_{20}$ aryl, $C_2–C_{20}$ heterocyclyl or (C_3-C_7)cycloalkyl, wherein any $(C_1–C_8)$alkyl, $(C_2–C_8)$alkynyl, $C_6–C_{20}$ aryl, $C_2–C_{20}$ heterocyclyl, or (C_3-C_7)cycloalkyl of R^8 is optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, (C_1-C_8)alkyl, (C_1-C_8)haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

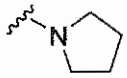
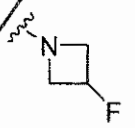
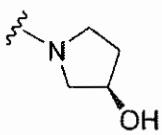
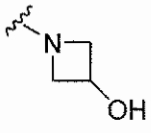
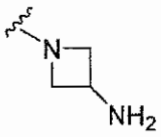
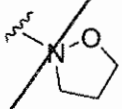
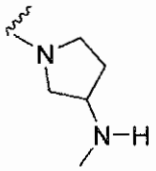
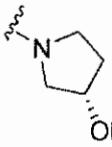
25. The compound of any one of claims 1-23 wherein R^8 is C_2–C_{20} heterocyclyl, wherein C_2–C_{20} heterocyclyl is optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

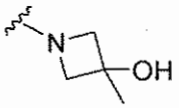
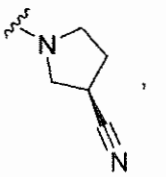
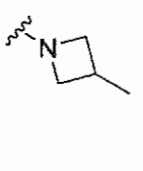
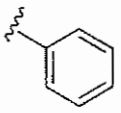
26. The compound of any one of claims 1-23 wherein R^8 is pyrrolidinyl or azetidinyl, wherein pyrrolidinyl or azetidinyl is optionally substituted with one or more hydroxy, NH_2, CN or $-OP(O)(OH)_2$.

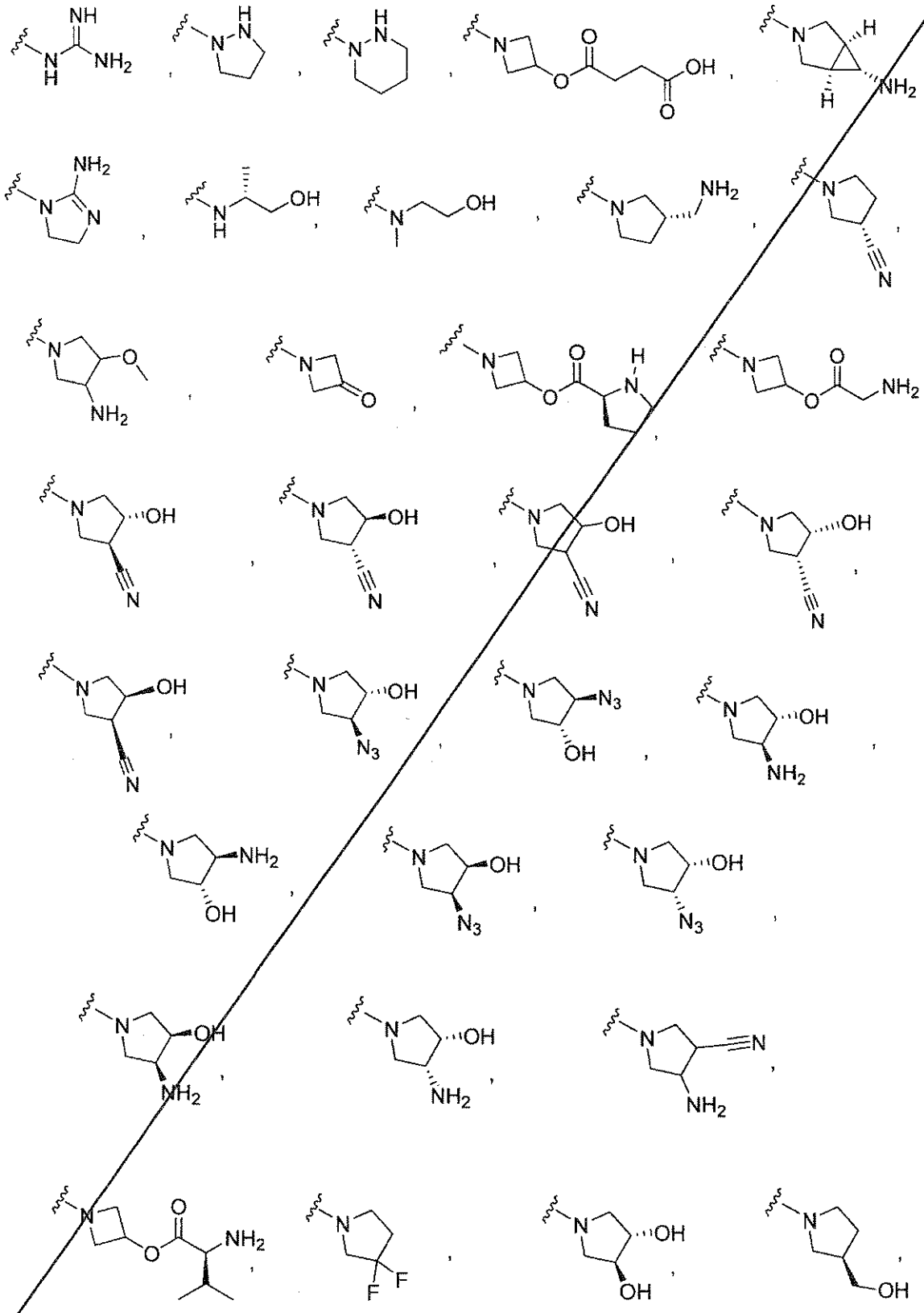
27. The compound of any one of claims 1-23 wherein R^8 is :

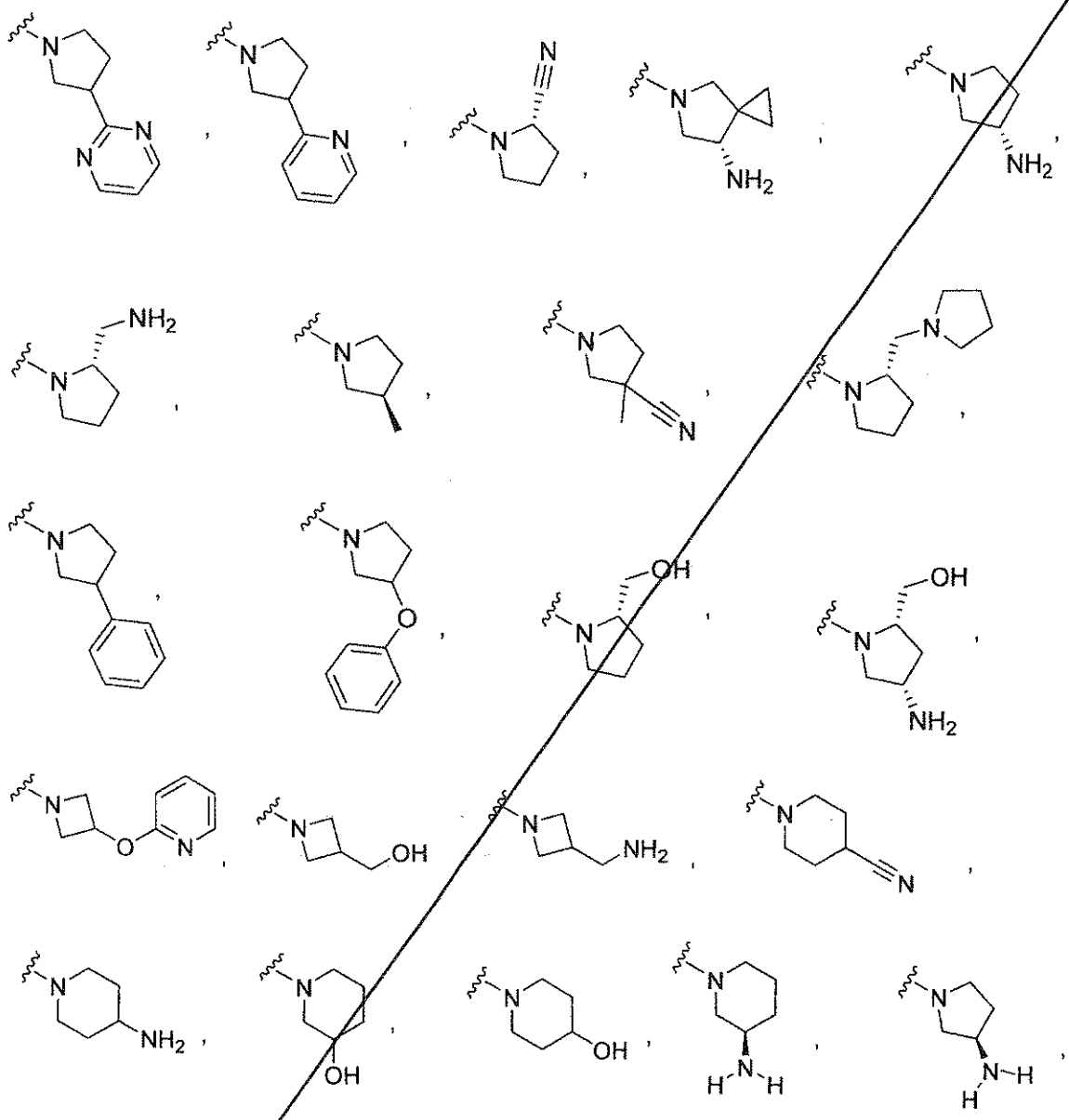


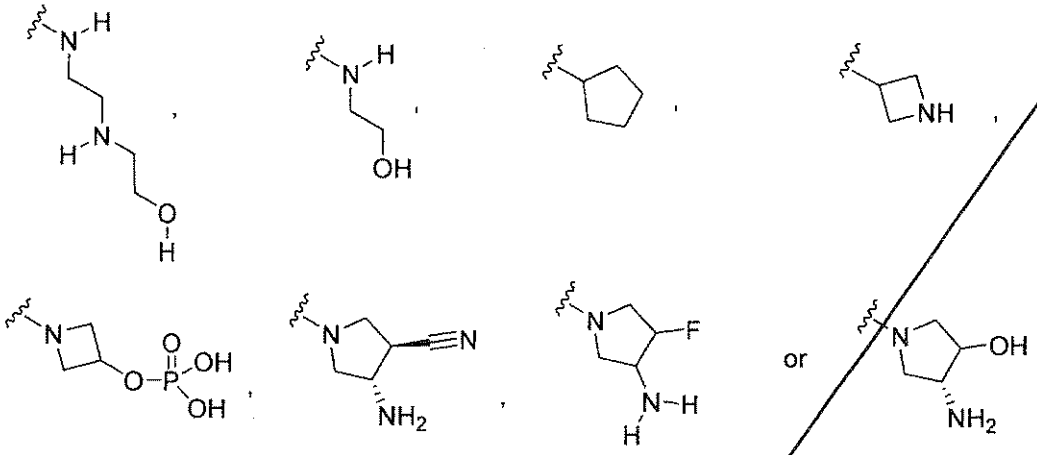



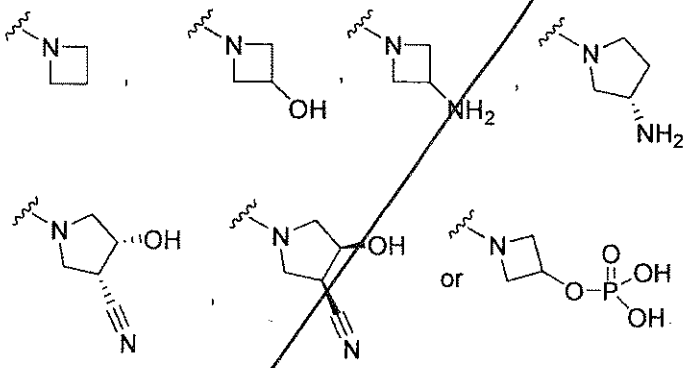








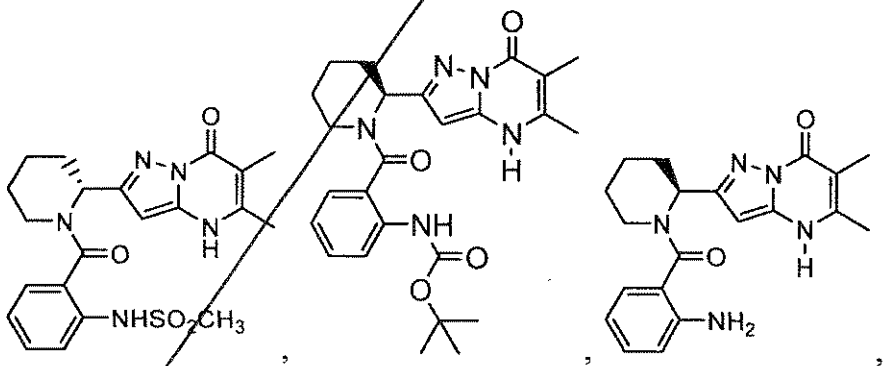


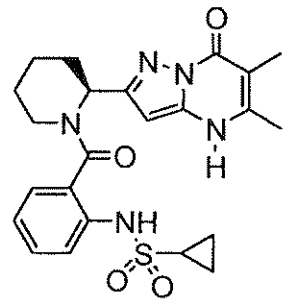
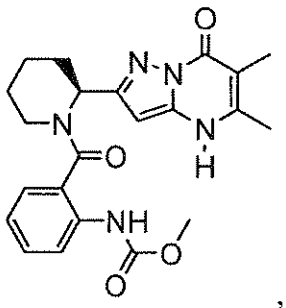
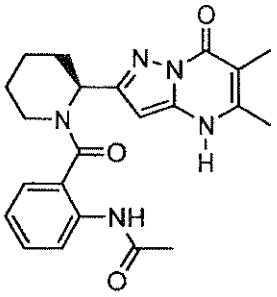
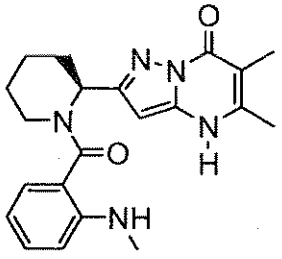
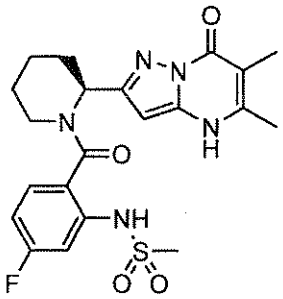
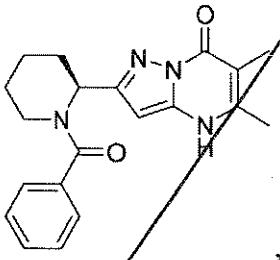
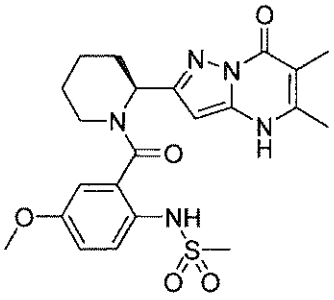
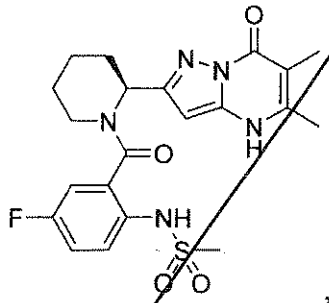
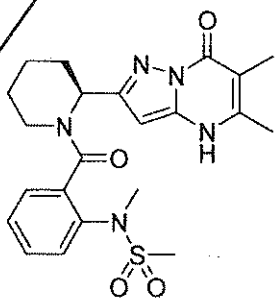
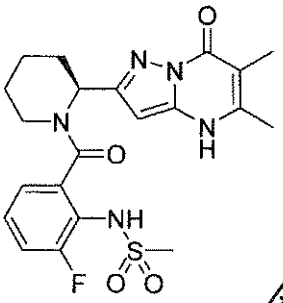
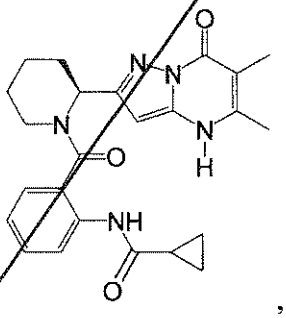
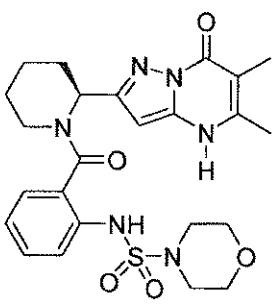


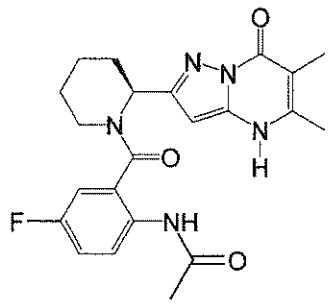
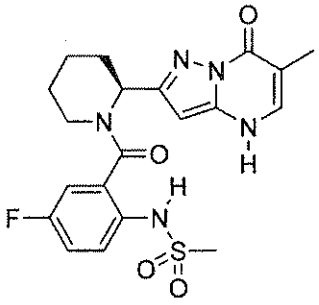
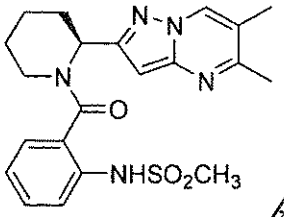
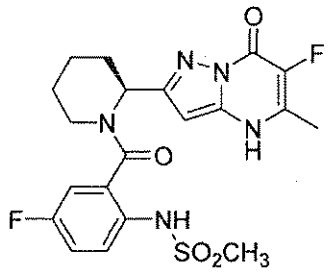
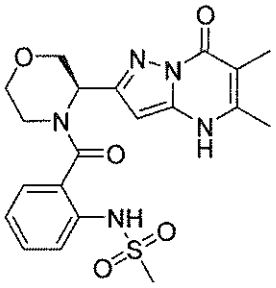
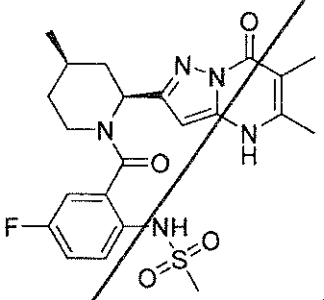
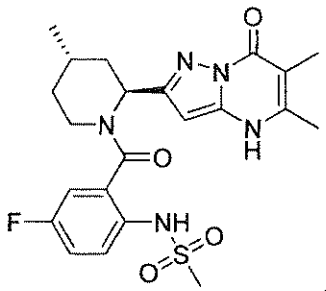
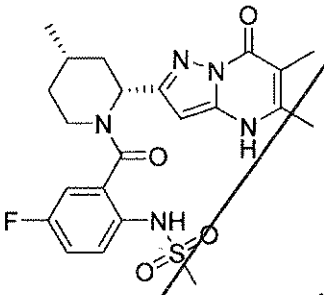
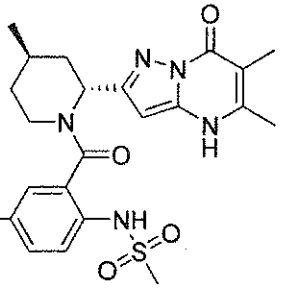
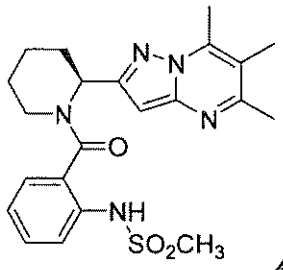
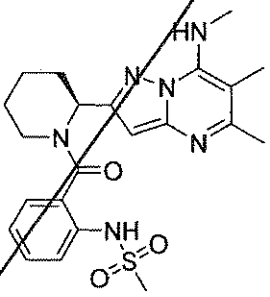
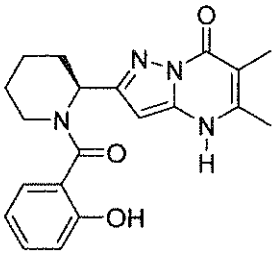
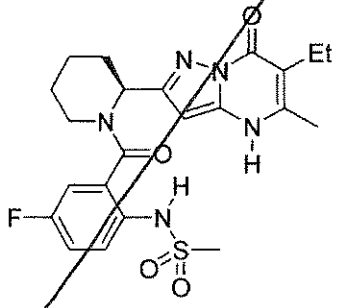
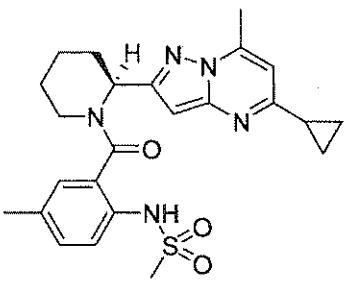
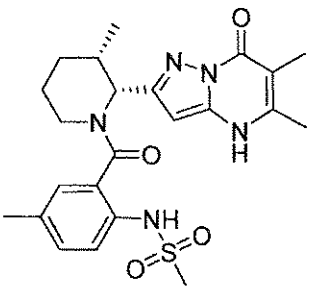
28. The compound of any one of claims 1-23 wherein R^8 is:

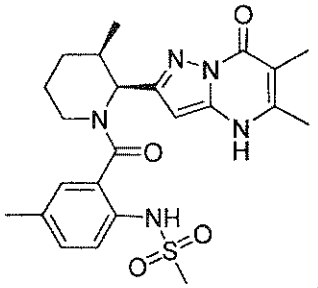
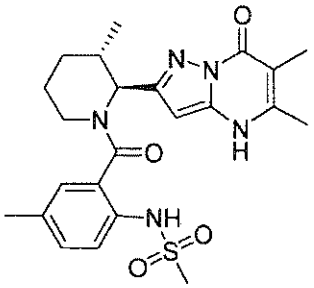
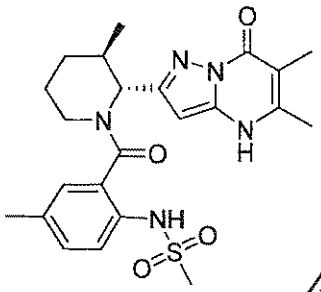
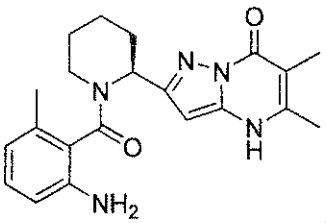
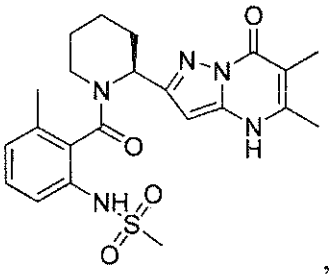
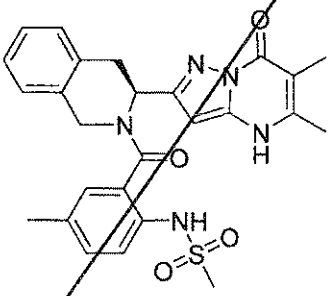
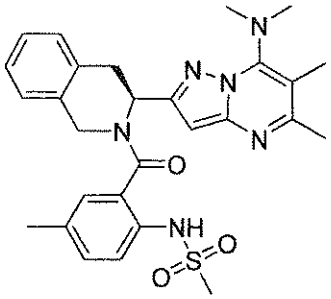
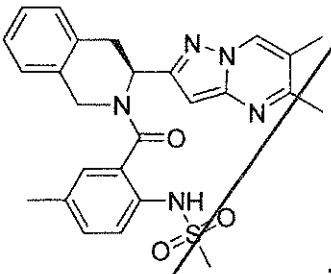
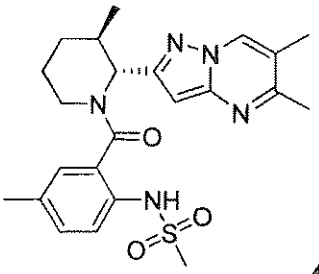
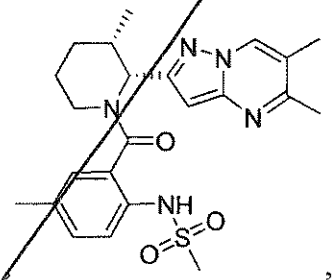
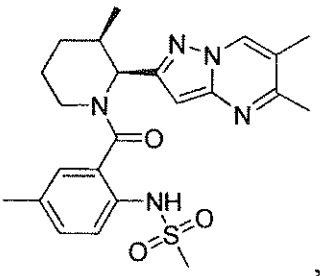
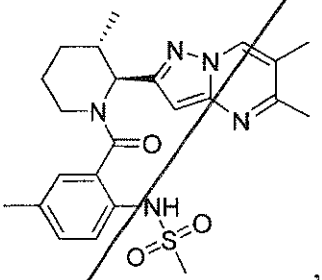
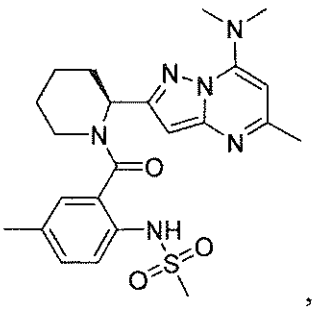
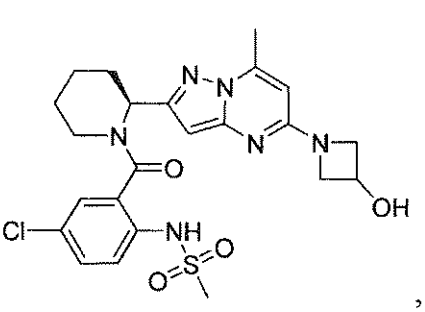


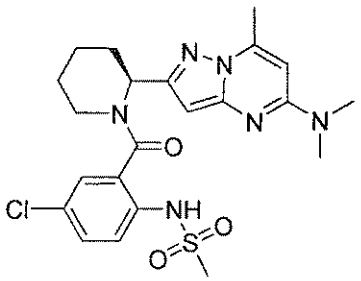
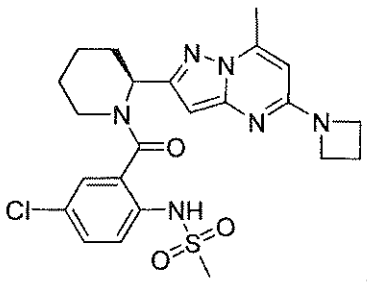
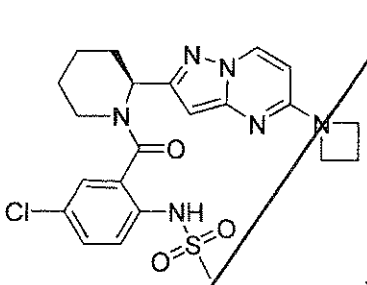
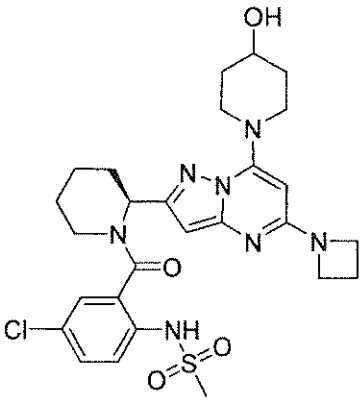
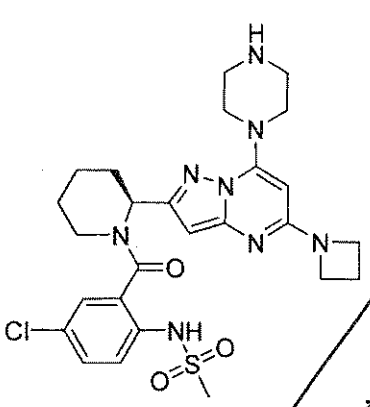
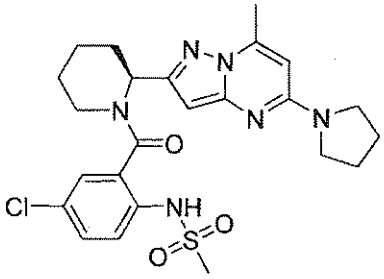
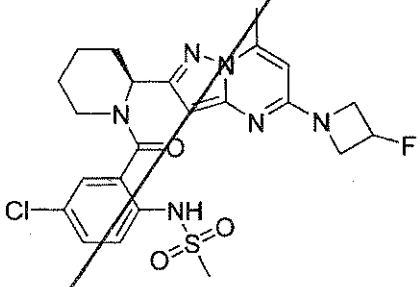
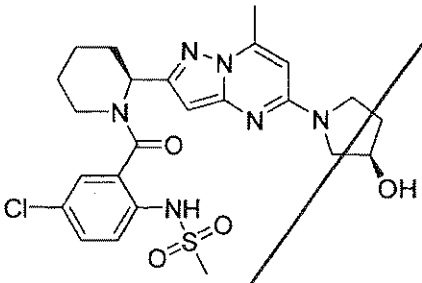
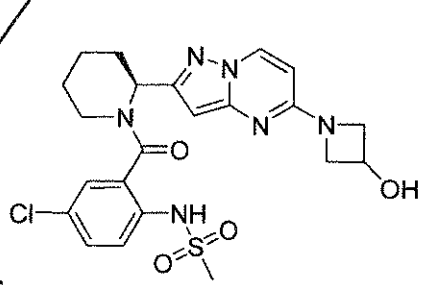
29. The compound according to claim 1 selected from the group consisting of :



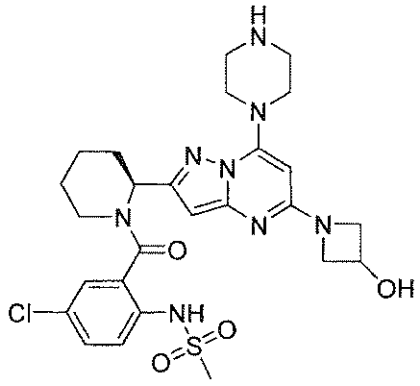
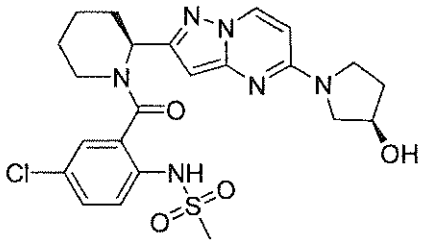
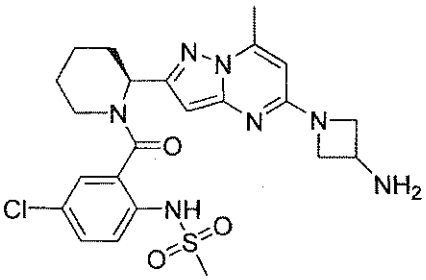
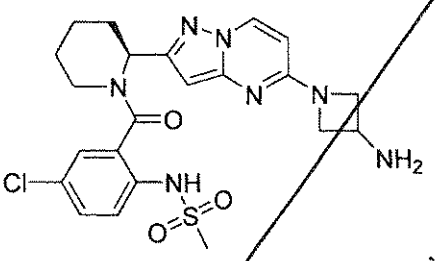
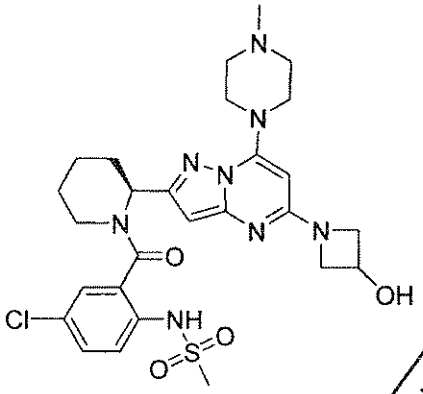
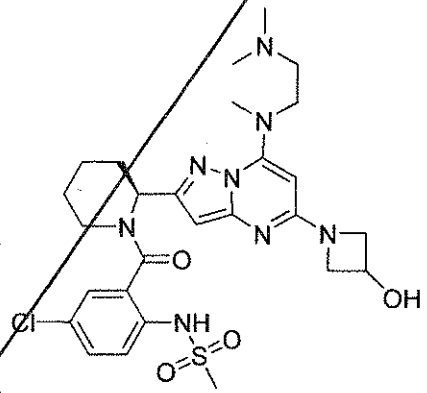
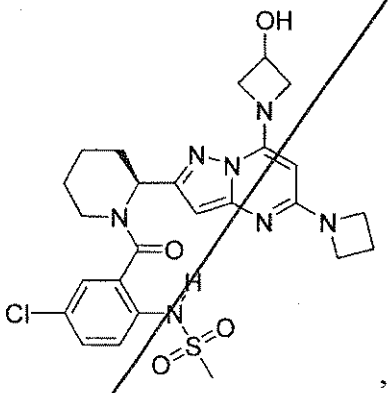
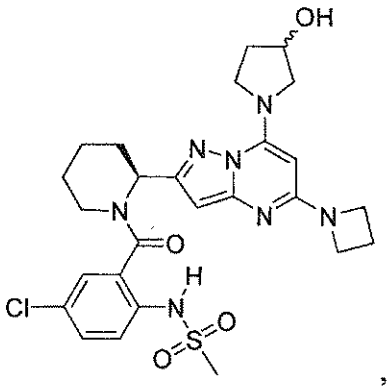













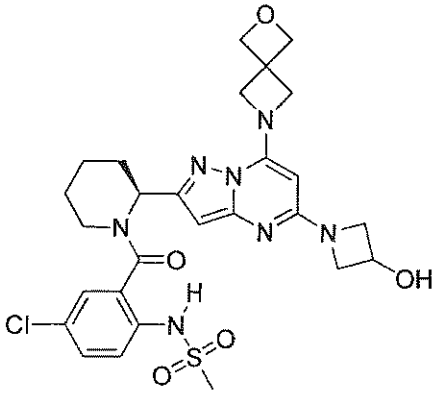
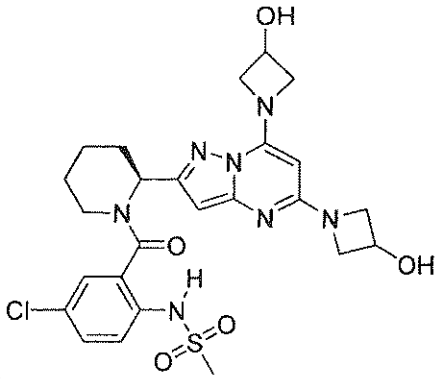
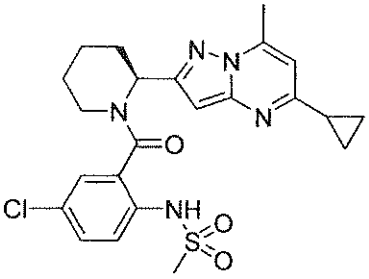
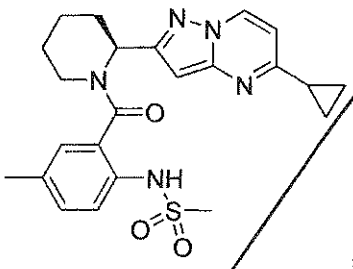
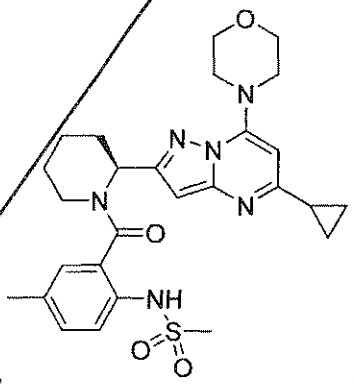
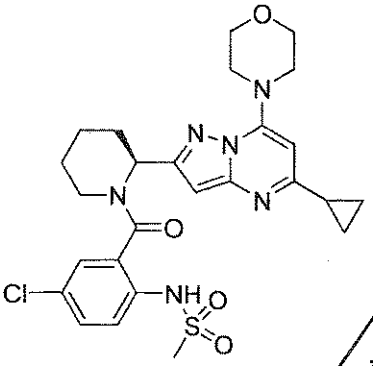
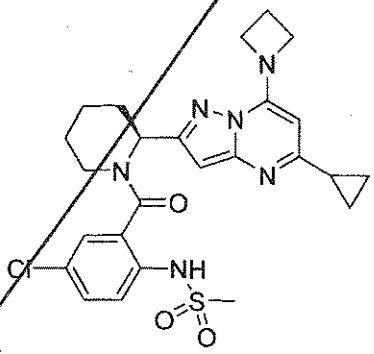
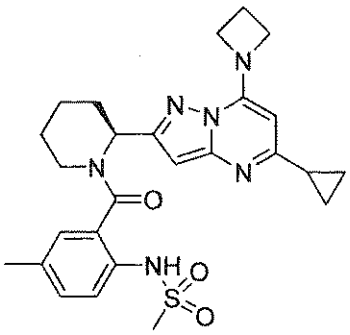
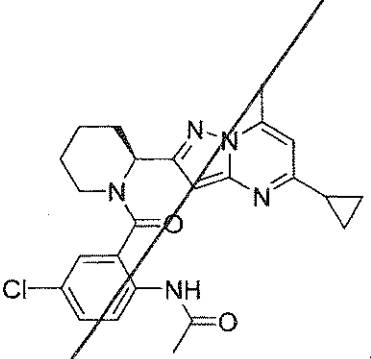
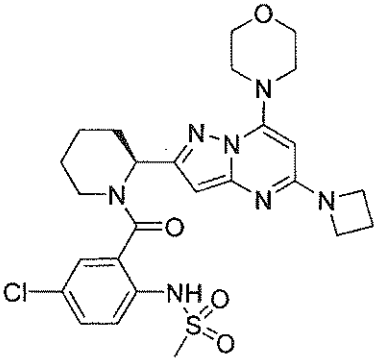

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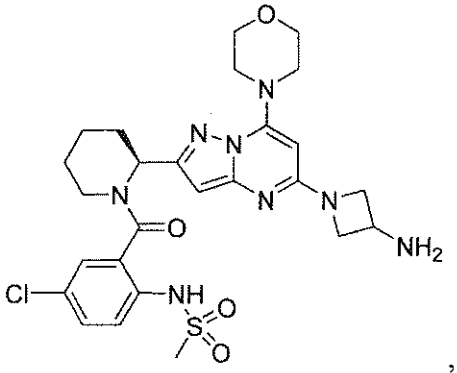
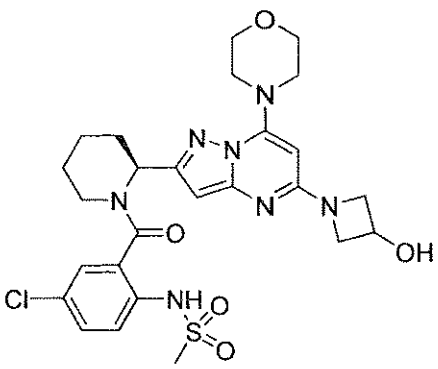
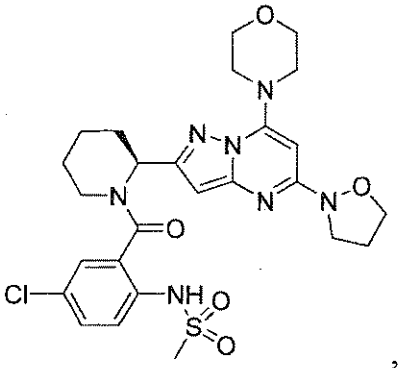
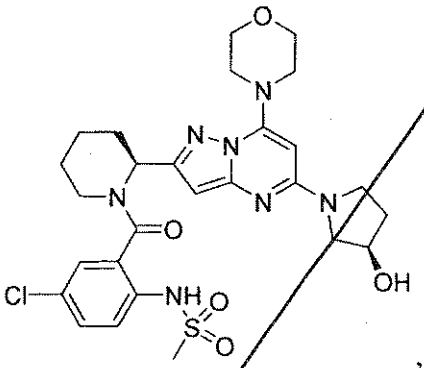
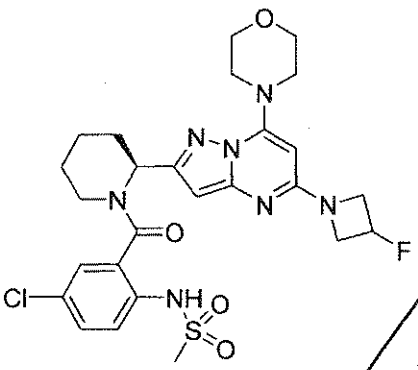
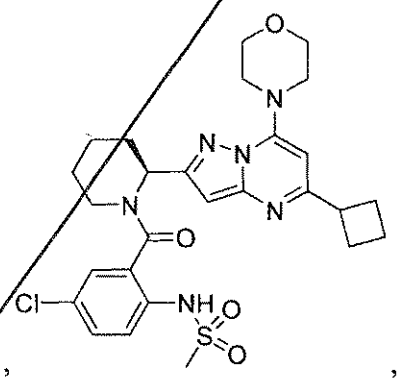
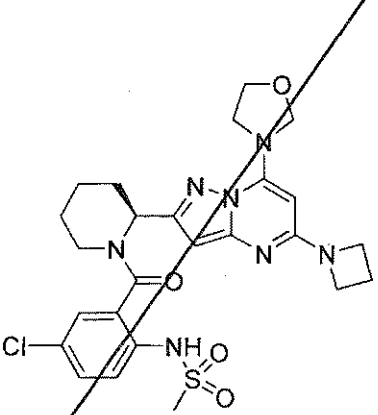
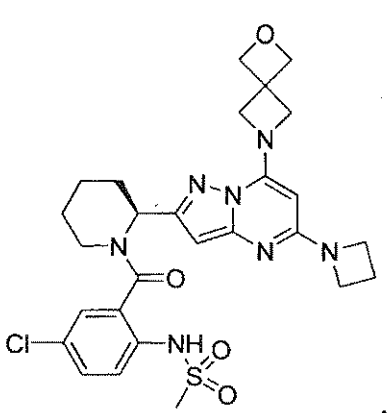
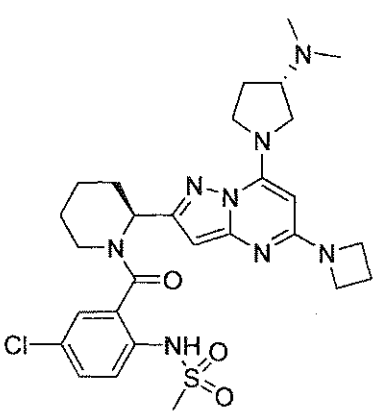
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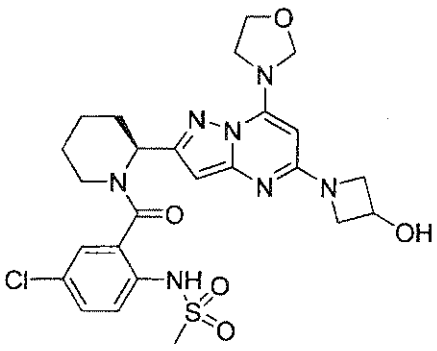
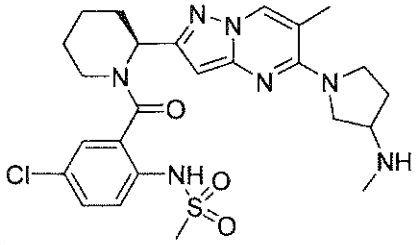
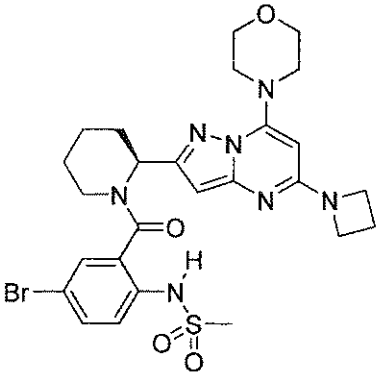
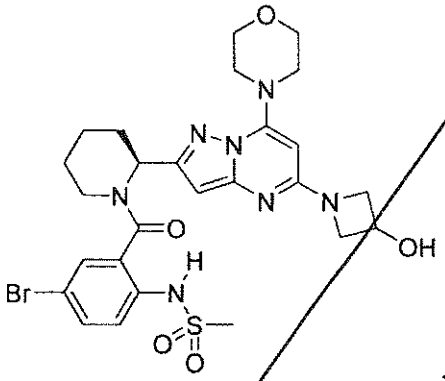
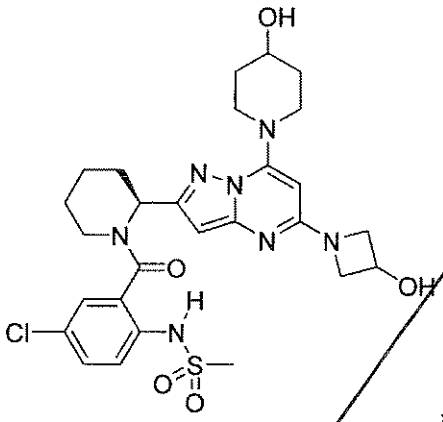
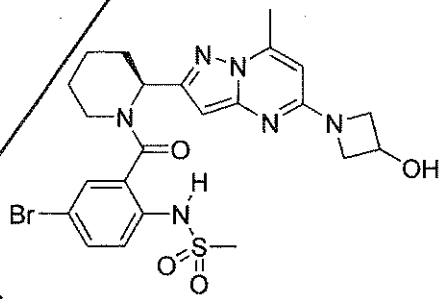
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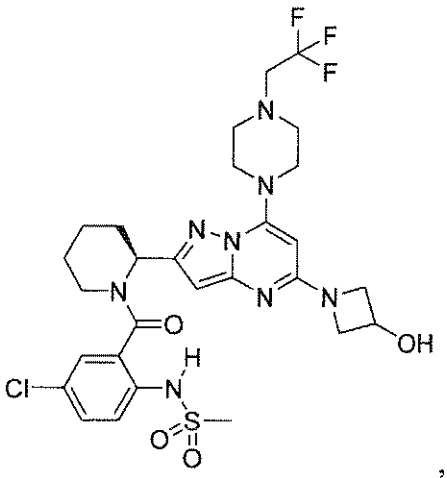
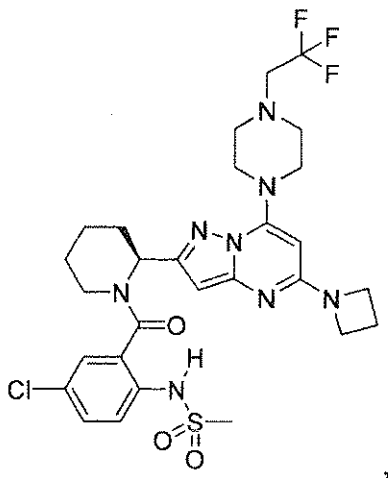
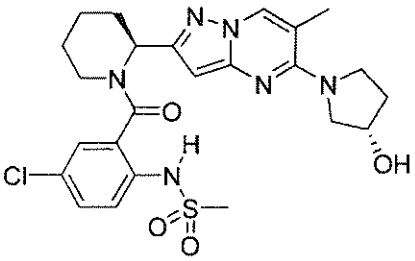
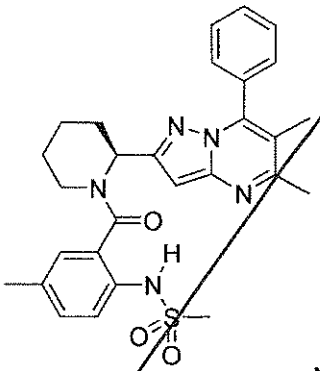
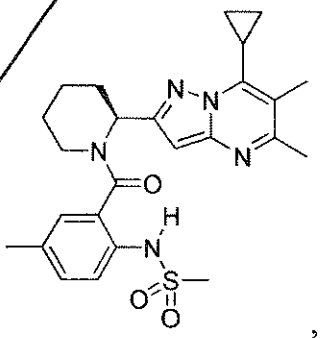
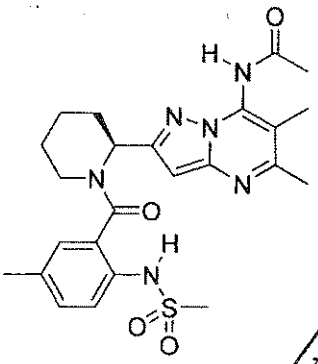
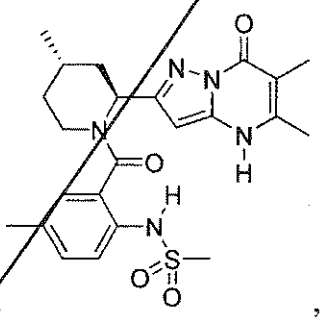
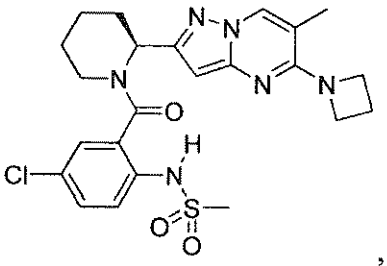
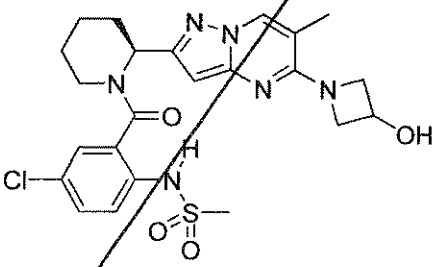
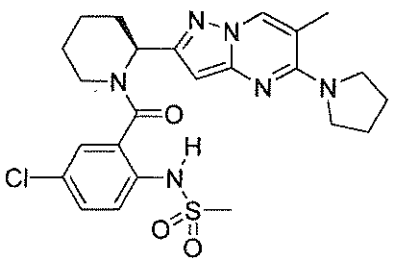
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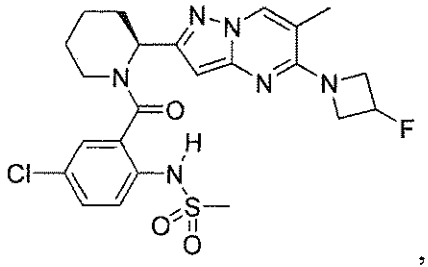
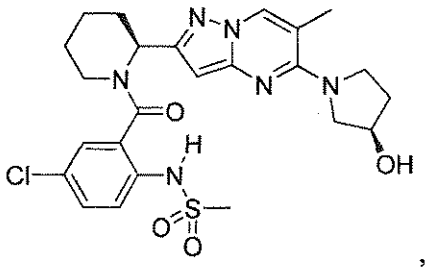
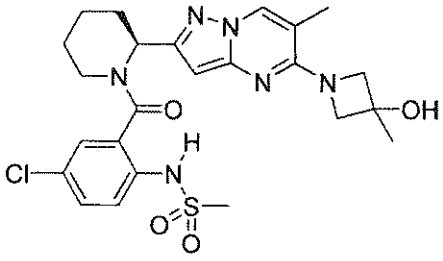
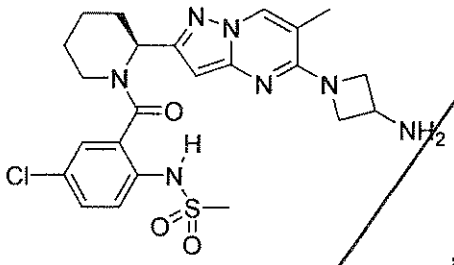
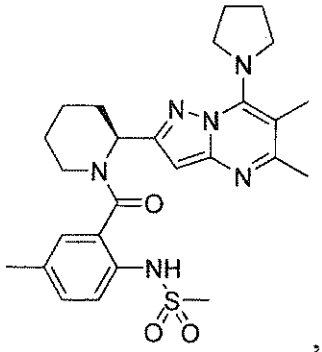
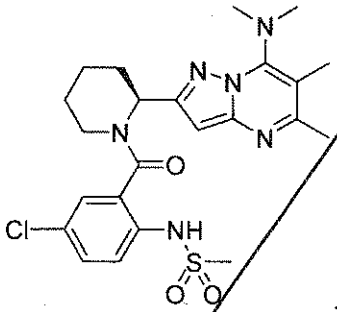
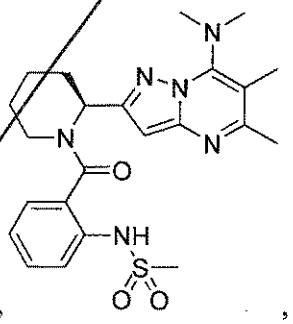
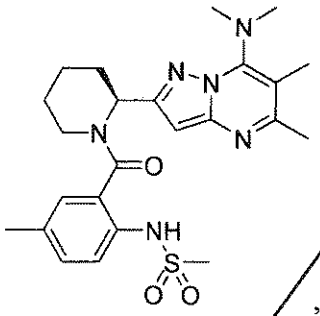
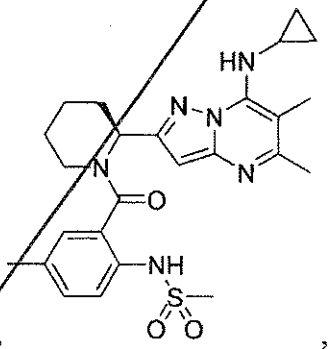
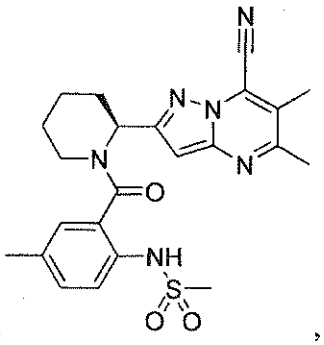










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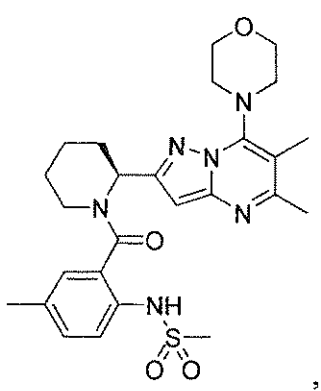
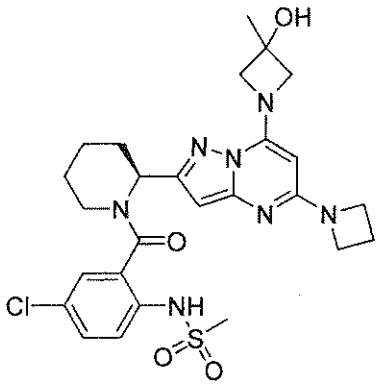
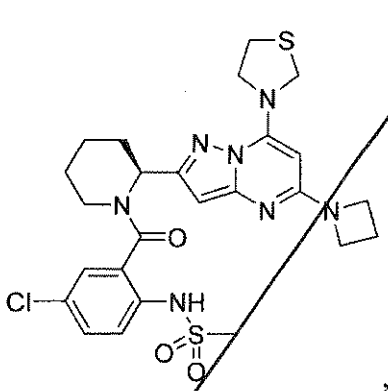
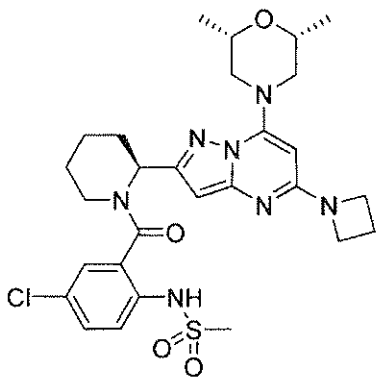
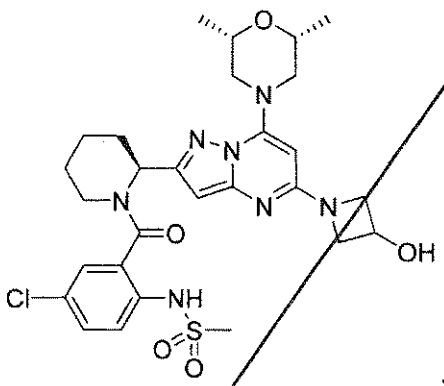
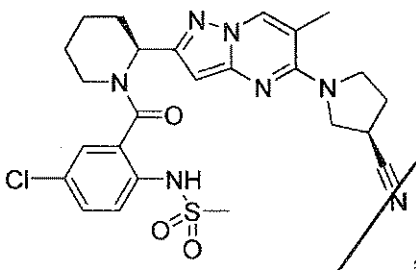
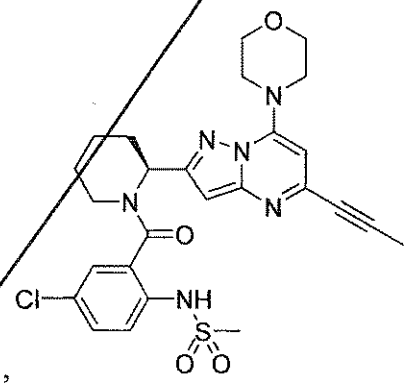
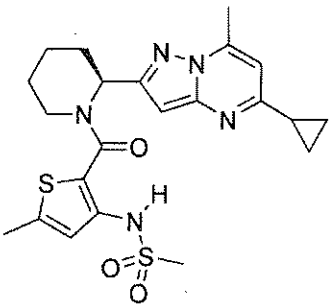
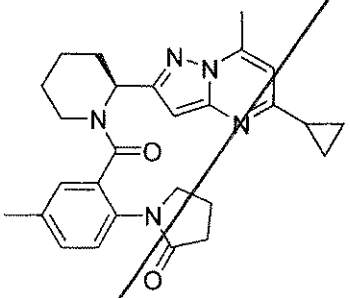
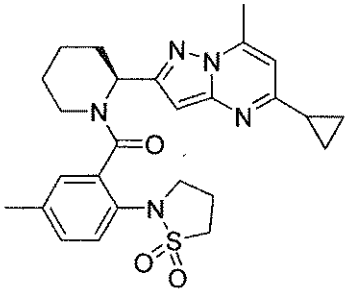
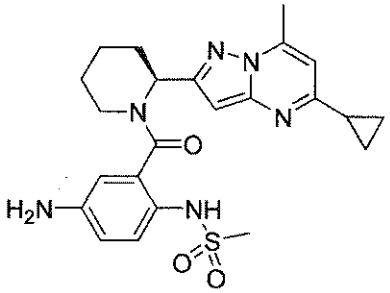
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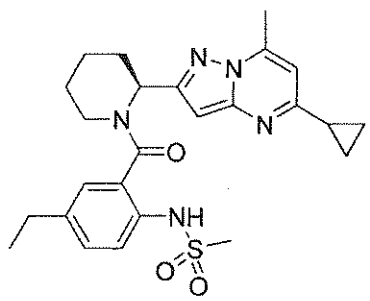
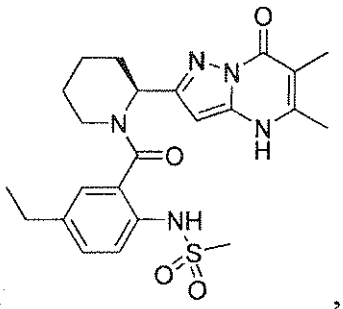
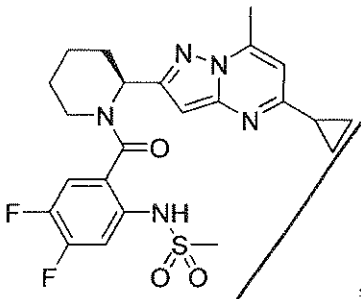
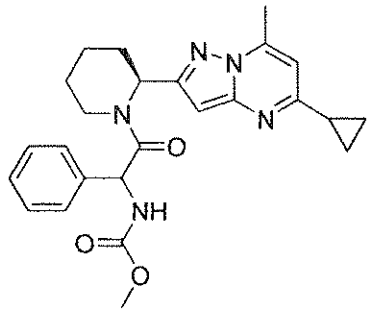
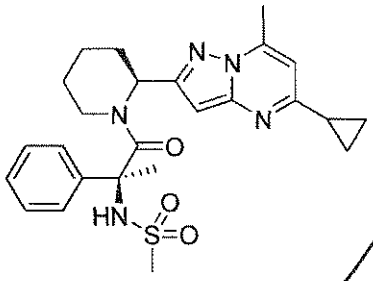
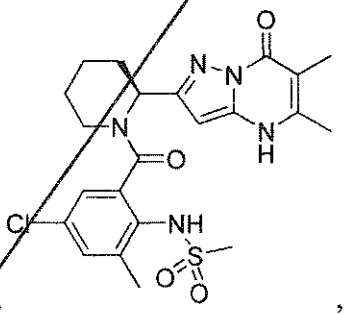
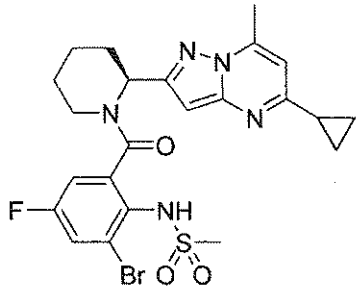
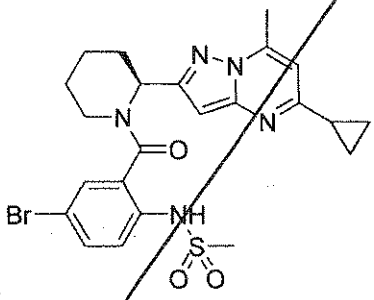
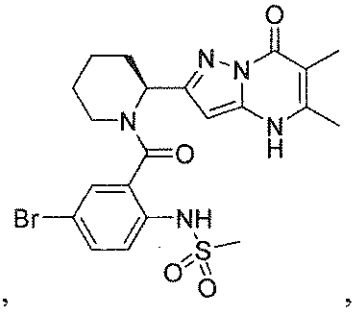
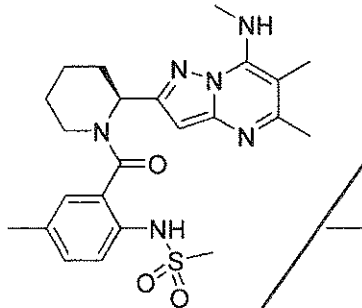

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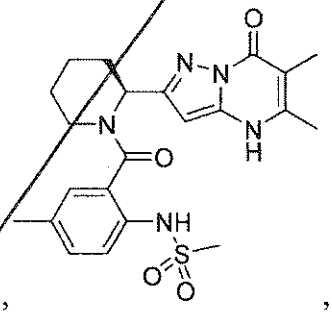
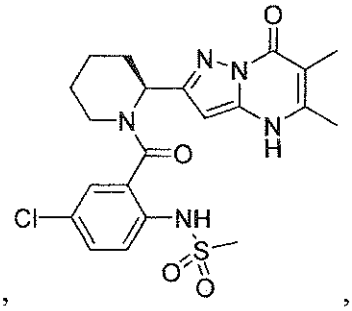











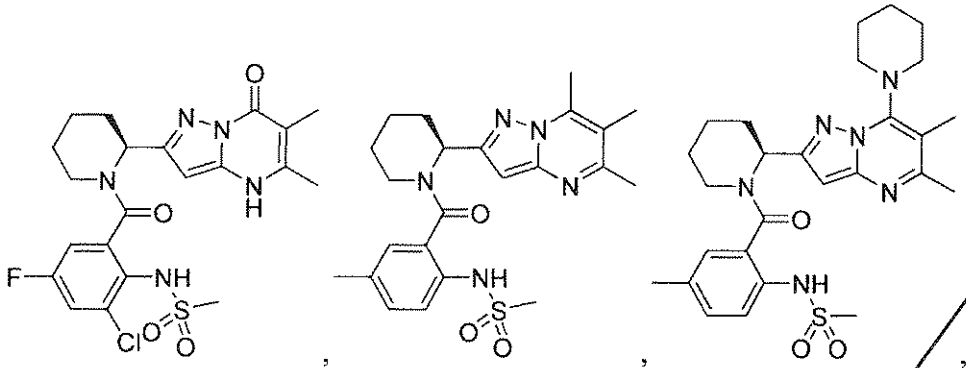
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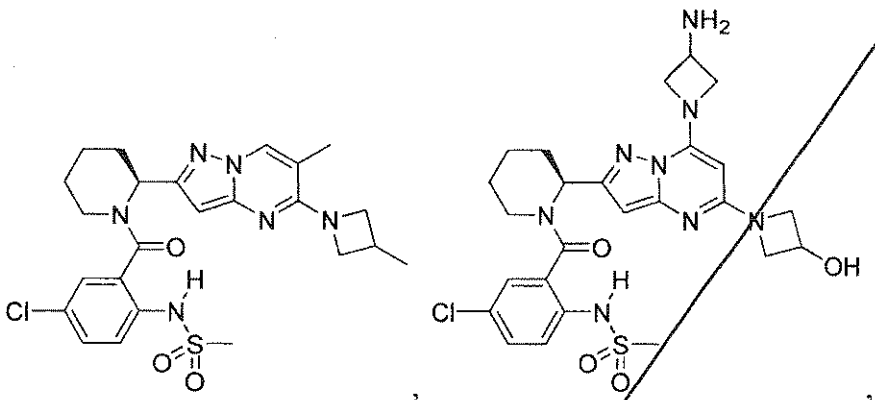
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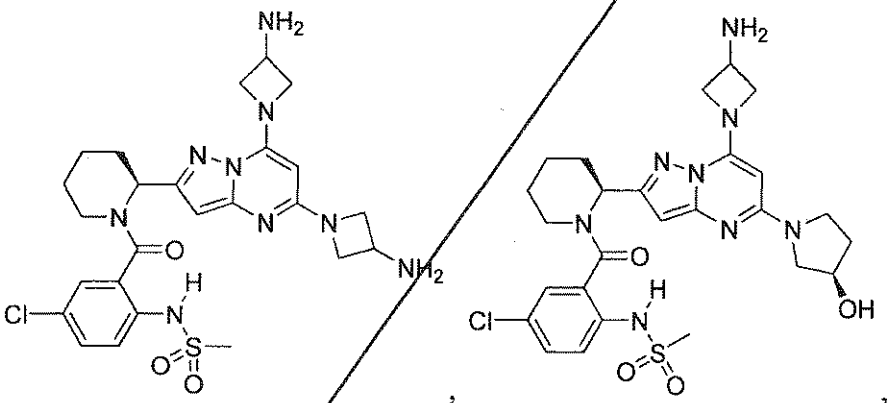












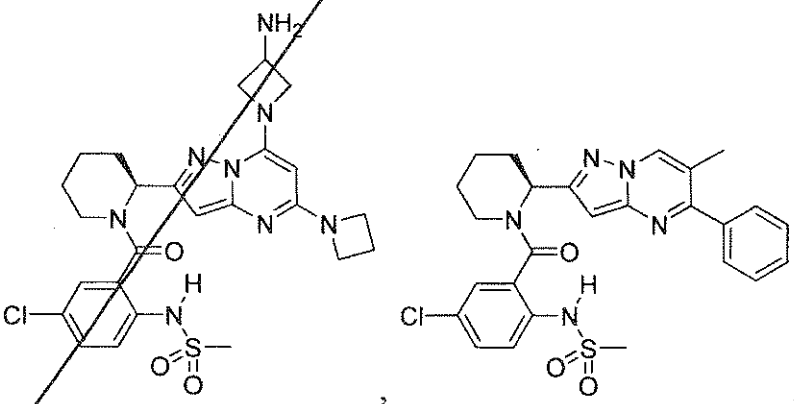

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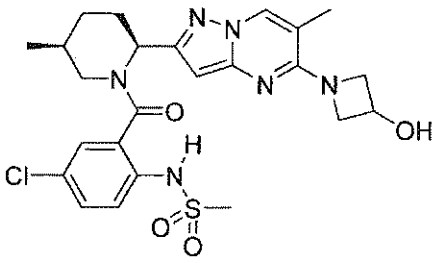
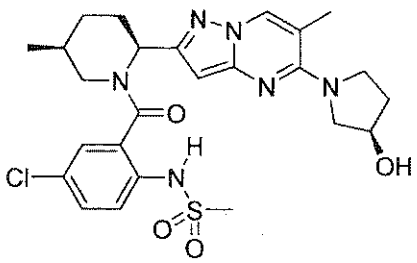
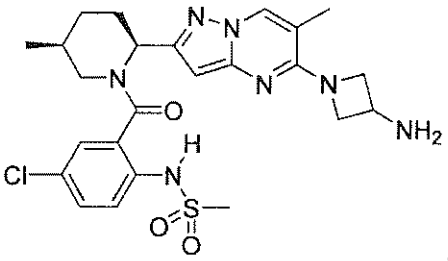
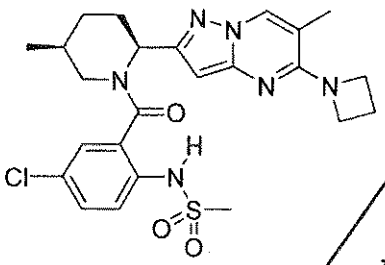
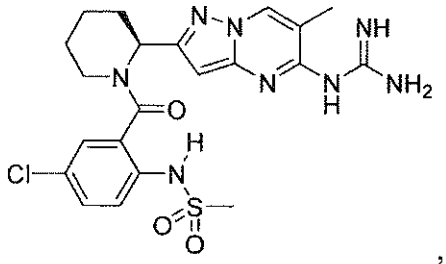
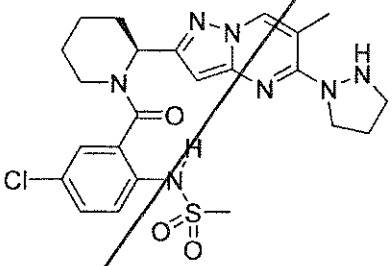
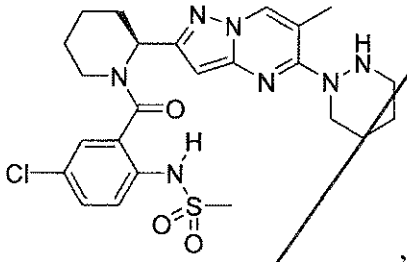
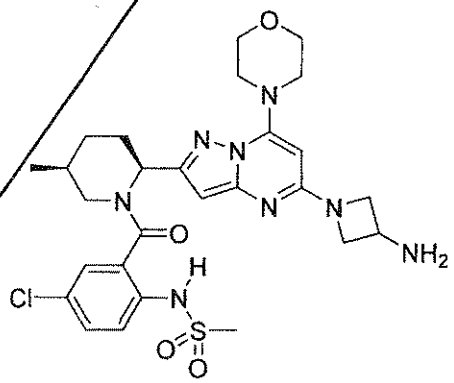

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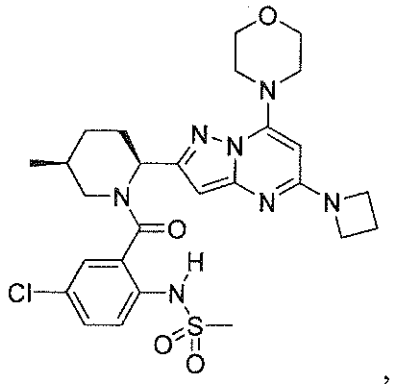




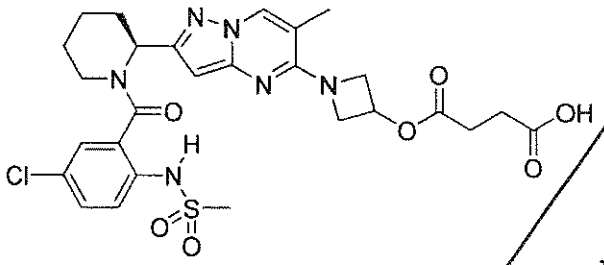


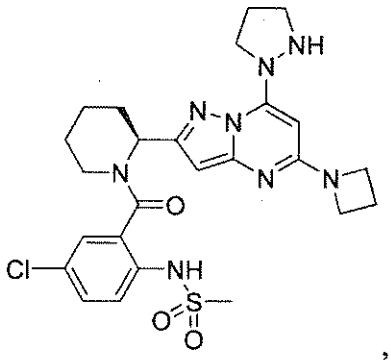
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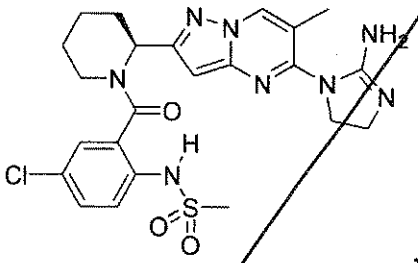
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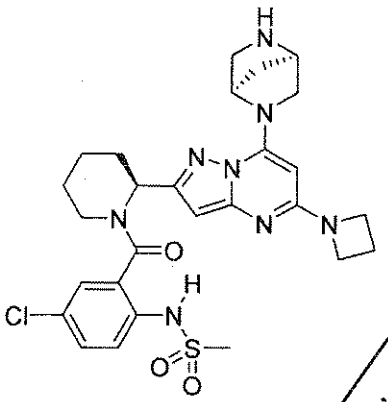
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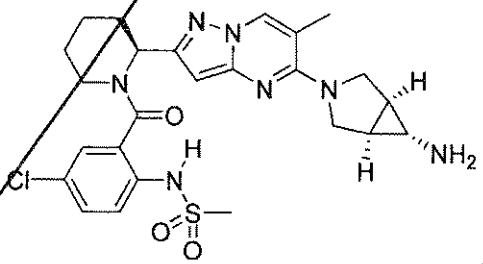
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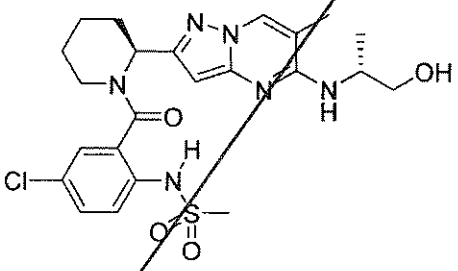
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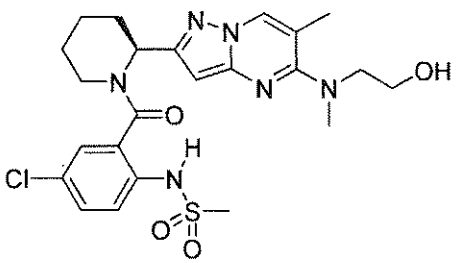
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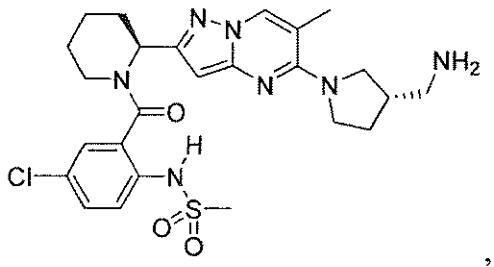
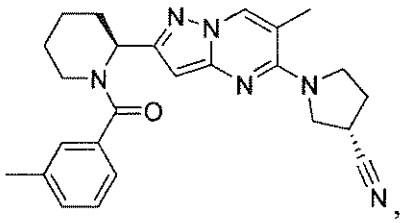
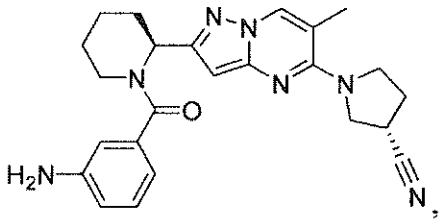
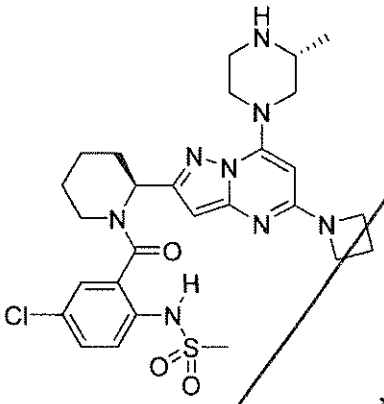
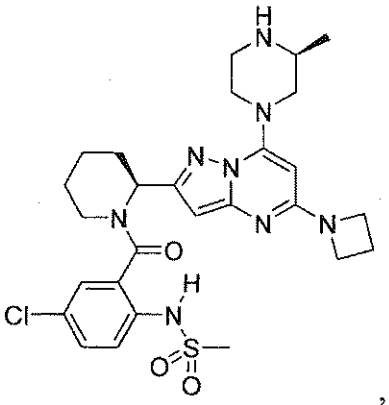
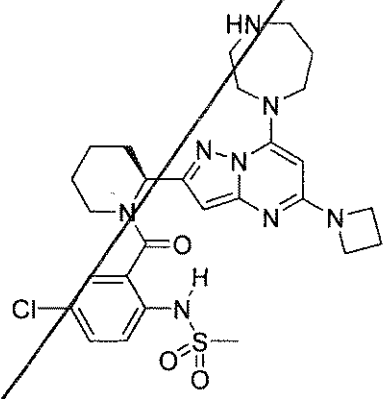
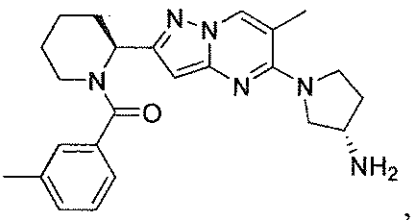
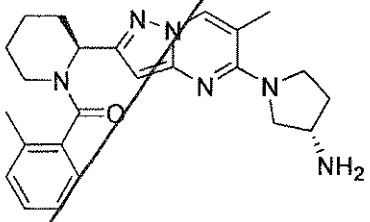
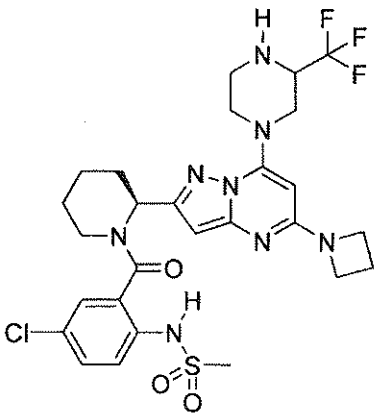
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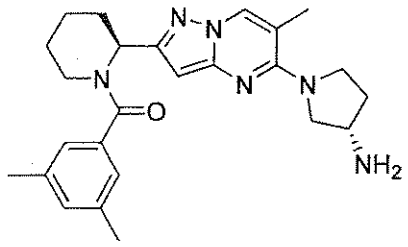
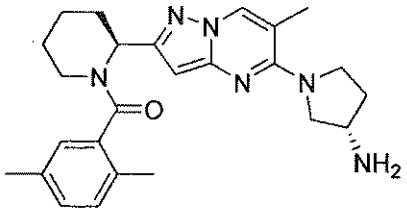


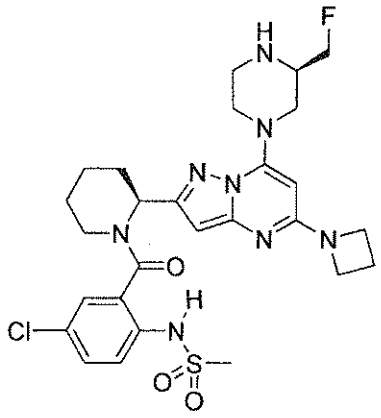
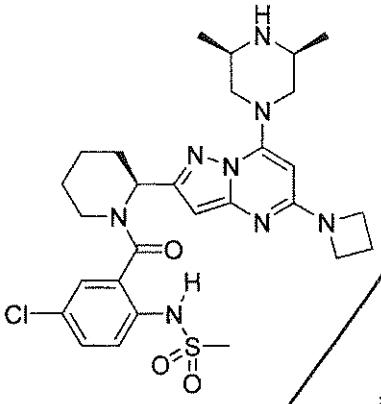
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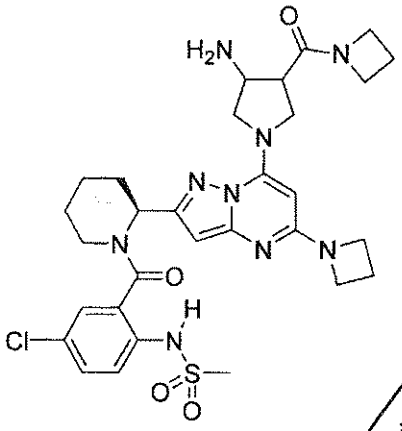
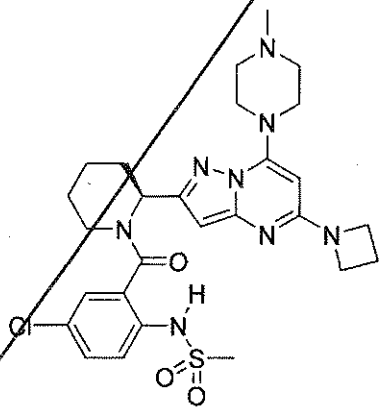
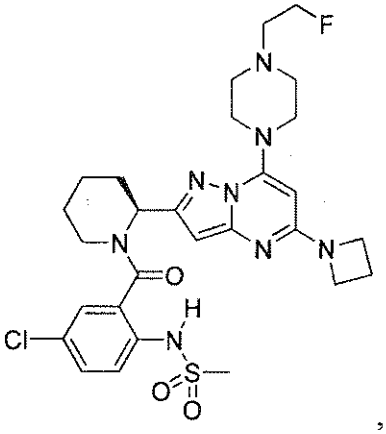


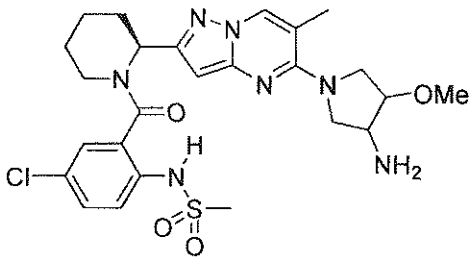
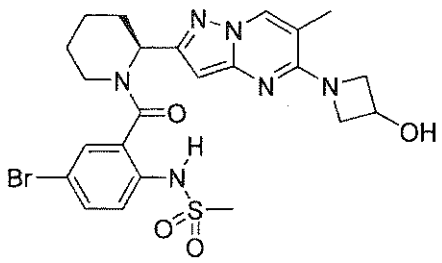
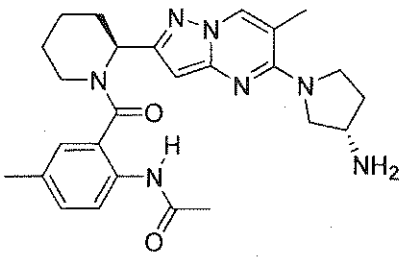
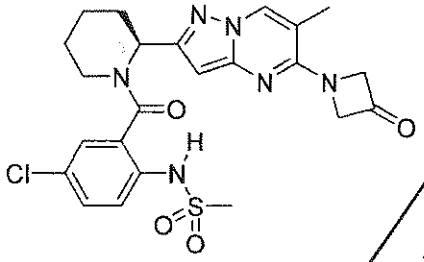
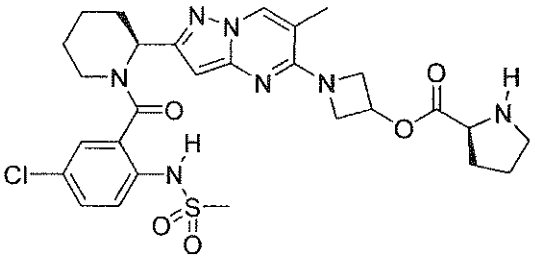
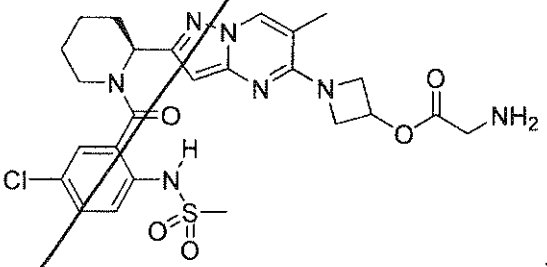
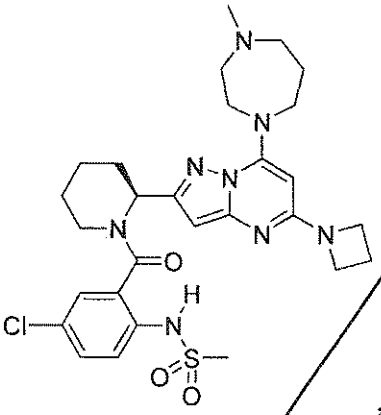
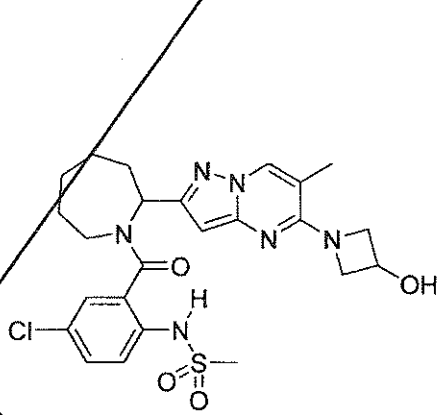
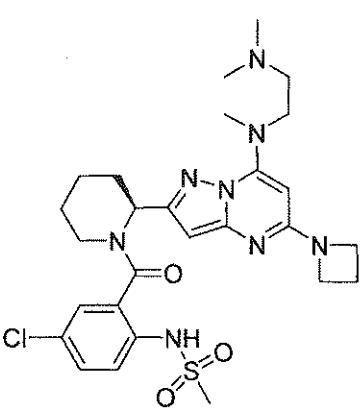
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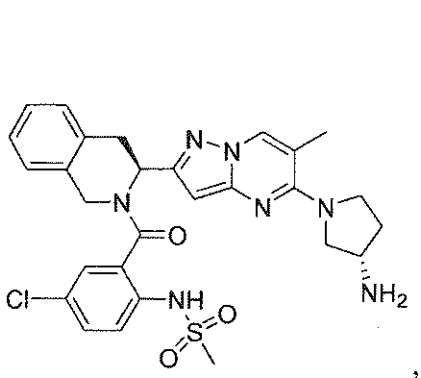
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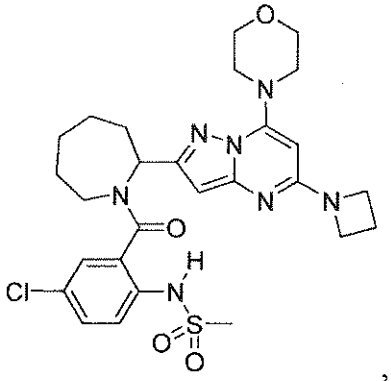
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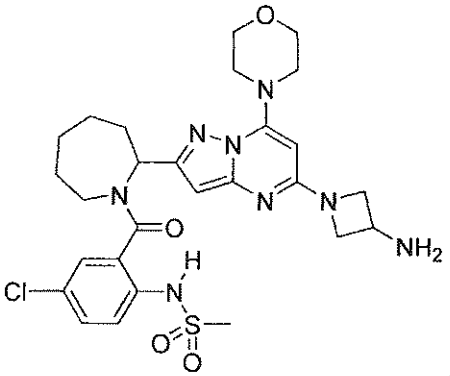
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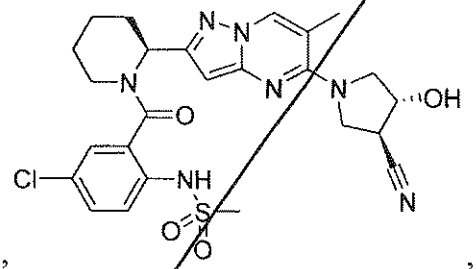










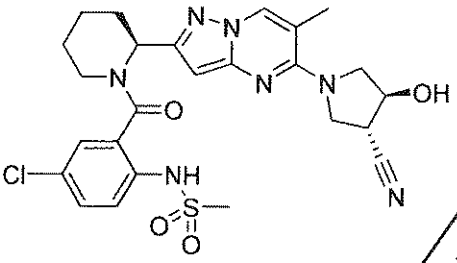
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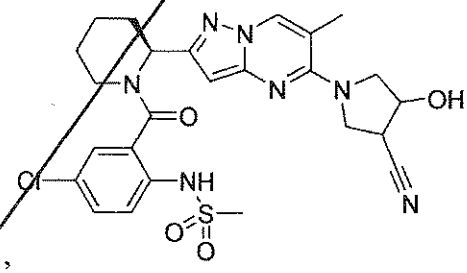


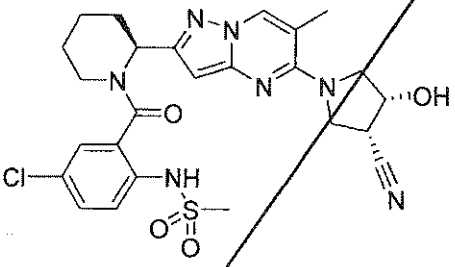


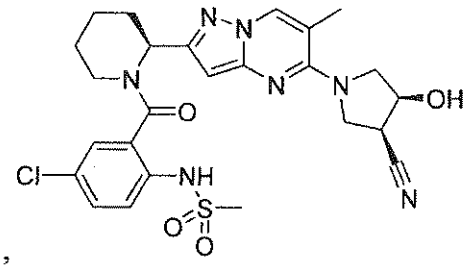


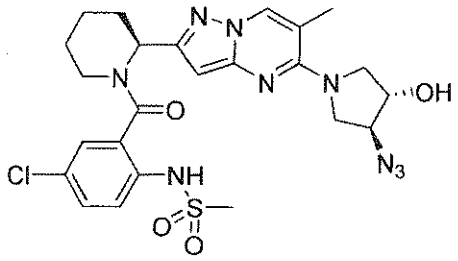
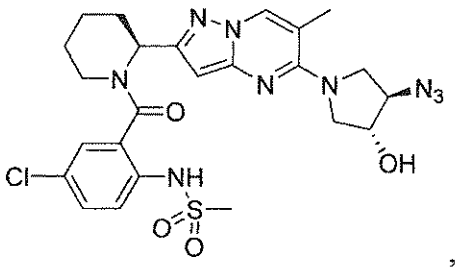
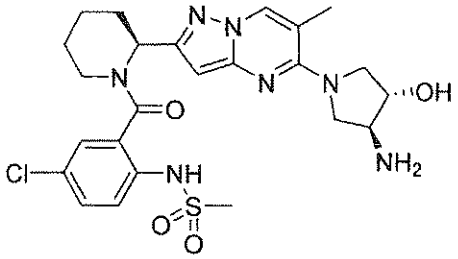
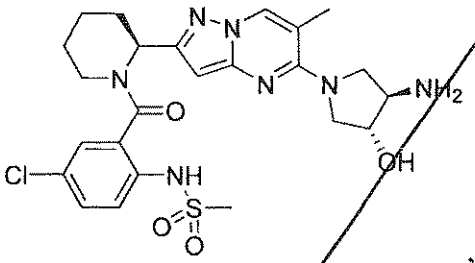
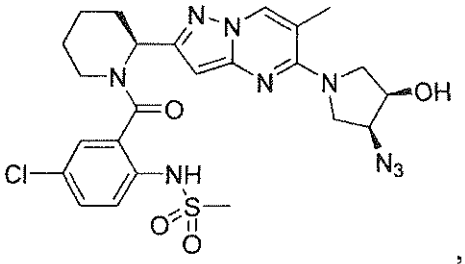
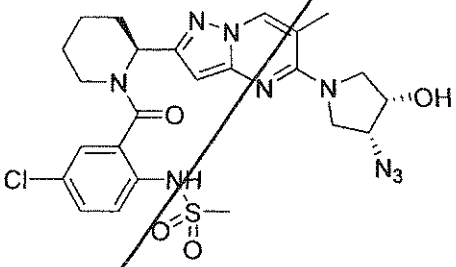
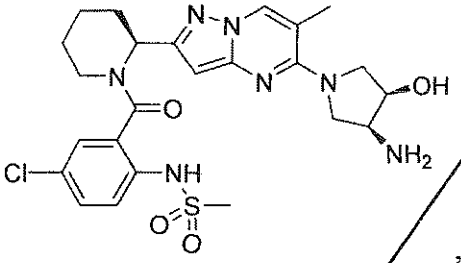
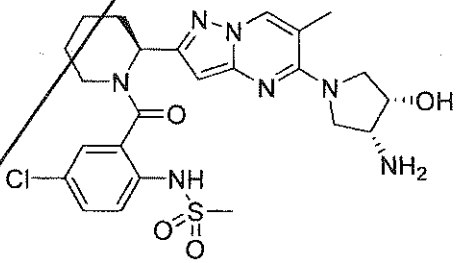
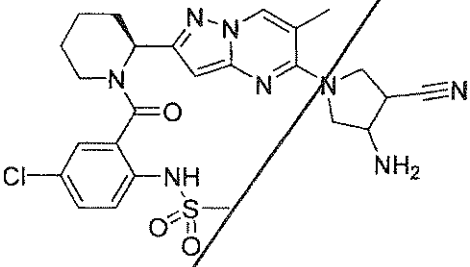
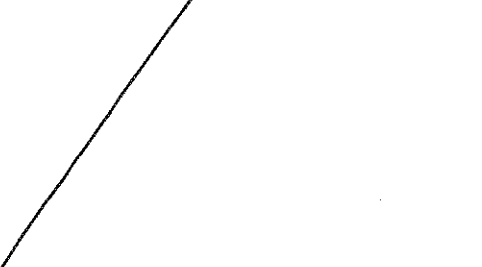
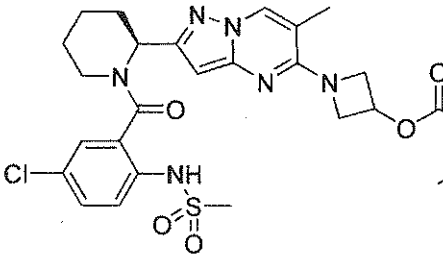




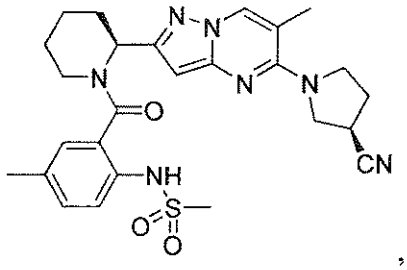
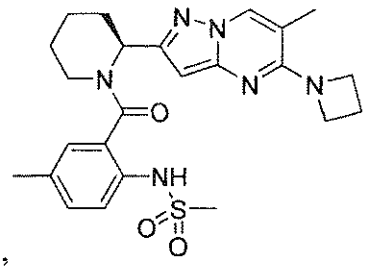
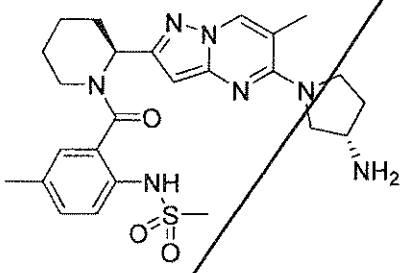
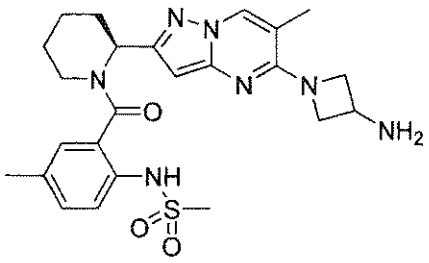
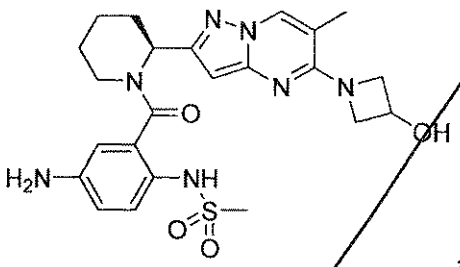
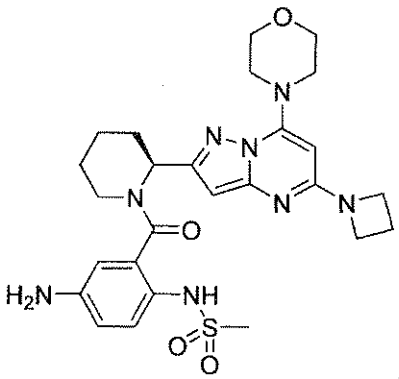
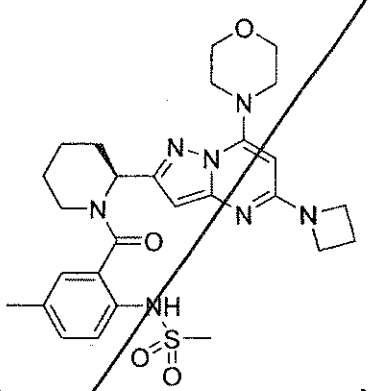
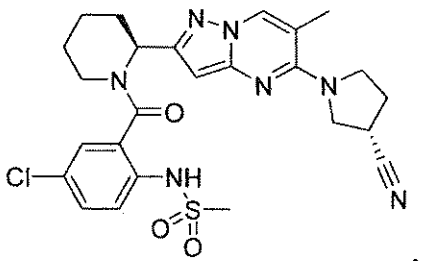
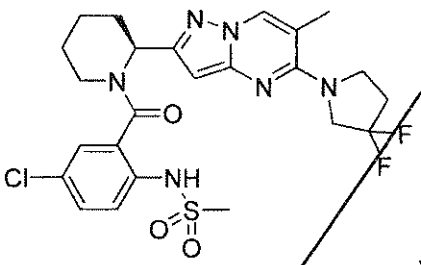
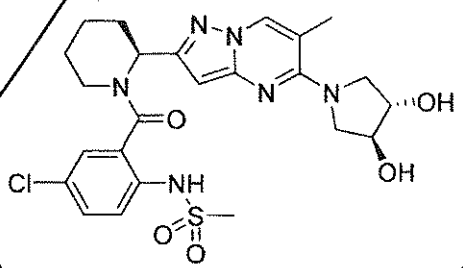
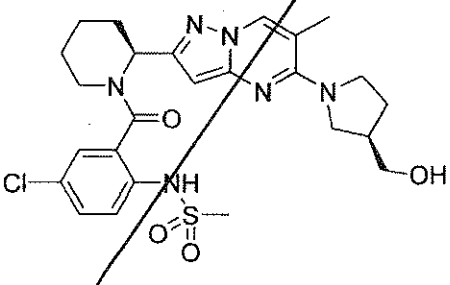
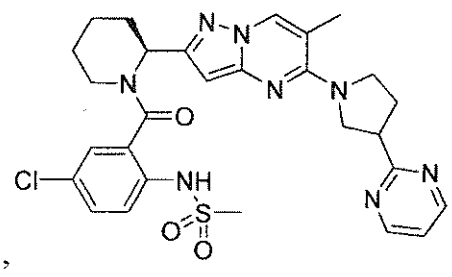




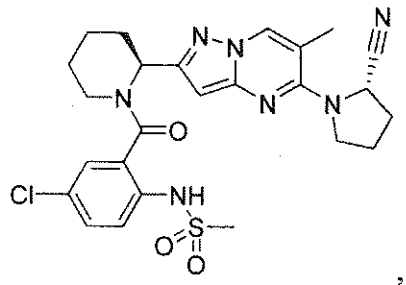
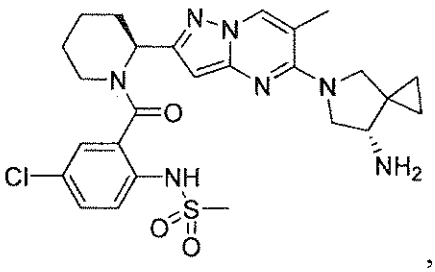
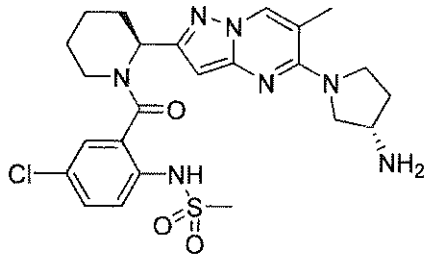
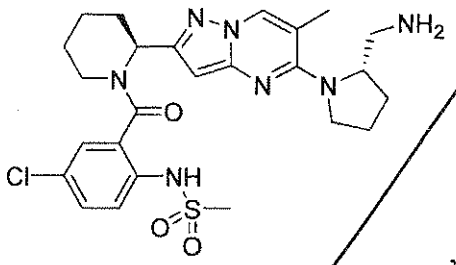
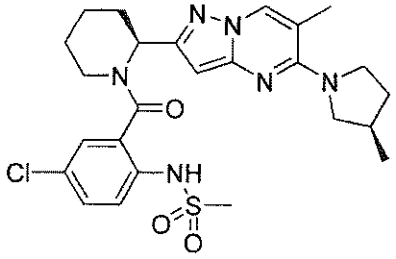
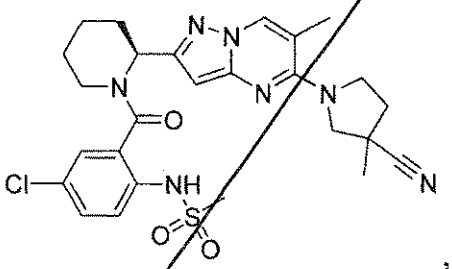
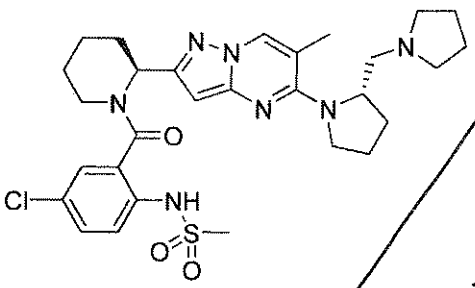
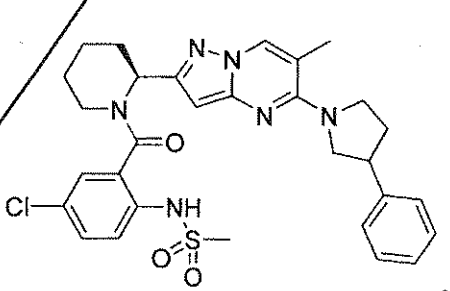
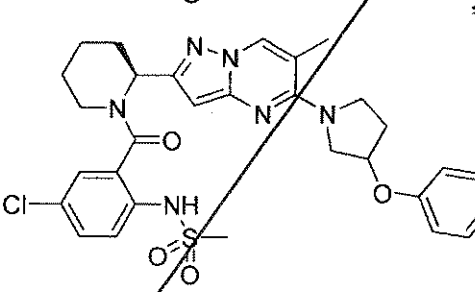
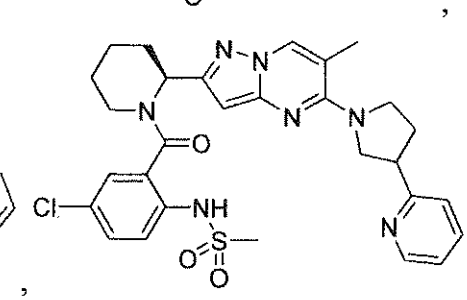
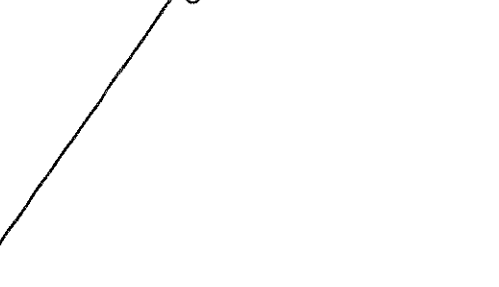
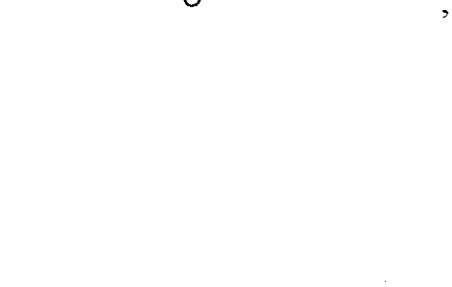


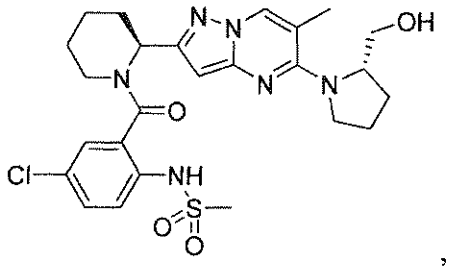
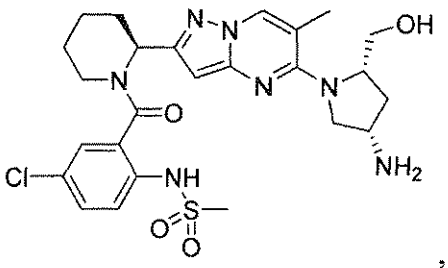
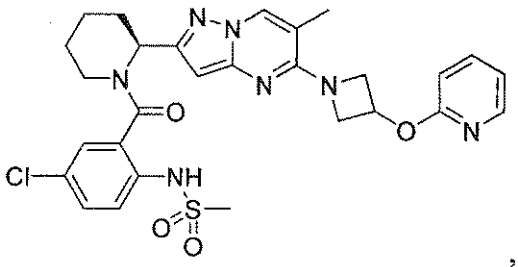
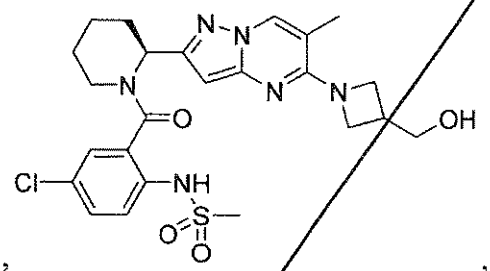
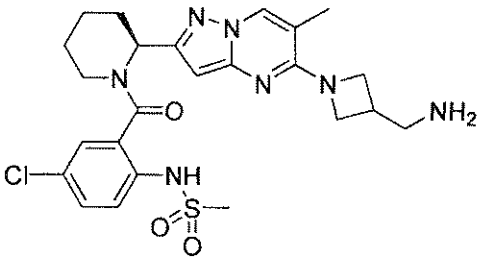
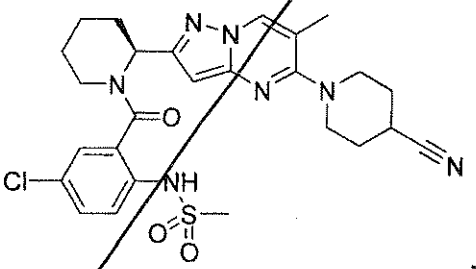
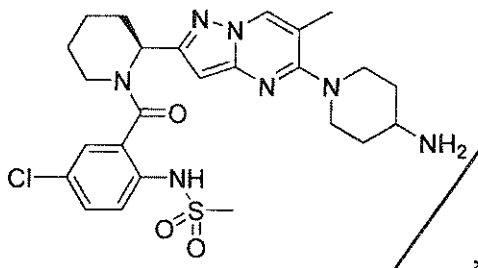
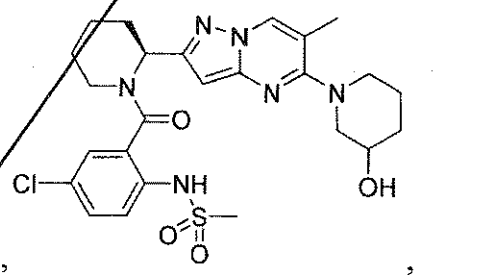
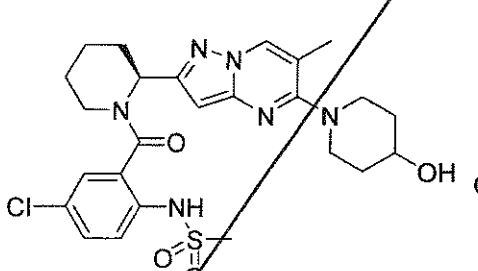
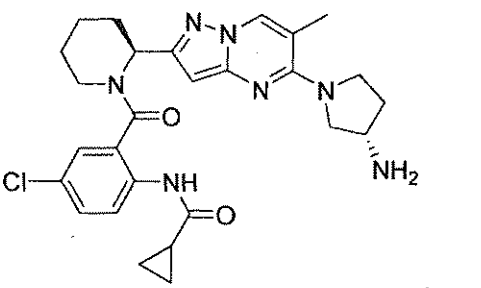
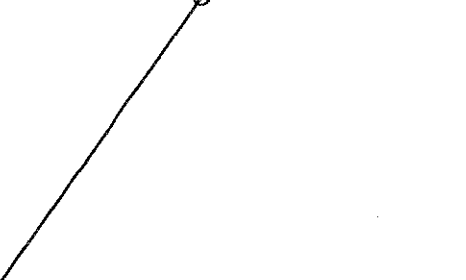
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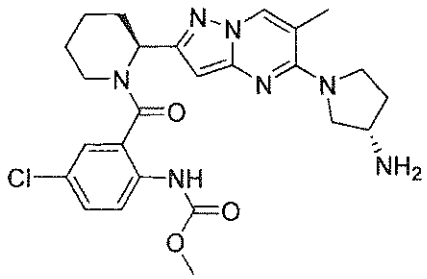
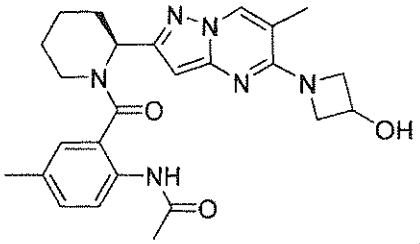
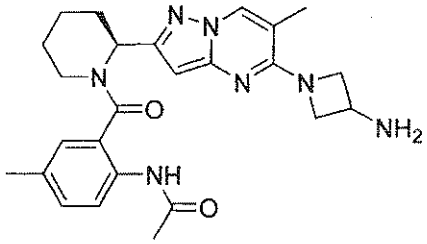
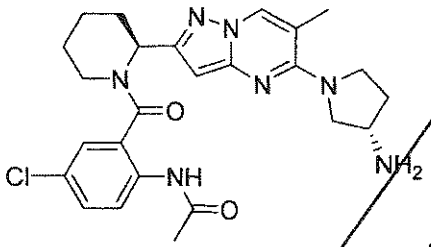
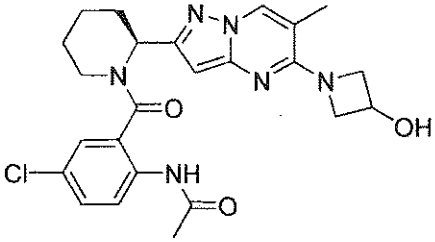
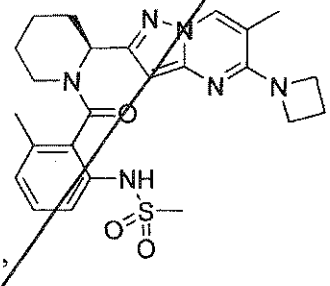
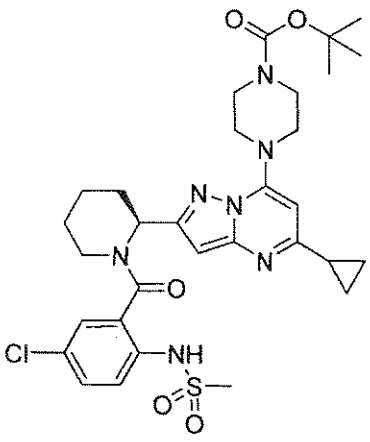
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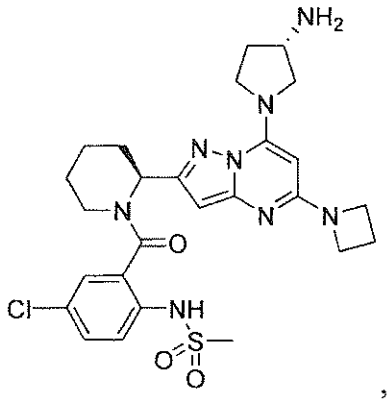
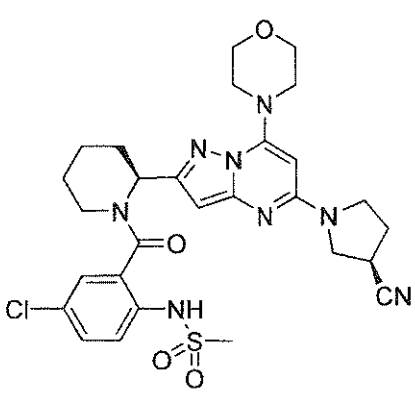
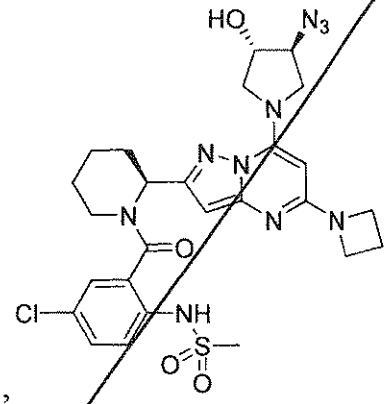
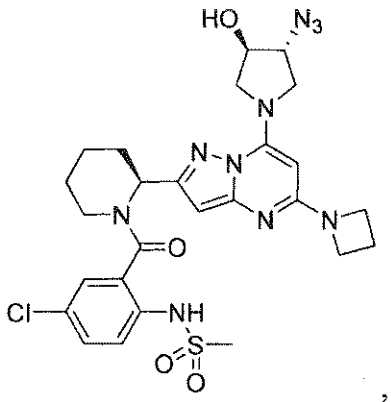
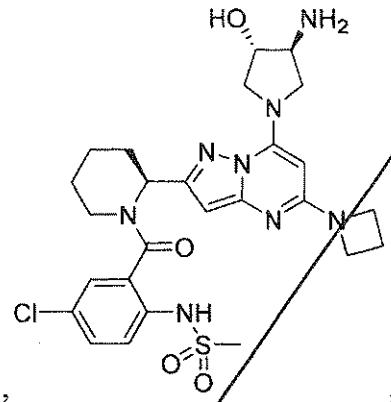
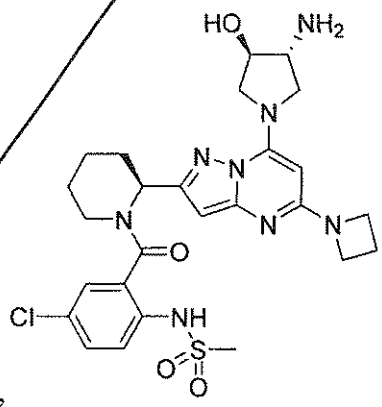
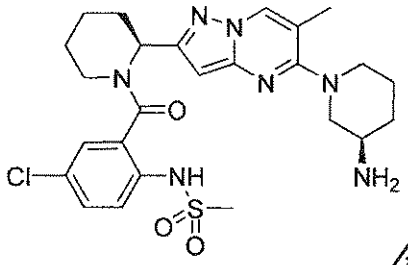
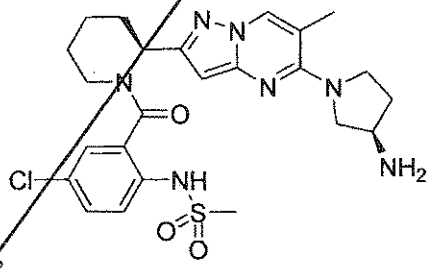
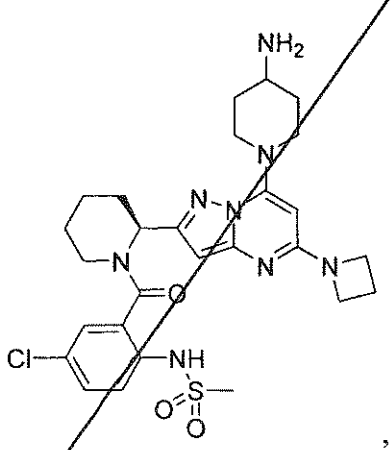
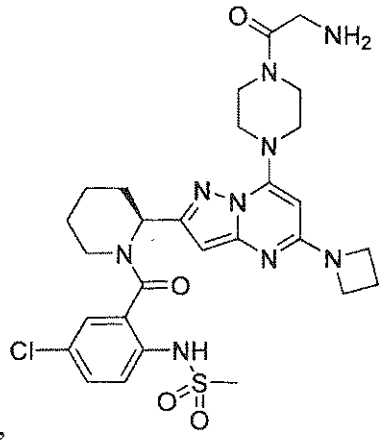













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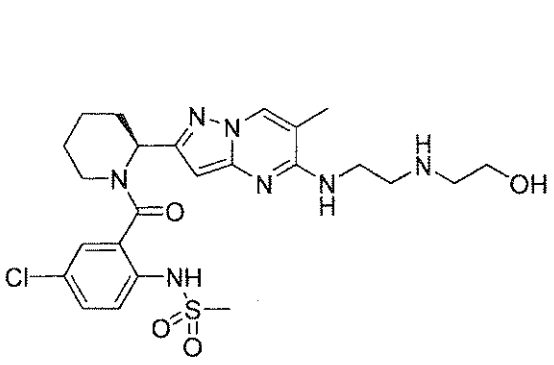
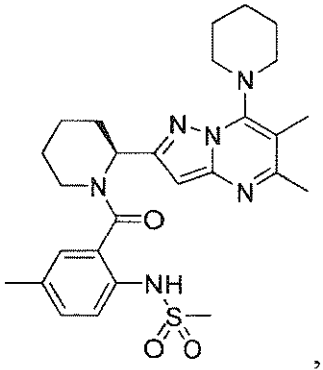
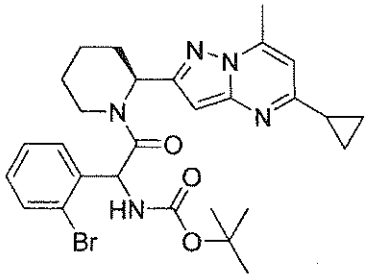
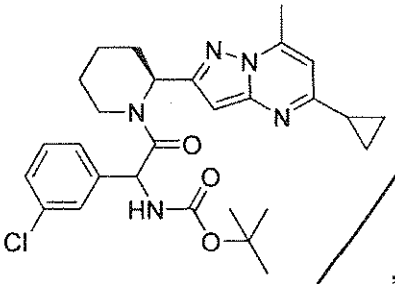
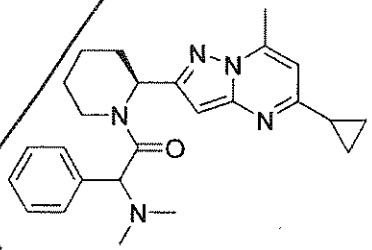
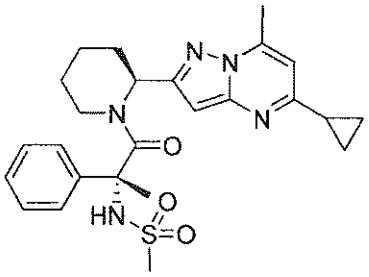
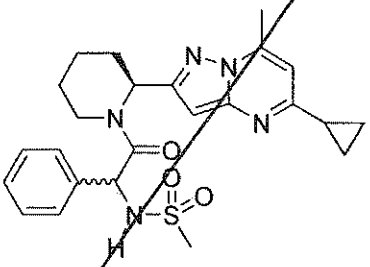
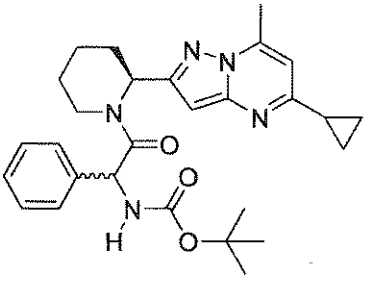
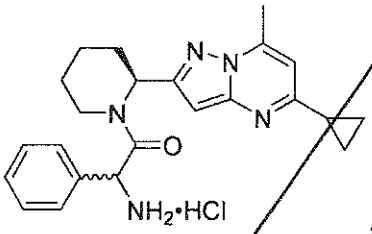
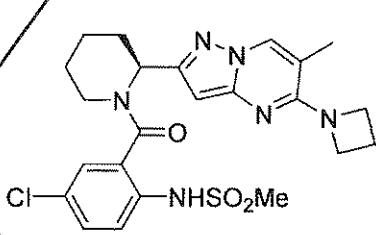
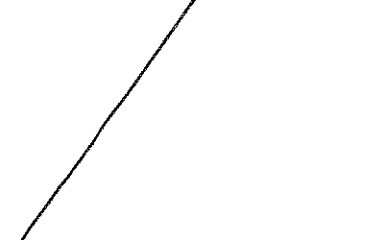












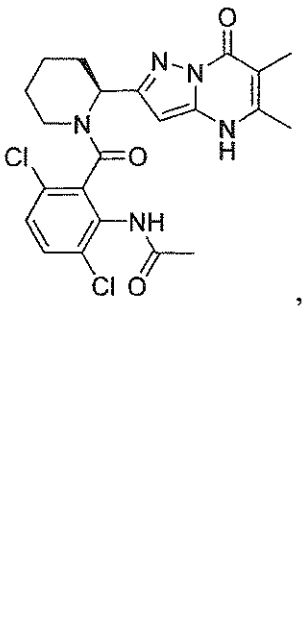
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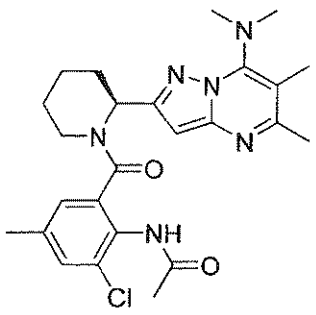
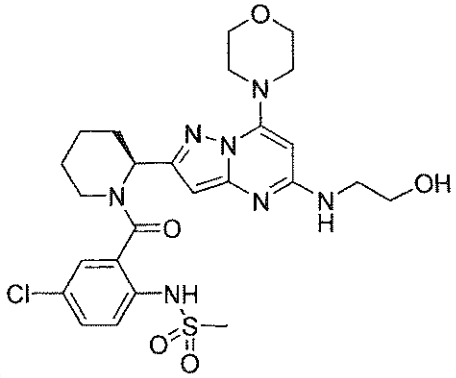
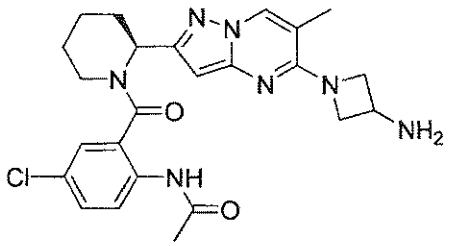
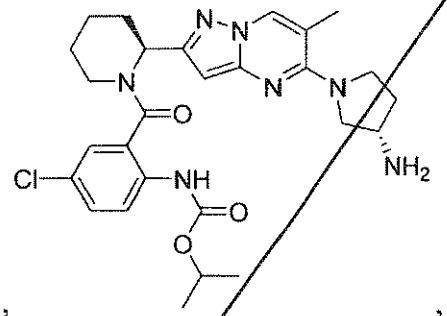
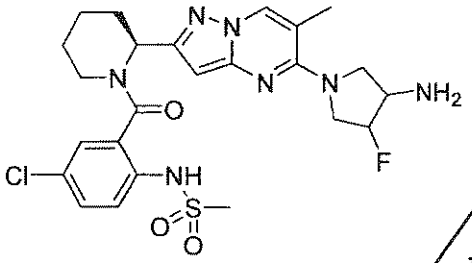
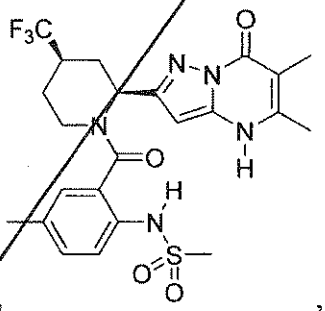
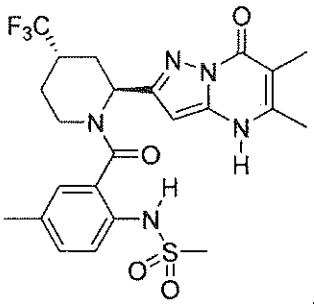
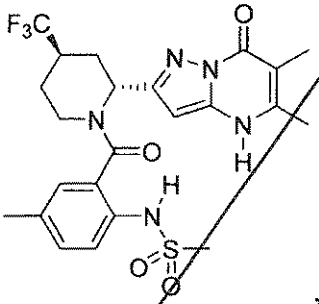
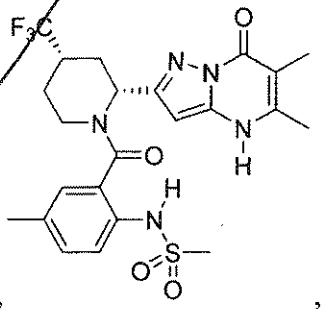
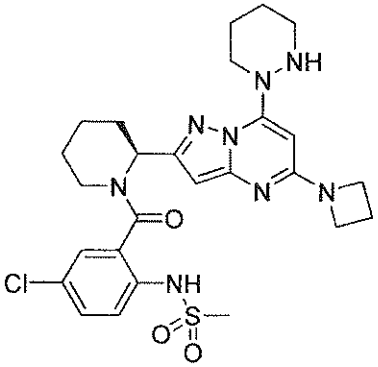








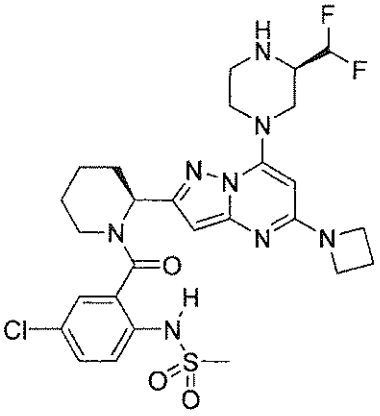
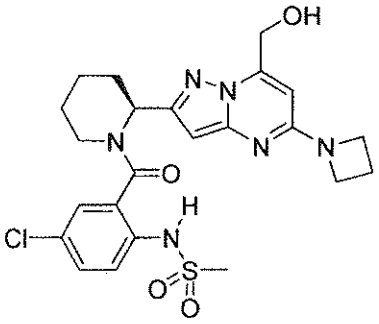
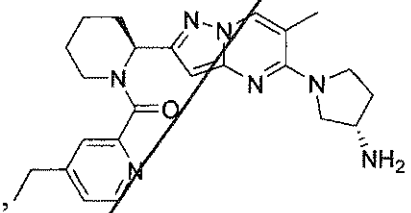
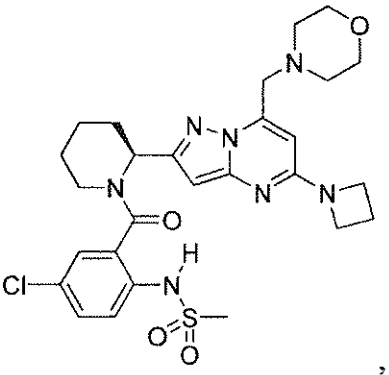
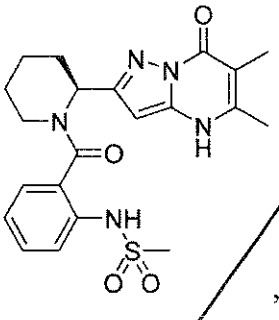
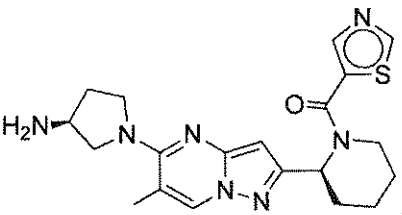
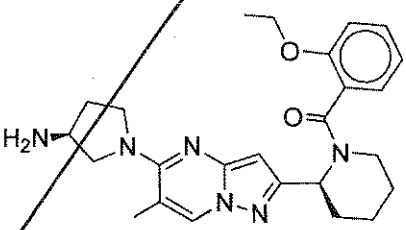
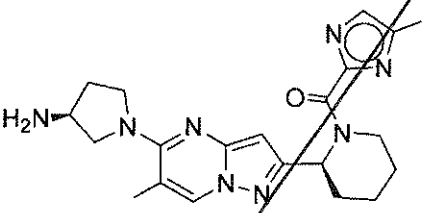
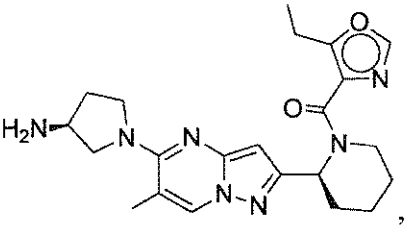
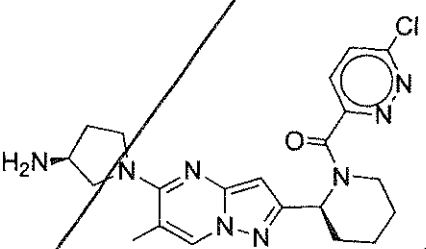
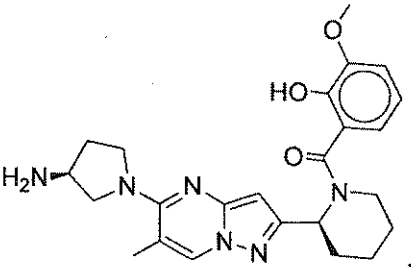











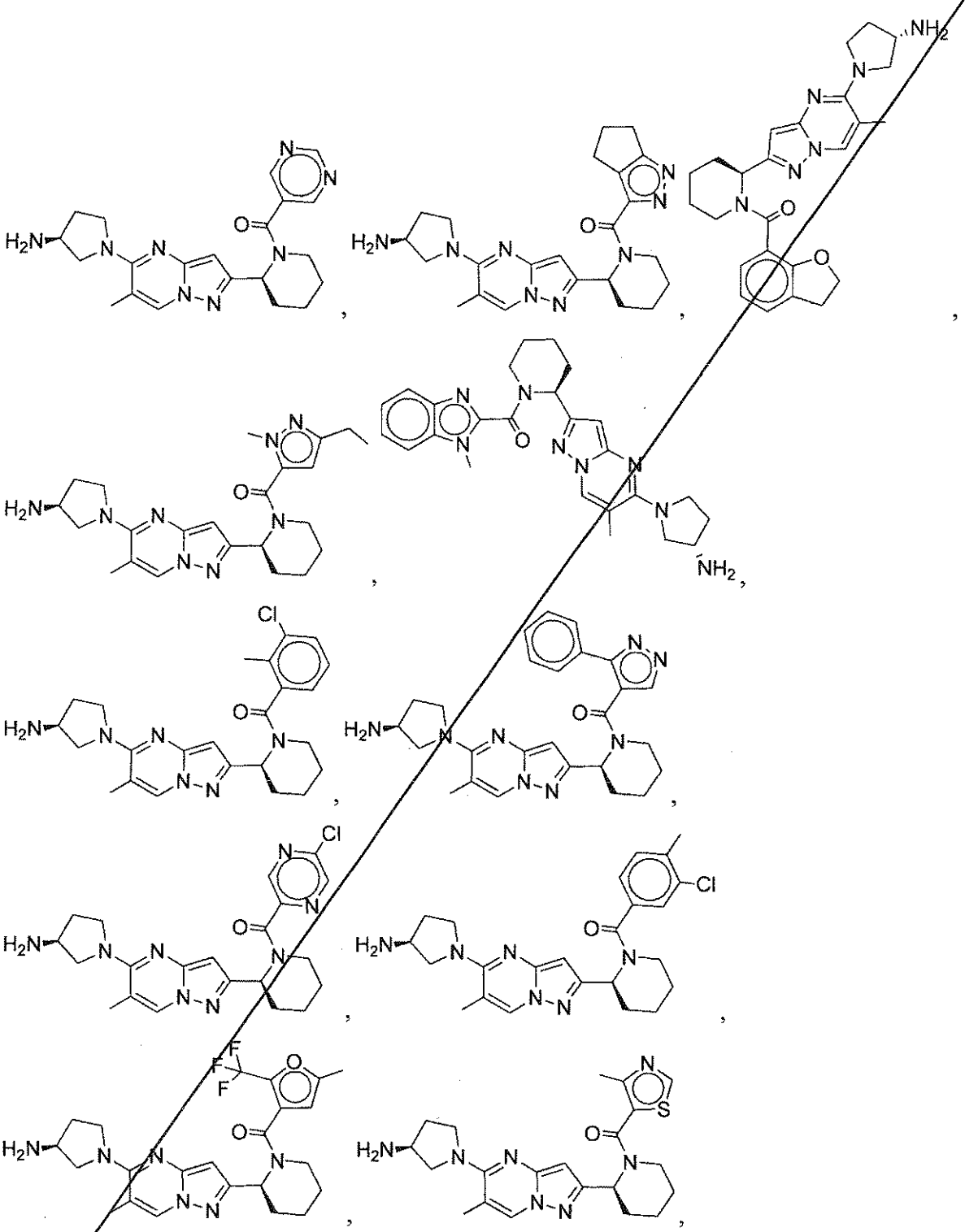
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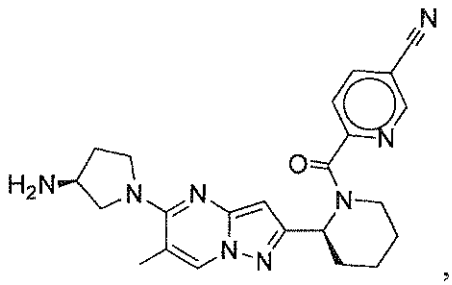
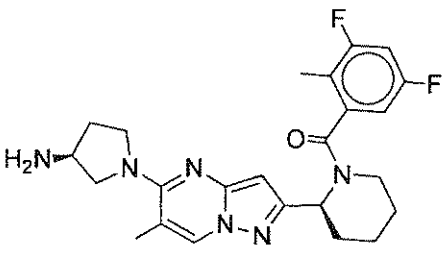
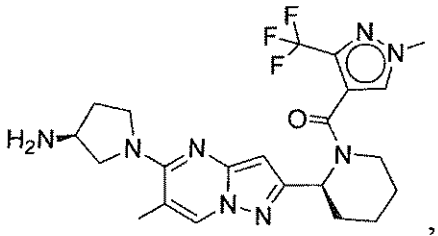
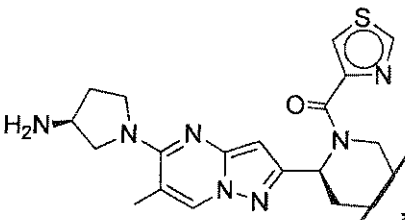
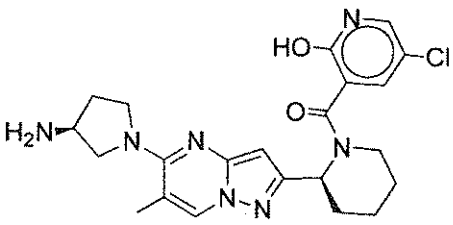
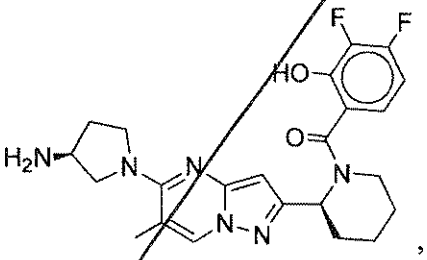
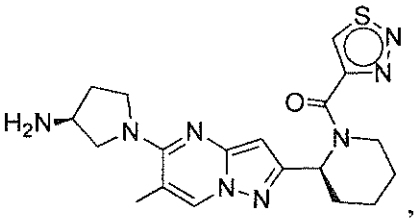
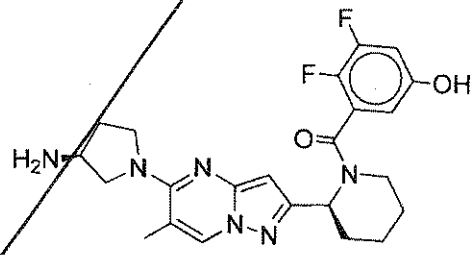
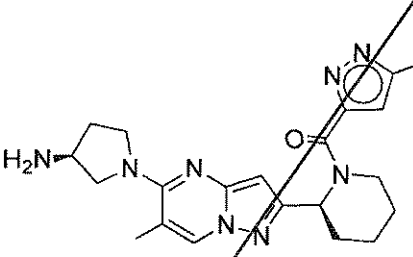












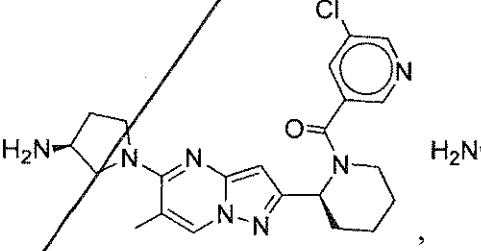
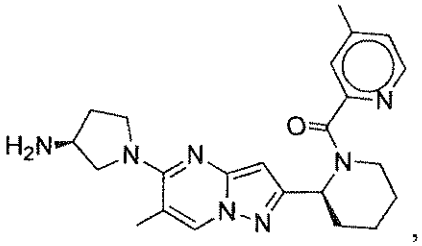


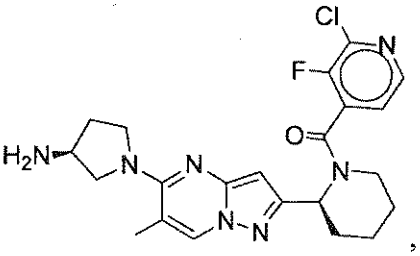











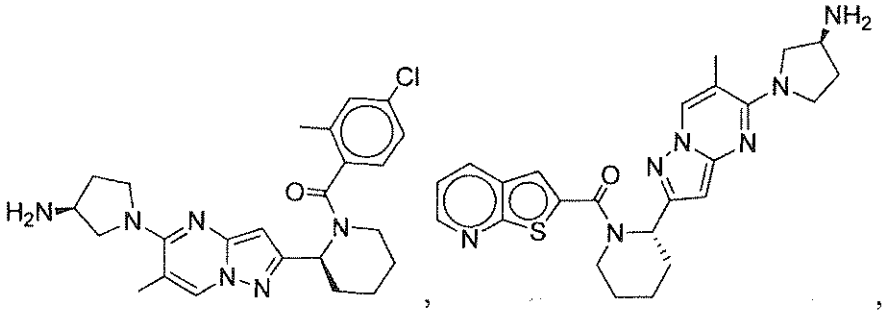












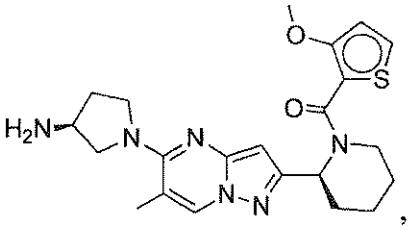
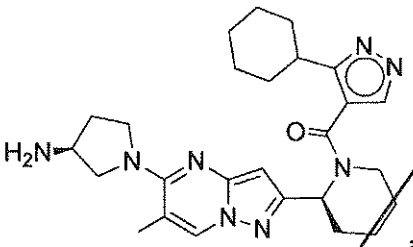
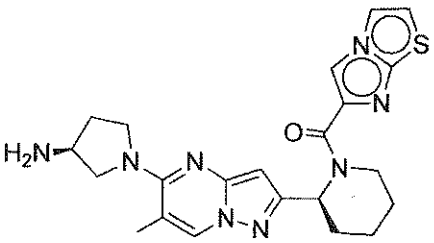
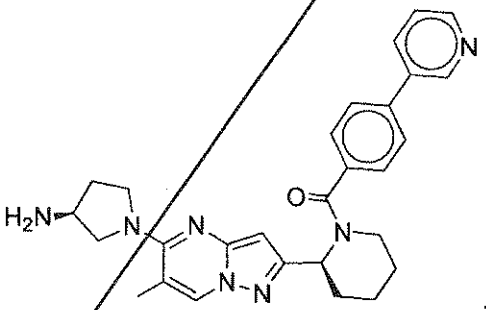


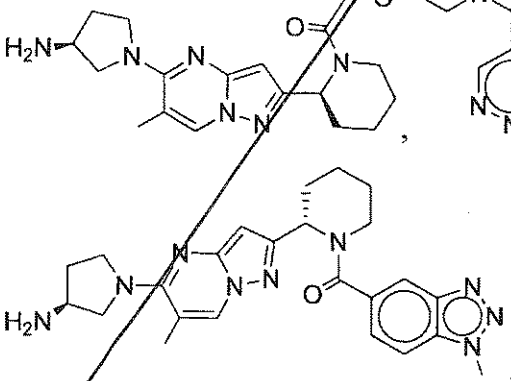
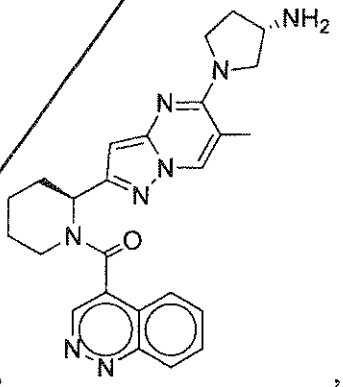

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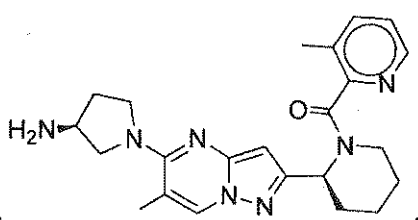
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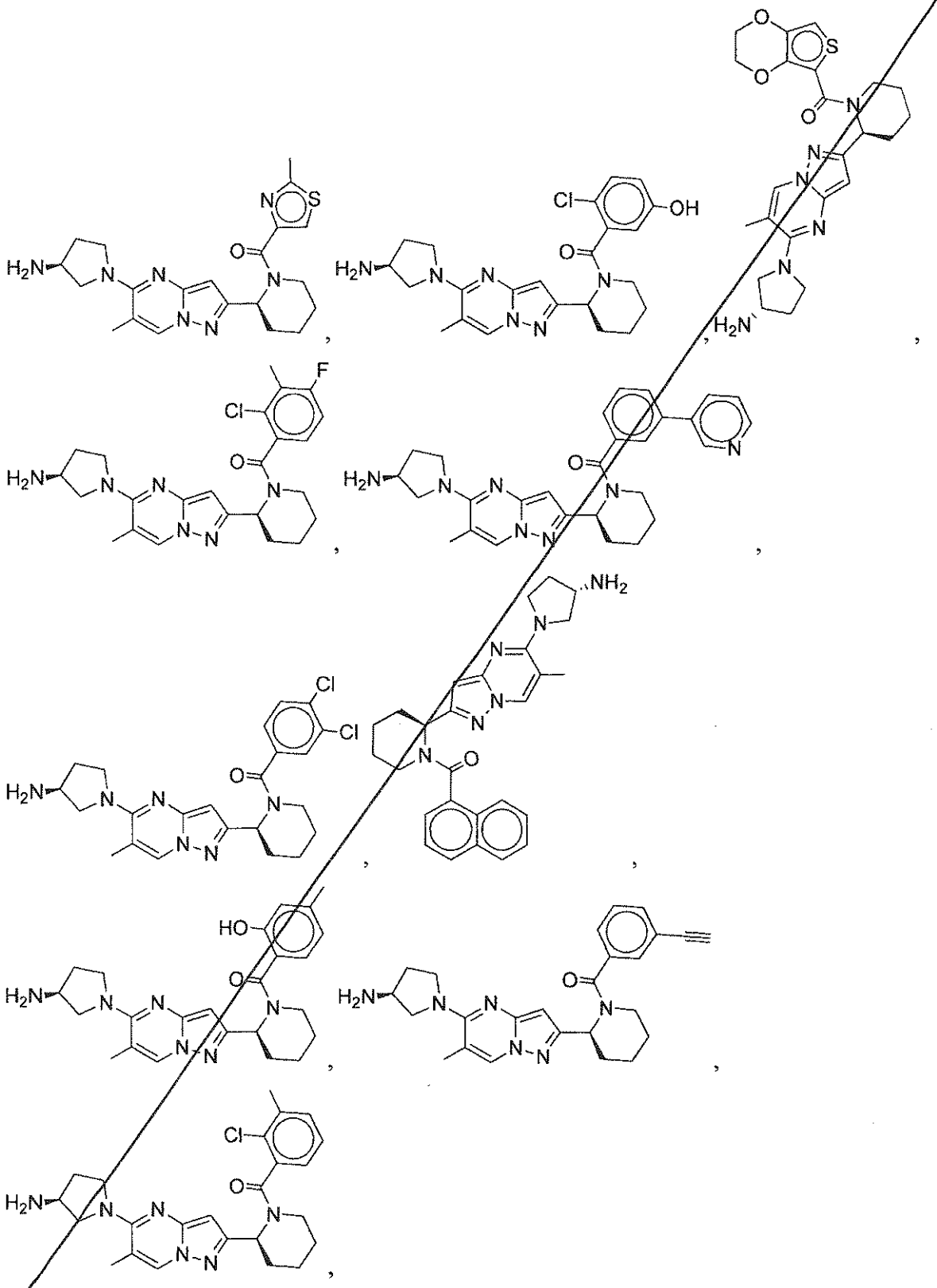
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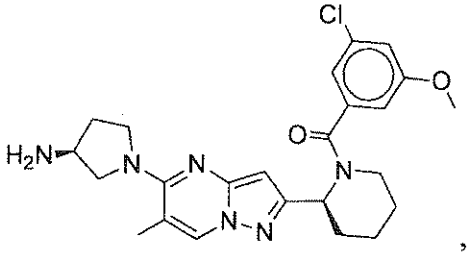
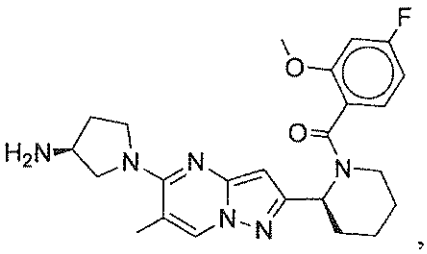
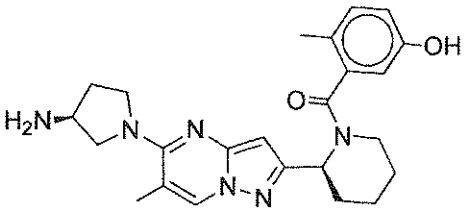
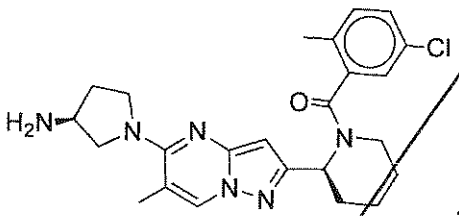
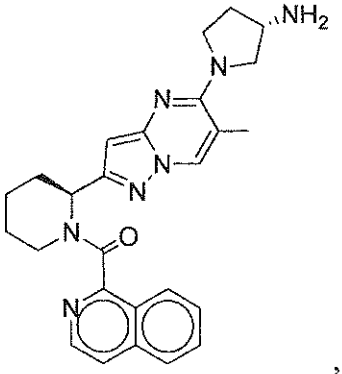
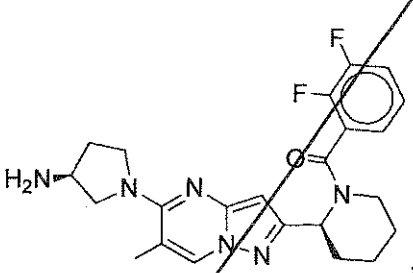
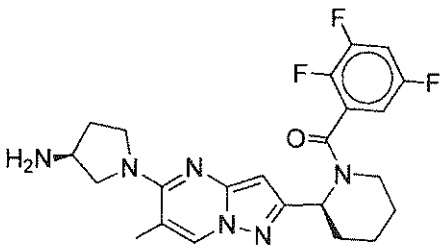
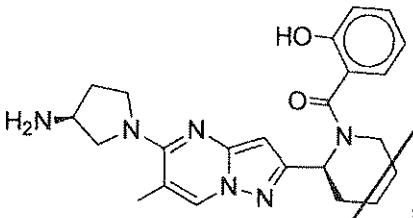
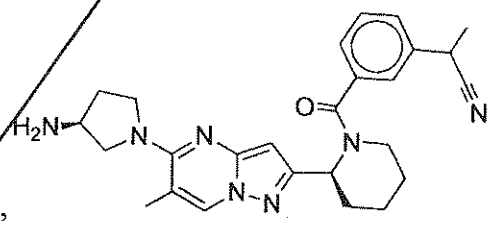


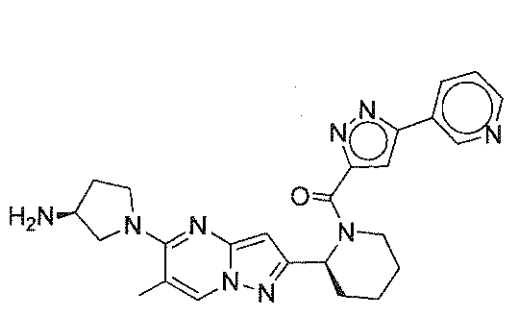
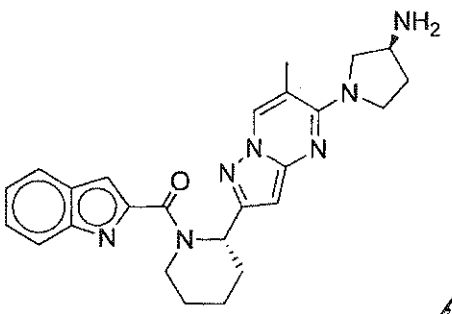
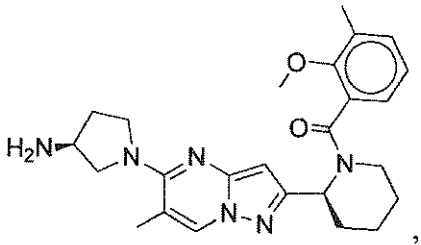
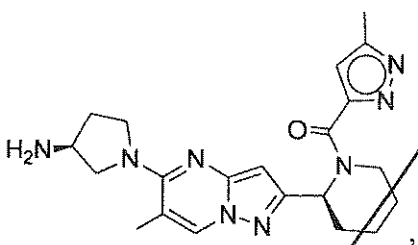
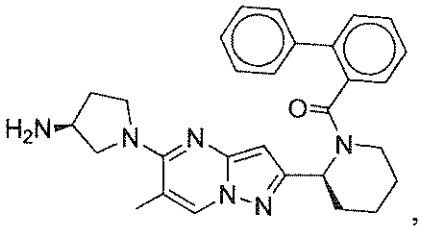
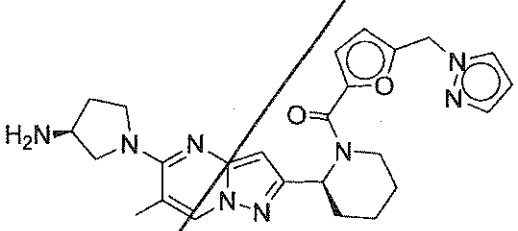
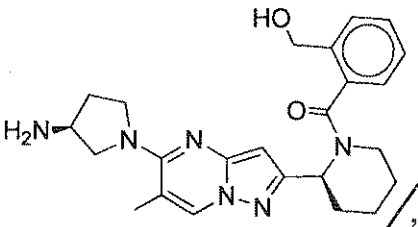
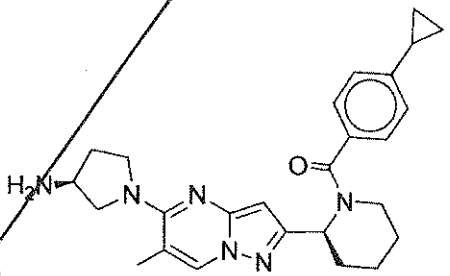
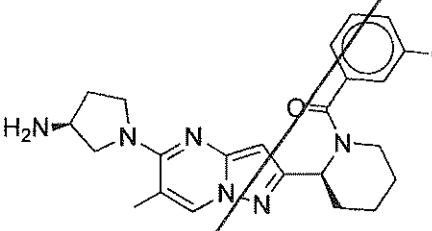
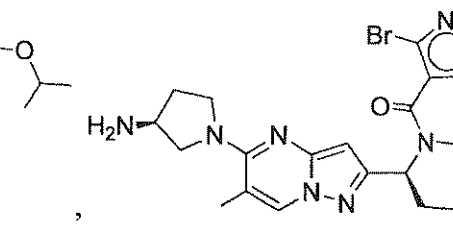




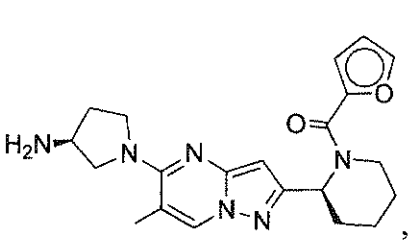
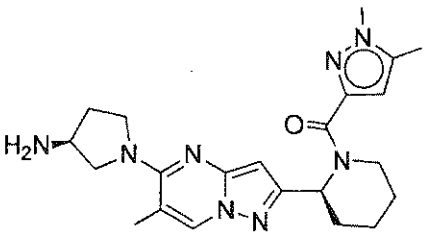
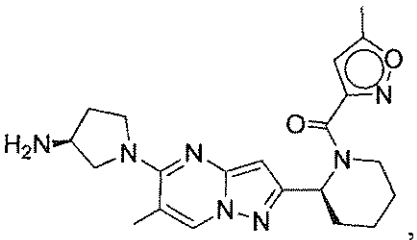
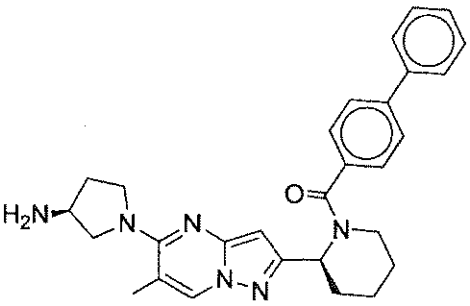
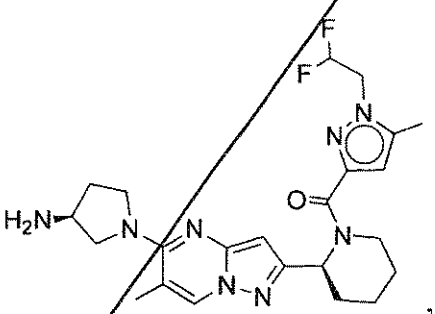
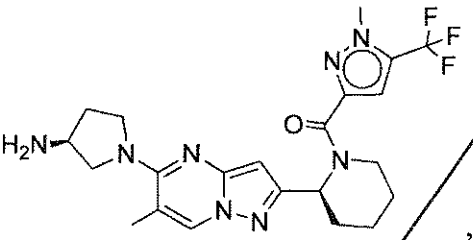
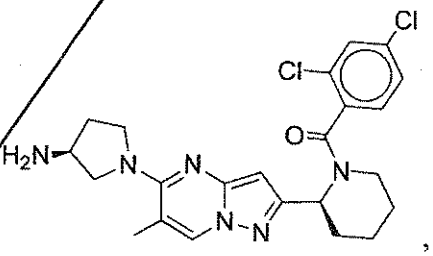
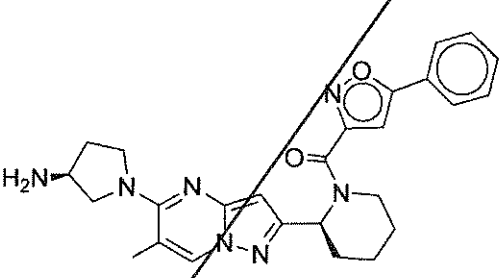
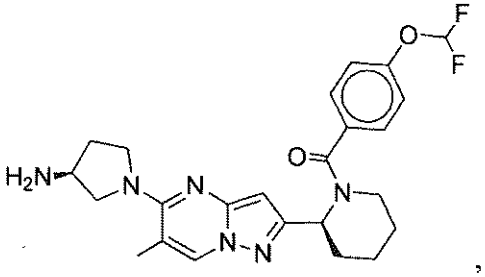
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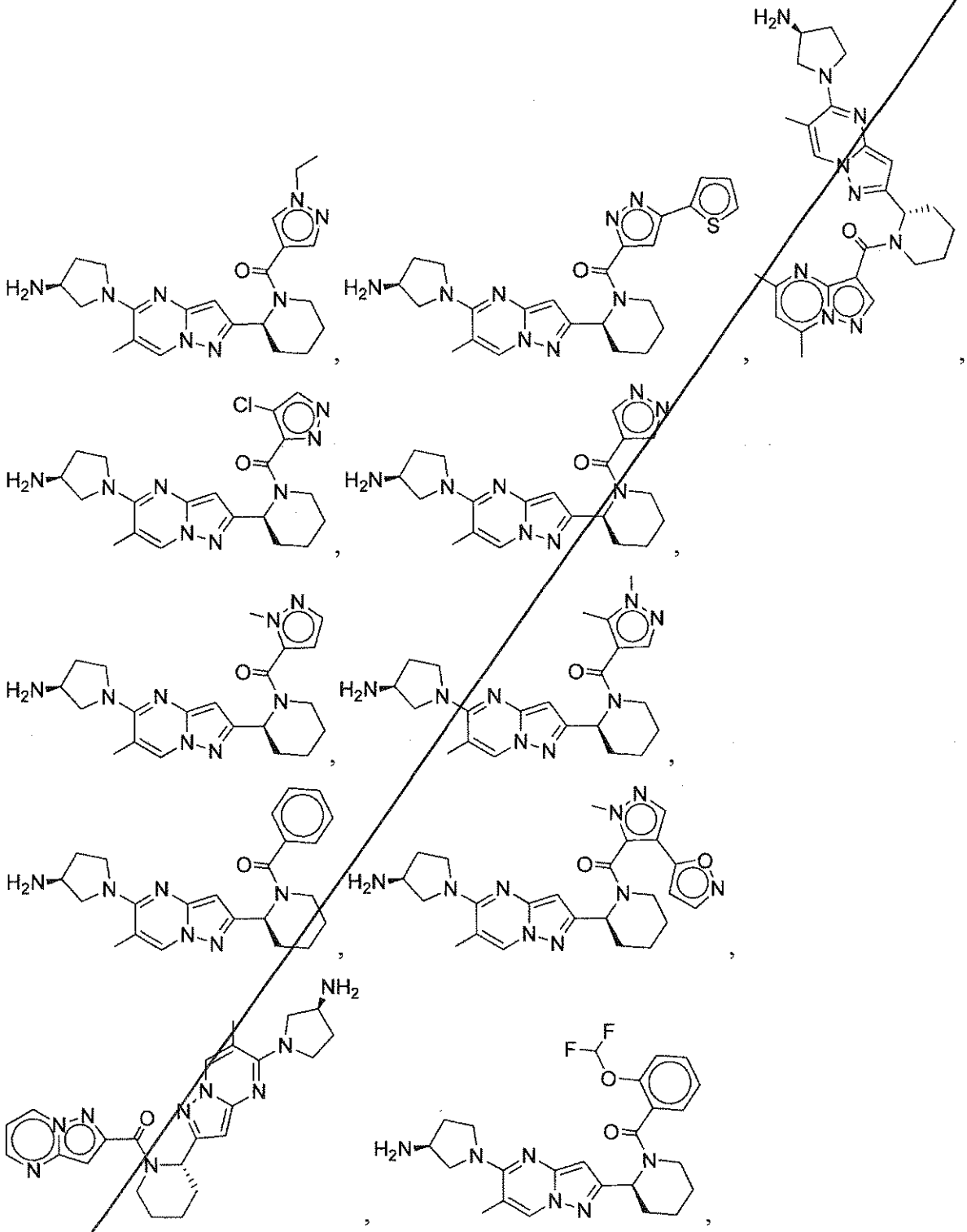
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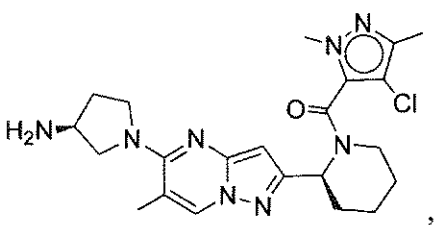
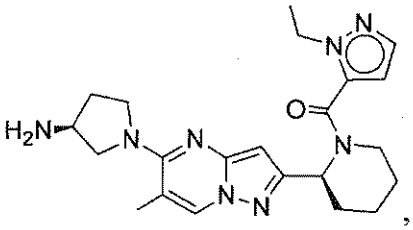
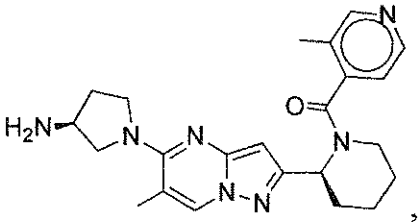
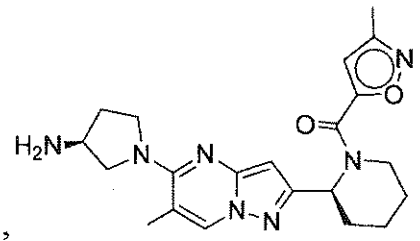
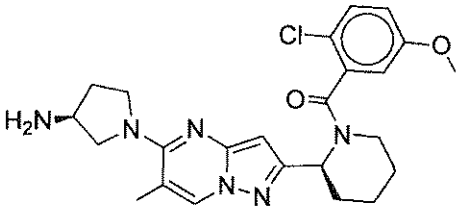
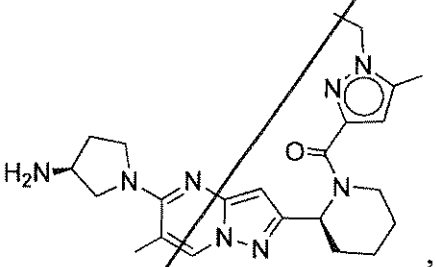
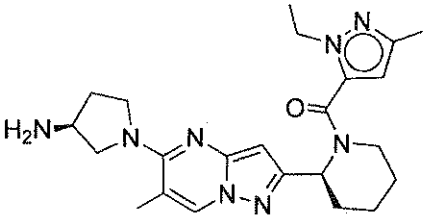
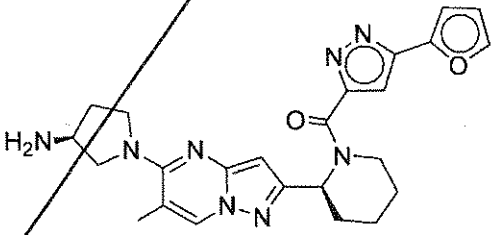
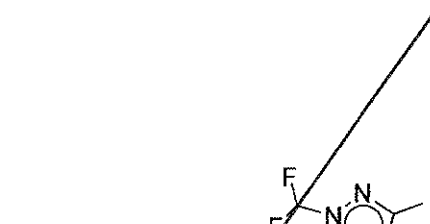
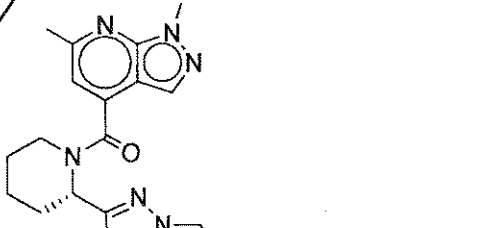
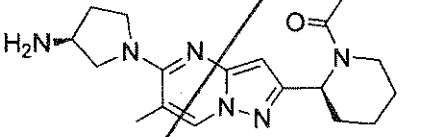

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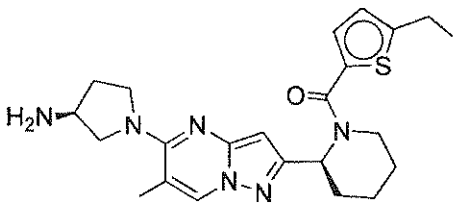
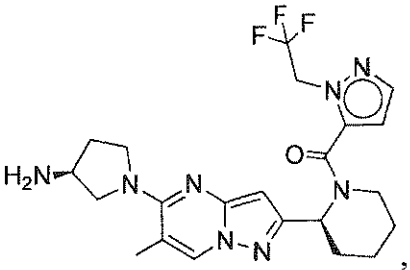
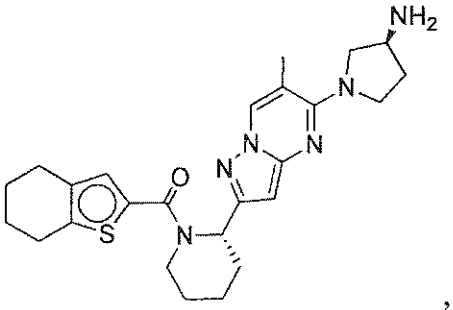
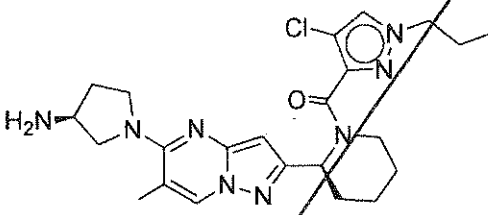
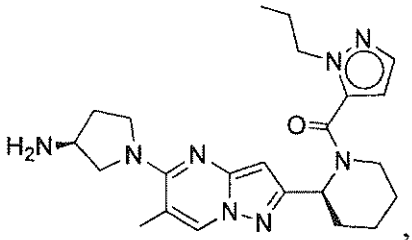
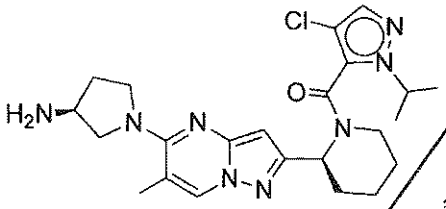
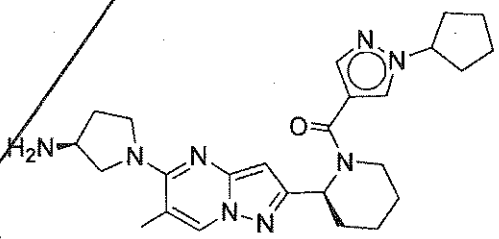
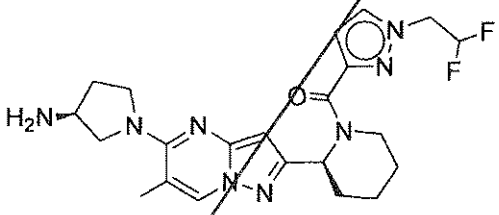
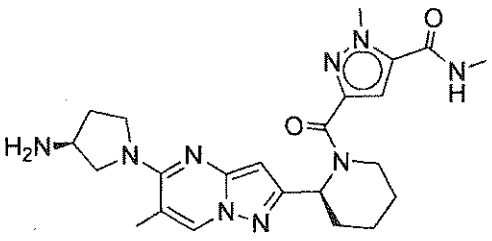
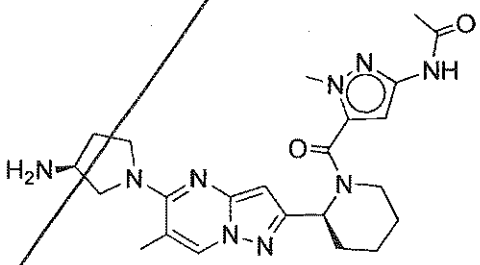
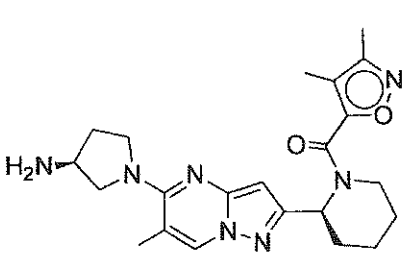
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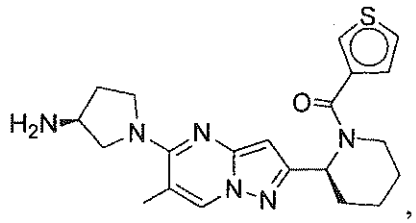
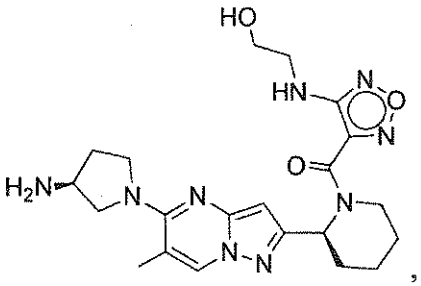
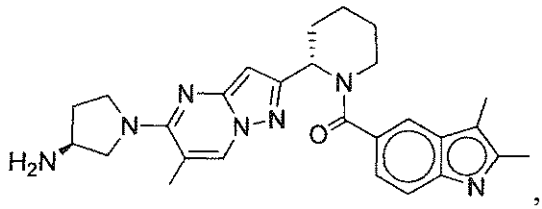
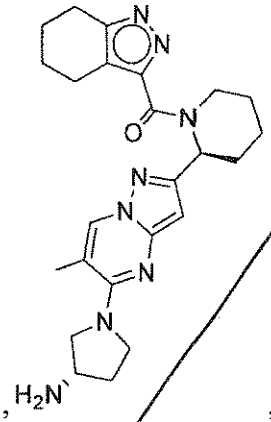
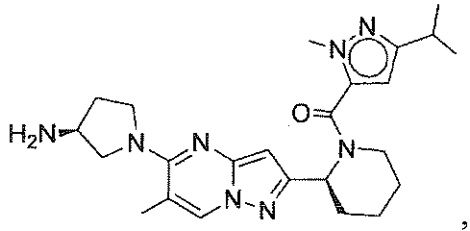
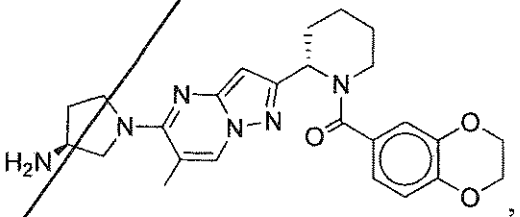
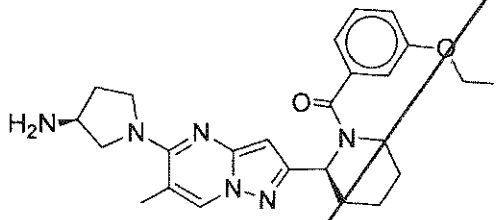
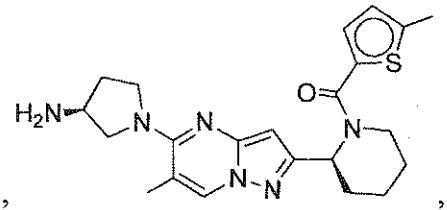
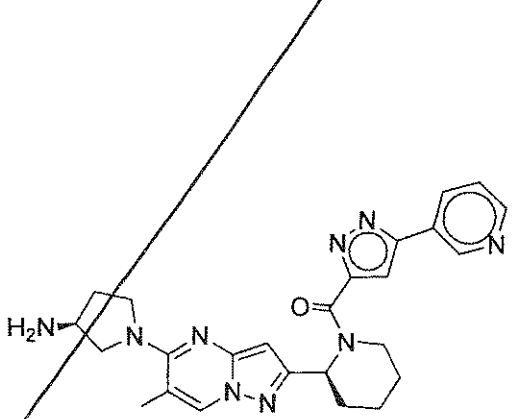
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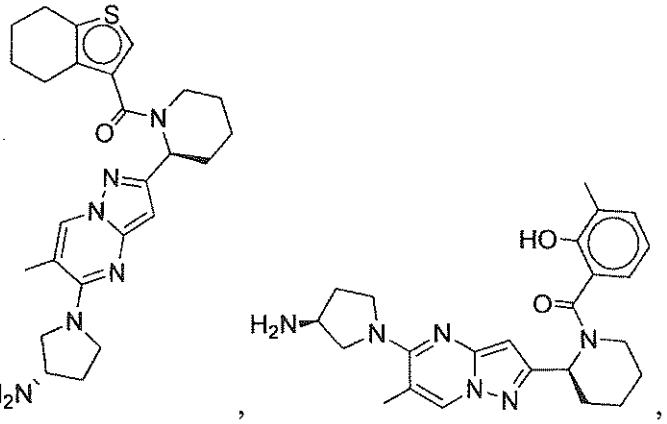



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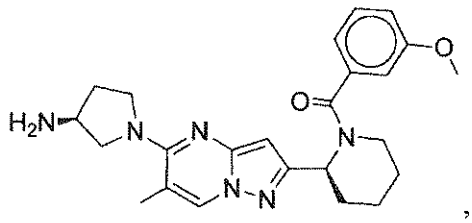
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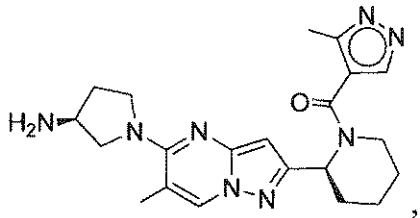












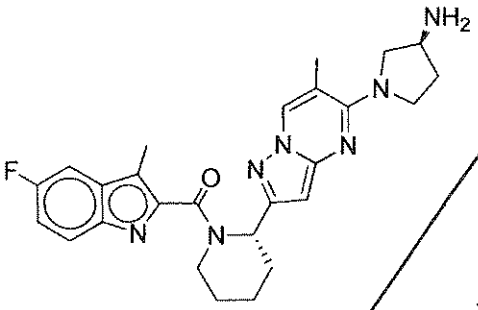
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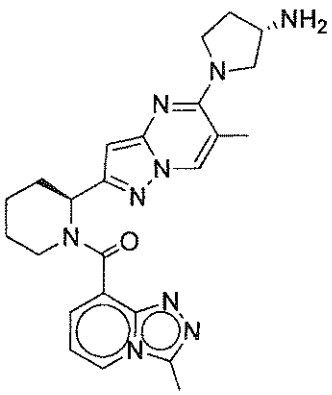
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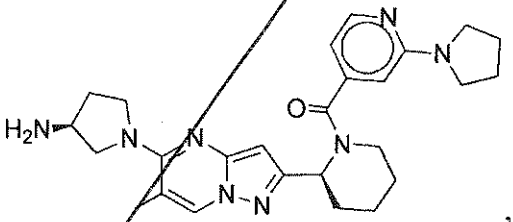
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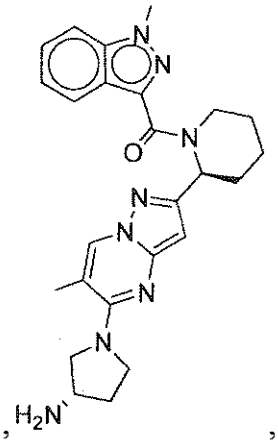
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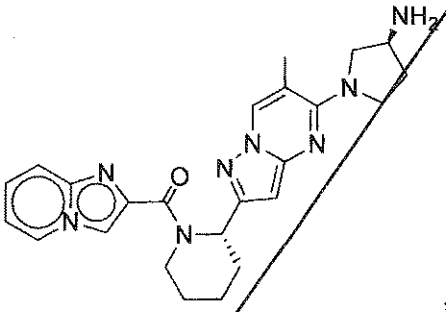
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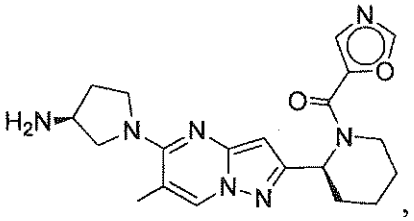
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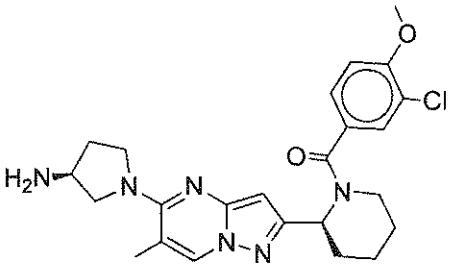
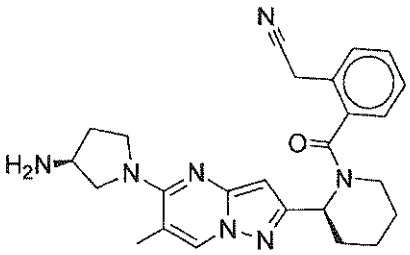
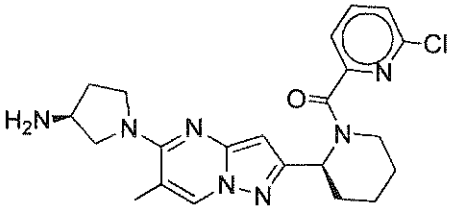
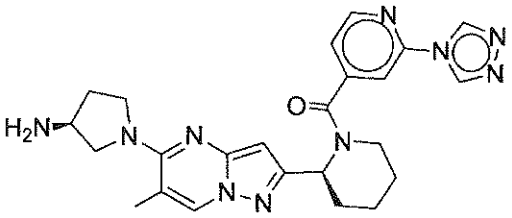
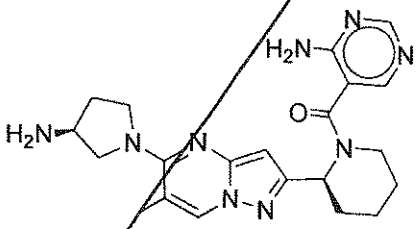
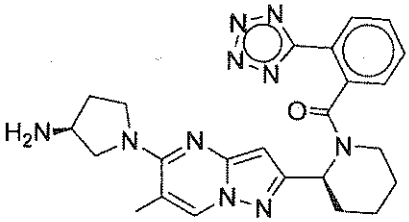
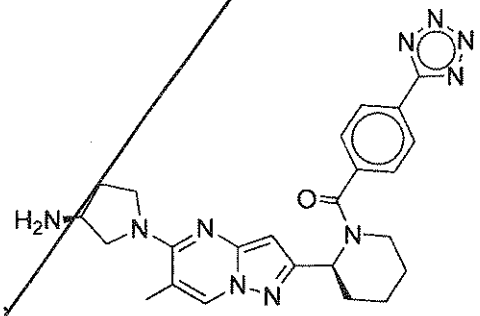
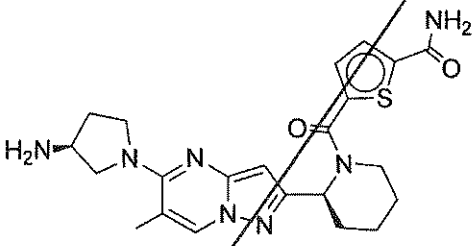
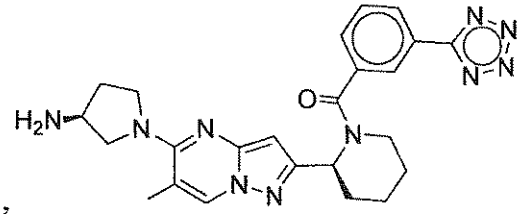
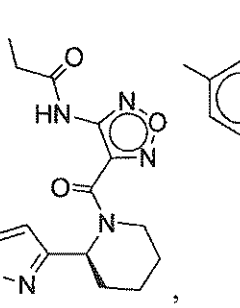
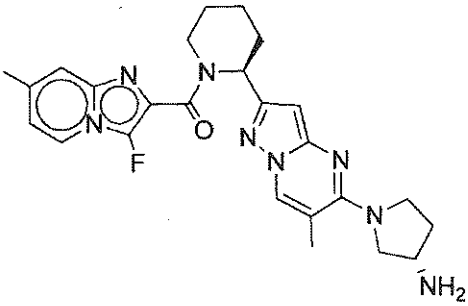
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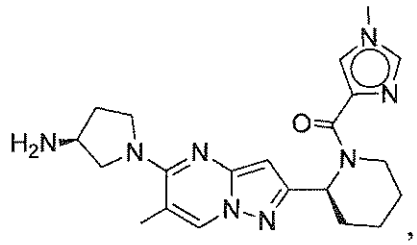
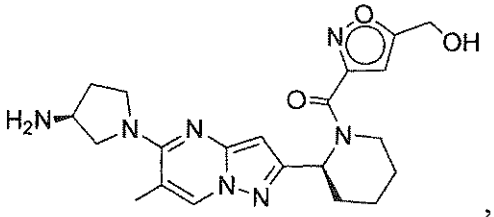
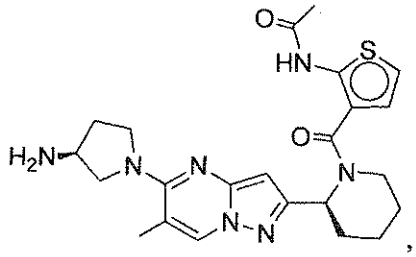
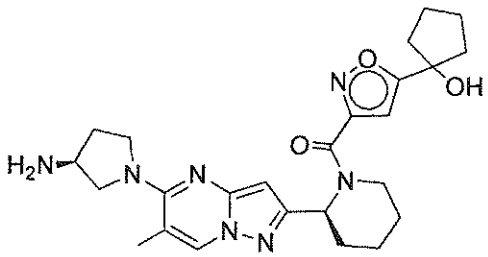
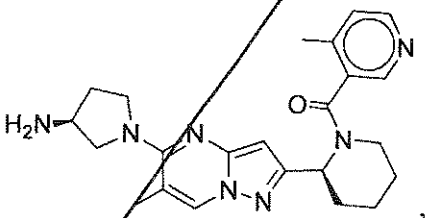
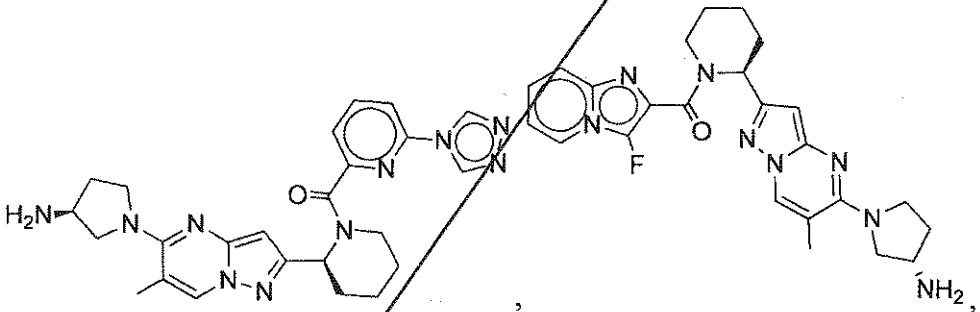
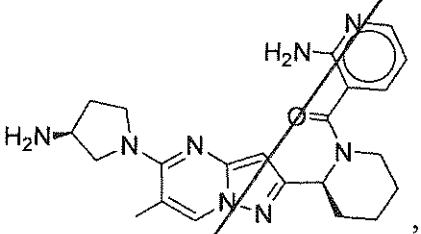
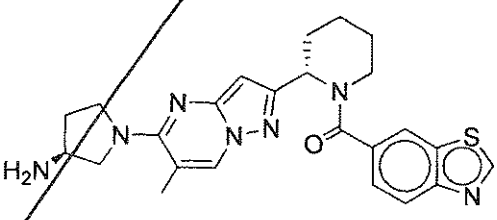
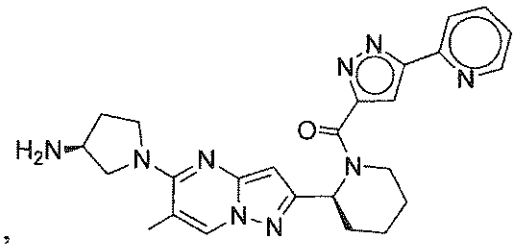


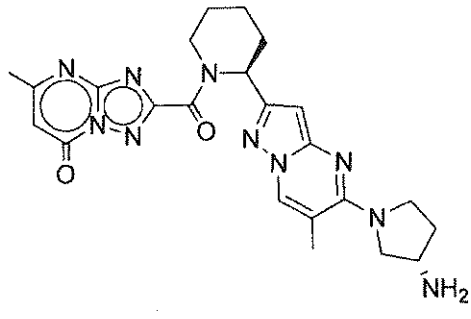
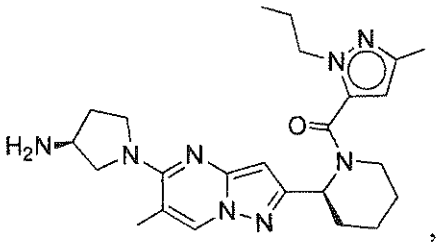
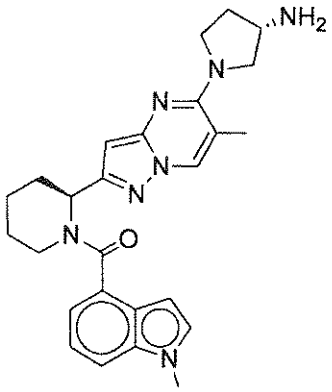
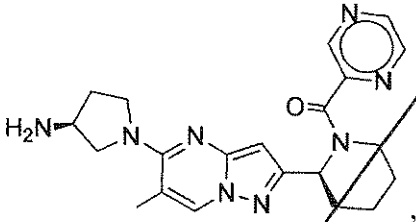
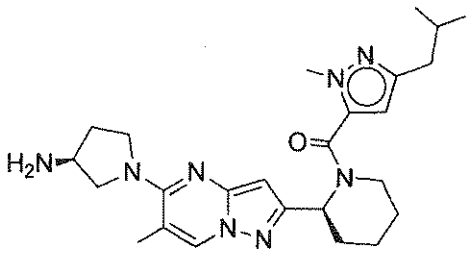
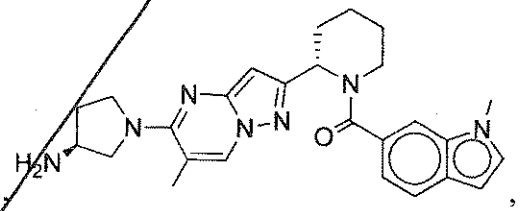
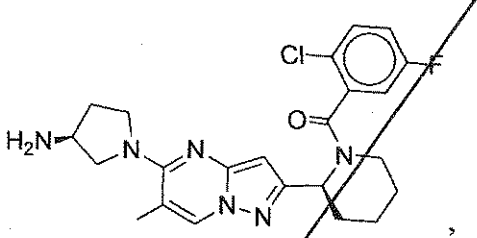
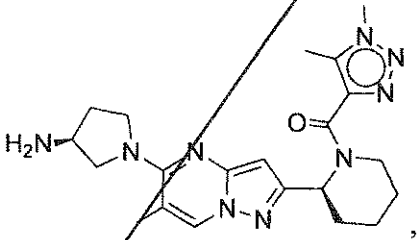
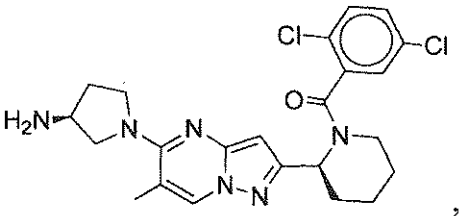
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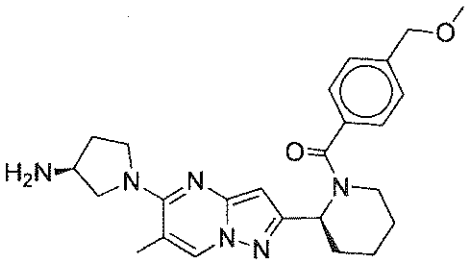
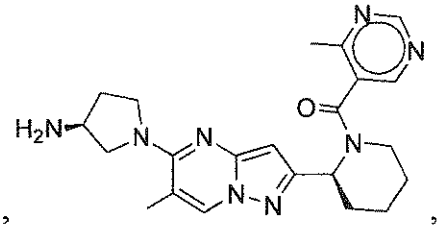
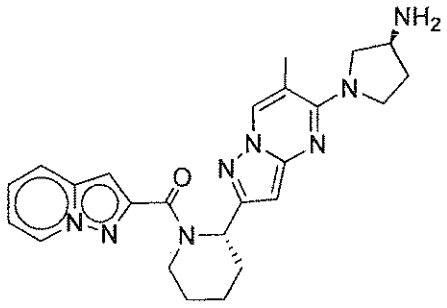
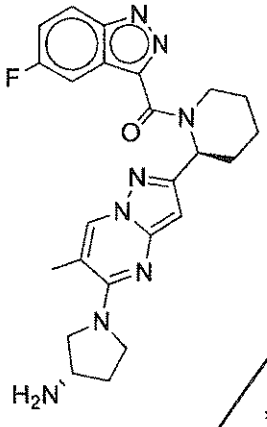
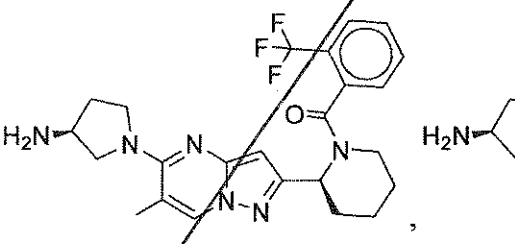
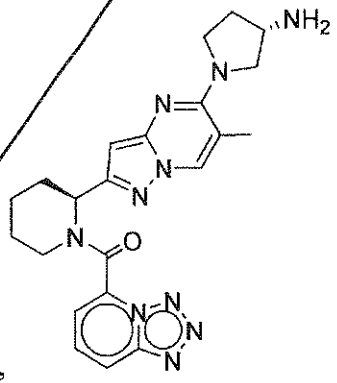

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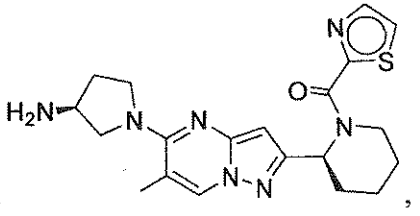
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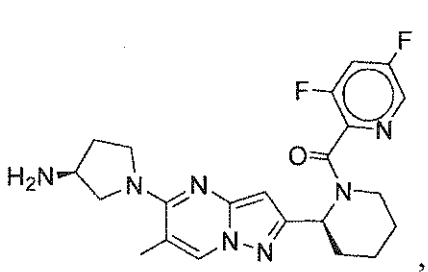
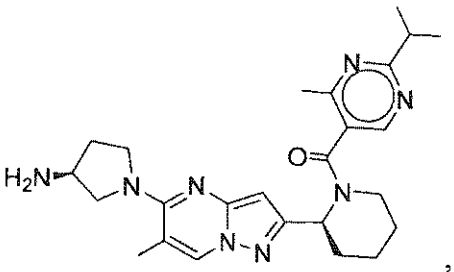
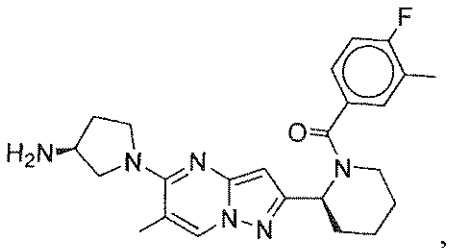
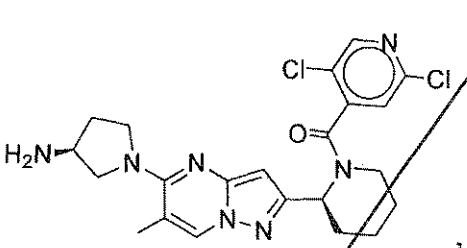
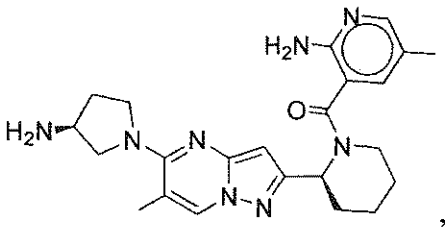
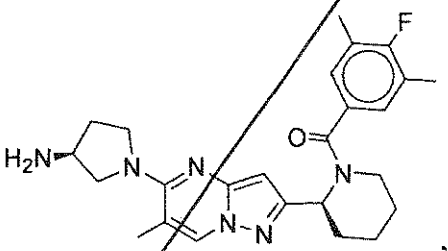
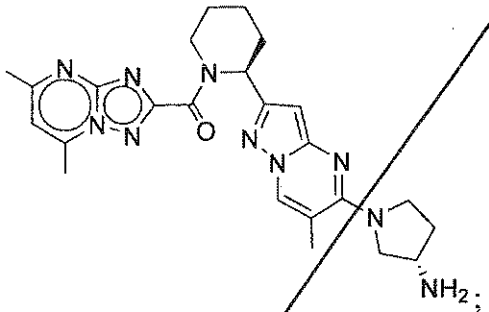
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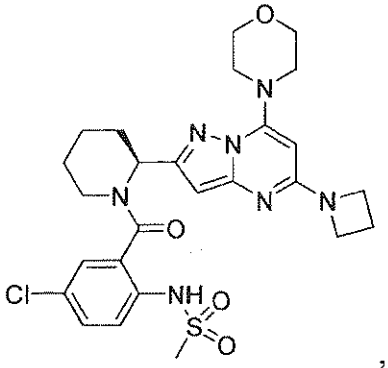
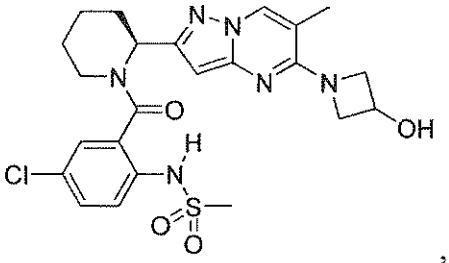
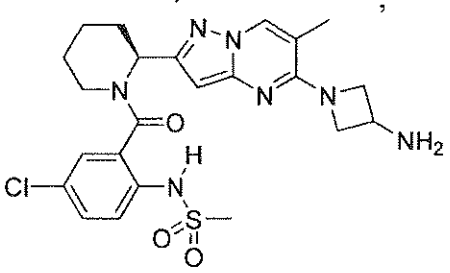
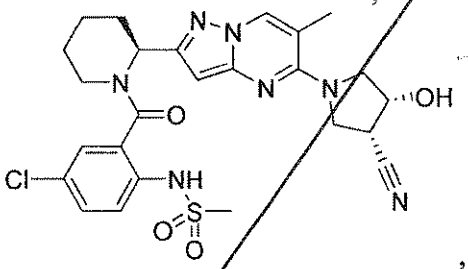
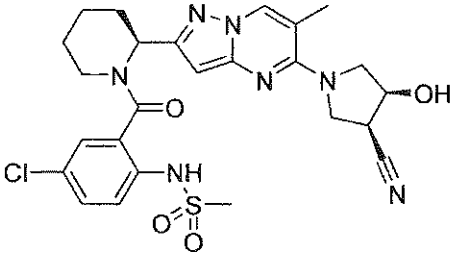
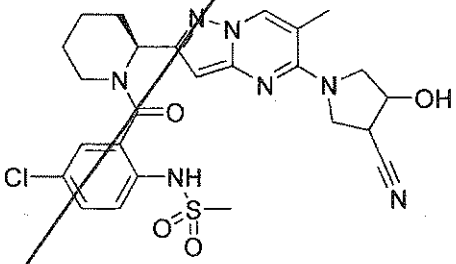
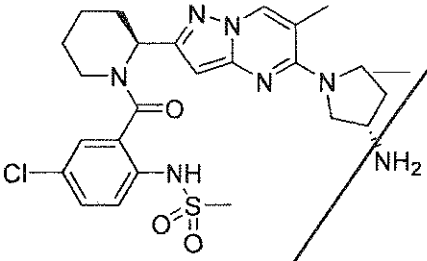
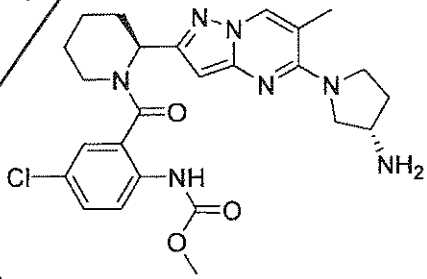
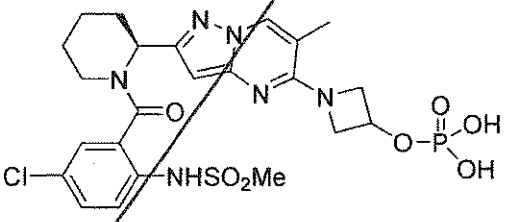
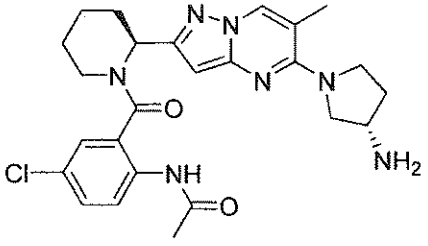



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and pharmaceutically acceptable salts and esters thereof.

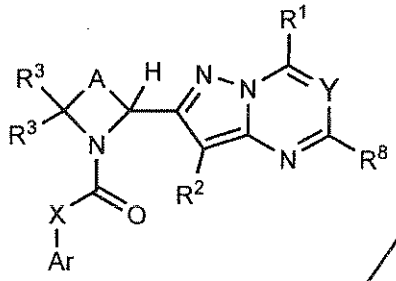
30. The compound according to claim 1 selected from the group consisting of:


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and pharmaceutically acceptable salts and esters thereof.

31. A compound of claim 1 which is a compound as described in any one of Examples 258-412, or a pharmaceutically acceptable salt or ester thereof.

32. A pharmaceutical composition comprising a compound of Formula IX:



Formula IX

or a pharmaceutically acceptable salt or ester thereof and a pharmaceutically acceptable carrier.

wherein:

A is $-(C(R^4)_2)_n-$ wherein any one $C(R^4)_2$ of said $-(C(R^4)_2)_n-$ may be optionally replaced with -O-, -S-, $S(O)_p$-, NH or NR^a;

n is 3, 4, 5 or 6;

each p is 1 or 2;

Ar is a C_2–C_{20} heterocyclyl group or a C_6-C_{20} aryl group, wherein the C_2–C_{20} heterocyclyl group or the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6;

X is $-(CR^{13}R^{14})-$, $-N(CH_2R^{14})-$ or X is absent;

Y is N or CR^7;

each R^1, R^2, R^3, R^4, R^5, R^6, R^7 or R^8 is independently H, oxo, OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, N_3, CN, NO_2, SR^{11}, $S(O)_pR^a$, $NR^{11}S(O)_pR^a$, $-C(=O)R^{11}$, $-C(=O)OR^{11}$, $-C(=O)NR^{11}R^{12}$, $-C(=O)SR^{11}$, $-S(O)_p(OR^{11})$, $-SO_2NR^{11}R^{12}$, $-NR^{11}S(O)_p(OR^{11})$, $-NR^{11}SO_pNR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, (C_1-C_8)alkyl, (C_2-C_8)alkenyl, (C_2-C_8)alkynyl, aryl(C_1-C_8)alkyl, C_6-C_{20} aryl, C_2-C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4-C_8)carbocyclylalkyl;

two R^4 on adjacent carbon atoms, when taken together, may form a double bond between the two carbons to which they are attached or may form a (C_3-C_7)cycloalkyl ring wherein one

carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

four R^4 on adjacent carbon atoms, when taken together, may form an optionally substituted C_6 aryl ring;

two R^4 on the same carbon atom, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

two R^6 on adjacent carbon atoms, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^3, may form a bond or a $-(C(R^5)_2)_m$- group wherein m is 1 or 2;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^2, may form a bond;

each R^a is independently $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl wherein any $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl or $(C_2$-$C_8)$alkynyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl, and wherein any aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl or $(C_1$-$C_8)$alkyl;

each R^{11} or R^{12} is independently H, $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl, $(C_4$–$C_8)$carbocyclylalkyl, $-C(=O)R^a$, $-S(O)_pR^a$, or aryl$(C_1$-$C_8)$alkyl; or R^{11} and R^{12} taken together with a nitrogen to which they are both attached form a 3 to 7 membered heterocyclic ring wherein any one carbon atom of said heterocyclic ring can optionally be replaced with -O-, -S-, $-S(O)_p$-, -NH-, $-NR^a$- or -C(O)-;

R^{13} is H or $(C_1$-$C_8)$alkyl;

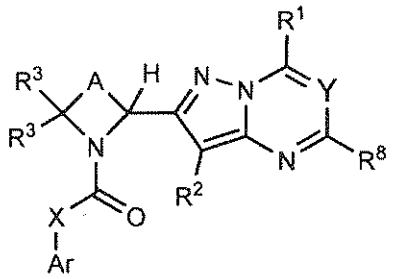
R^{14} is H, $(C_1$-$C_8)$alkyl, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, $NR^{11}S(O)_pR^a$, $-NR^{11}S(O)_p(OR^{11})$ or $NR^{11}SO_pNR^{11}R^{12}$; and

wherein each $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of each R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^{11} or R^{12} is, independently, optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

33. A pharmaceutical composition comprising a therapeutically effective amount of a compound of any one of claims 1-31 or a pharmaceutically acceptable salt or ester thereof and a pharmaceutically acceptable carrier.

34. The pharmaceutical composition of claim 32 or claim 33 further comprising at least one other therapeutic agent selected from ribavirin, palivizumab, motavizumab, RSV-IGIV MEDI-557, A-60444, MDT-637, BMS-433771, ALN-RSV0 or ALX-0171 mixtures thereof.

35. A method of treating a *Pneumovirinae* virus infection in a mammal in need thereof comprising administering to the mammal a therapeutically effective amount of a compound of Formula IX:



Formula IX

or a pharmaceutically acceptable salt or ester thereof,

wherein:

A is $-(C(R^4)_2)_n-$ wherein any one $C(R^4)_2$ of said $-(C(R^4)_2)_n-$ may be optionally replaced with -O-, -S-, $S(O)_p$-, NH or NR^a;

n is 3, 4, 5 or 6;

each p is 1 or 2;

Ar is a C_2–C_{20} heterocyclyl group or a C_6-C_{20} aryl group, wherein the C_2–C_{20} heterocyclyl group or the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6;

X is $-(CR^{13}R^{14})-$, $-N(CH_2R^{14})-$ or X is absent;

Y is N or CR^7;

each R^1, R^2, R^3, R^4, R^5, R^6, R^7 or R^8 is independently H, oxo, OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, N_3, CN, NO_2, SR^{11}, $S(O)_pR^a$, $NR^{11}S(O)_pR^a$, $-C(=O)R^{11}$, $-C(=O)OR^{11}$, $-C(=O)NR^{11}R^{12}$, $-C(=O)SR^{11}$, $-S(O)_p(OR^{11})$, $-SO_2NR^{11}R^{12}$, $-NR^{11}S(O)_p(OR^{11})$, $-NR^{11}SO_pNR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, $(C_1$–$C_8)$alkyl, $(C_2$–$C_8)$alkenyl, $(C_2$–$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl;

two R^4 on adjacent carbon atoms, when taken together, may form a double bond between the two carbons to which they are attached or may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

four R^4 on adjacent carbon atoms, when taken together, may form an optionally substituted C_6 aryl ring;

two R^4 on the same carbon atom, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

two R^6 on adjacent carbon atoms, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^3, may form a bond or a $-(C(R^5)_2)_m-$ group wherein m is 1 or 2;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^2, may form a bond;

each R^a is independently $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl wherein any $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl or $(C_2$-$C_8)$alkynyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl, and wherein any aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl or $(C_1$-$C_8)$alkyl;

each R^{11} or R^{12} is independently H, $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl, $(C_4$–$C_8)$carbocyclylalkyl, $-C(=O)R^a$, $-S(O)_pR^a$, or aryl$(C_1$-$C_8)$alkyl; or R^{11} and R^{12} taken together with a nitrogen to which they are both attached form a 3 to 7 membered heterocyclic ring wherein any one carbon atom of said heterocyclic ring can optionally be replaced with -O-, -S-, $-S(O)_p$-, -NH-, $-NR^a$- or -C(O)-;

R^{13} is H or $(C_1$-$C_8)$alkyl;

R^{14} is H, $(C_1$-$C_8)$alkyl, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, $NR^{11}S(O)_pR^a$, $-NR^{11}S(O)_p(OR^{11})$ or $NR^{11}SO_pNR^{11}R^{12}$; and

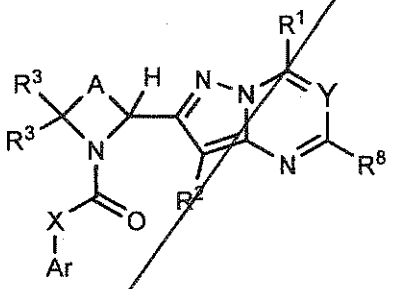
wherein each $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of each R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^{11} or R^{12} is, independently, optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

36. A method of treating a *Pneumovirinae* virus infection in a mammal in need thereof comprising administering to the mammal a therapeutically effective amount of a compound of any one of claims 1-31 or a composition of any one of claims 32-34 or a pharmaceutically acceptable salt or ester thereof.

37. The method of claim 35 or 36 wherein the *Pneumovirinae* virus infection is caused by a respiratory syncytial virus.

38. The method of any one of claims 35-37 further comprising administering a therapeutically effective amount of at least one other therapeutic agent or composition thereof selected from the group consisting of ribavirin, palivizumab, motavizumab, RSV-IGIV MEDI-557, A-60444, MDT-637, BMS-433771, ALN-RSV0 and ALX-0171 of mixtures thereof.

39. A compound of Formula IX:



Formula IX

or a pharmaceutically acceptable salt or ester thereof , or composition thereof for use in the therapeutic or prophylactic treatment of a *Pneumovirinae* virus infection or a respiratory syncytial virus infection;

wherein:

A is $-(C(R^4)_2)_n-$ wherein any one $C(R^4)_2$ of said $-(C(R^4)_2)_n-$ may be optionally replaced with -O-, -S-, $S(O)_p$-, NH or NR^a;

n is 3, 4, 5 or 6;

each p is 1 or 2;

Ar is a C_2–C_{20} heterocyclyl group or a C_6-C_{20} aryl group, wherein the C_2–C_{20} heterocyclyl group or the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6;

X is $-(CR^{13}R^{14})-$, $-N(CH_2R^{14})-$ or X is absent;

Y is N or CR^7;

each R^1, R^2, R^3, R^4, R^5, R^6, R^7 or R^8 is independently H, oxo, OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, N_3, CN, NO_2, SR^{11}, $S(O)_pR^a$, $NR^{11}S(O)_pR^a$, $-C(=O)R^{11}$, $-C(=O)OR^{11}$, $-C(=O)NR^{11}R^{12}$, $-C(=O)SR^{11}$, $-S(O)_p(OR^{11})$, $-SO_2NR^{11}R^{12}$, $-NR^{11}S(O)_p(OR^{11})$, $-NR^{11}SO_pNR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, (C_1-C_8)alkyl, (C_2-C_8)alkenyl, (C_2-C_8)alkynyl, aryl(C_1-C_8)alkyl, C_6-C_{20} aryl, C_2-C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4-C_8)carbocyclylalkyl;

two R^4 on adjacent carbon atoms, when taken together, may form a double bond between the two carbons to which they are attached or may form a (C_3-C_7)cycloalkyl ring wherein one carbon atom of said (C_3-C_7)cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p-$, -NH- or $-NR^a-$;

four R^4 on adjacent carbon atoms, when taken together, may form an optionally substituted C_6 aryl ring;

two R^4 on the same carbon atom, when taken together, may form a (C_3-C_7)cycloalkyl ring wherein one carbon atom of said (C_3-C_7)cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p-$, -NH- or $-NR^a-$;

two R^6 on adjacent carbon atoms, when taken together, may form a (C_3-C_7)cycloalkyl ring wherein one carbon atom of said (C_3-C_7)cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p-$, -NH- or $-NR^a-$;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^3, may form a bond or a $-(C(R^5)_2)_m-$ group wherein m is 1 or 2;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^2, may form a bond;

each R^a is independently (C_1-C_8)alkyl, (C_1-C_8)haloalkyl, (C_2-C_8)alkenyl, (C_2-C_8)alkynyl, aryl(C_1-C_8)alkyl, C_6-C_{20} aryl, C_2-C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4-C_8)carbocyclylalkyl wherein any (C_1-C_8)alkyl, (C_1-C_8)haloalkyl, (C_2-C_8)alkenyl or (C_2-C_8)alkynyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2-C_{20} heterocyclyl, and wherein any aryl(C_1-C_8)alkyl, C_6-C_{20} aryl, C_2-C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4-C_8)carbocyclylalkyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2-C_{20} heterocyclyl or (C_1-C_8)alkyl;

each R^{11} or R^{12} is independently H, $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl, $(C_4$–$C_8)$carbocyclylalkyl, -C(=O)R^a, -S(O)$_p$$R^a$, or aryl$(C_1$-$C_8)$alkyl; or R^{11} and R^{12} taken together with a nitrogen to which they are both attached form a 3 to 7 membered heterocyclic ring wherein any one carbon atom of said heterocyclic ring can optionally be replaced with -O-, -S-, -S(O)$_p$-, -NH-, -NR^a- or -C(O)-;

R^{13} is H or $(C_1$-$C_8)$alkyl;

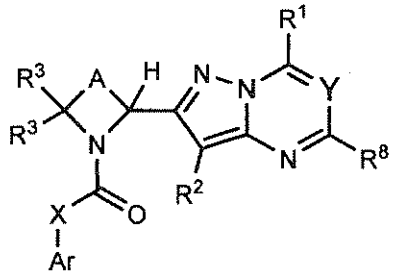
R^{14} is H, $(C_1$-$C_8)$alkyl, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, $NR^{11}S(O)_pR^a$, -$NR^{11}S(O)_p(OR^{11})$ or $NR^{11}SO_pNR^{11}R^{12}$; and

wherein each $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of each R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^{11} or R^{12} is, independently, optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, S(O)$_p$$R^a$, OR^a, $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, -C(O)R^a, -C(O)H, -C(=O)OR^a, -C(=O)OH, -C(=O)$N(R^a)_2$, -C(=O)NHR^a, -C(=O)NH_2, NHS(O)$_p$$R^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, =NOR^a, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, -OC(=O)R^a, -OP(O)$(OH)_2$ or R^a.

40. A compound of any one of claims 1-31 or a pharmaceutically acceptable salt or ester thereof, or composition thereof for use in the therapeutic or prophylactic treatment of a *Pneumovirinae* virus infection or a respiratory syncytial virus infection.

41. The compound of claim 39 or claim 40 further comprising administering a therapeutically effective amount of at least one other therapeutic agent or composition thereof selected from the group consisting of ribavirin, palivizumab, motavizumab, RSV-IGIV, MEDI-557, A-60444, MDT-63, BMS-433771, ALN-RSV0 and ALX-0171 or mixtures thereof.

42. A compound of Formula IX:



Formula IX

or a pharmaceutically acceptable salt or ester thereof , or composition thereof for use in medical therapy,

wherein:

A is $-(C(R^4)_2)_n-$ wherein any one $C(R^4)_2$ of said $-(C(R^4)_2)_n-$ may be optionally replaced with -O-, -S-, $S(O)_p$-, NH or NR^a;

n is 3, 4, 5 or 6;

each p is 1 or 2;

Ar is a C_2–C_{20} heterocyclyl group or a C_6-C_{20} aryl group, wherein the C_2–C_{20} heterocyclyl group or the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6;

X is $-(CR^{13}R^{14})-$, $-N(CH_2R^{14})-$ or X is absent;

Y is N or CR^7;

each R^1, R^2, R^3, R^4, R^5, R^6, R^7 or R^8 is independently H, oxo, OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, N_3, CN, NO_2, SR^{11}, $S(O)_pR^a$, $NR^{11}S(O)_pR^a$, $-C(=O)R^{11}$, $-C(=O)OR^{11}$, $-C(=O)NR^{11}R^{12}$, $-C(=O)SR^{11}$, $-S(O)_p(OR^{11})$, $-SO_2NR^{11}R^{12}$, $-NR^{11}S(O)_p(OR^{11})$, $-NR^{11}SO_pNR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, $(C_1$–$C_8)$alkyl, $(C_2$–$C_8)$alkenyl, $(C_2$–$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl;

two R^4 on adjacent carbon atoms, when taken together, may form a double bond between the two carbons to which they are attached or may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

four R^4 on adjacent carbon atoms, when taken together, may form an optionally substituted C_6 aryl ring;

two R^4 on the same carbon atom, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

two R^6 on adjacent carbon atoms, when taken together, may form a $(C_3$-$C_7)$cycloalkyl ring wherein one carbon atom of said $(C_3$-$C_7)$cycloalkyl ring may be optionally replaced by -O-, -S-, $-S(O)_p$-, -NH- or $-NR^a$-;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^3, may form a bond or a $-(C(R^5)_2)_m$- group wherein m is 1 or 2;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^2, may form a bond;

each R^a is independently $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl wherein any $(C_1$-$C_8)$alkyl, $(C_1$-$C_8)$haloalkyl, $(C_2$-$C_8)$alkenyl or $(C_2$-$C_8)$alkynyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl, and wherein any aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl or $(C_1$-$C_8)$alkyl;

each R^{11} or R^{12} is independently H, $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl, $(C_4$–$C_8)$carbocyclylalkyl, $-C(=O)R^a$, $-S(O)_pR^a$, or aryl$(C_1$-$C_8)$alkyl; or R^{11} and R^{12} taken together with a nitrogen to which they are both attached form a 3 to 7 membered heterocyclic ring wherein any one carbon atom of said heterocyclic ring can optionally be replaced with -O-, -S-, $-S(O)_p$-, -NH-, $-NR^a$- or -C(O)-;

R^{13} is H or $(C_1$-$C_8)$alkyl;

R^{14} is H, $(C_1$-$C_8)$alkyl, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, $NR^{11}S(O)_pR^a$, $NR^{11}S(O)_p(OR^{11})$ or $NR^{11}SO_pNR^{11}R^{12}$; and

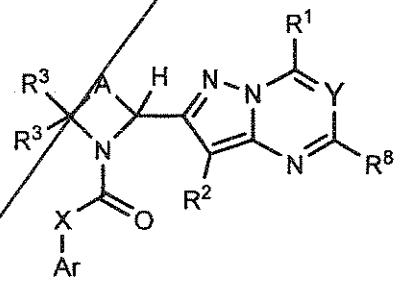
wherein each $(C_1$-$C_8)$alkyl, $(C_2$-$C_8)$alkenyl, $(C_2$-$C_8)$alkynyl, aryl$(C_1$-$C_8)$alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, $(C_3$-$C_7)$cycloalkyl or $(C_4$–$C_8)$carbocyclylalkyl of each R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^{11} or R^{12} is, independently, optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, $(C_1$-$C_8)$alkyl, $(C_1$-

C_8)haloalkyl, -C(O)R^a, -C(O)H, -C(=O)OR^a, -C(=O)OH, -C(=O)N(R^a)$_2$, -C(=O)NHR^a, -C(=O)NH_2, NHS(O)$_p$$R^a$, N$R^a$S(O)$_p$$R^a$, NHC(O)$R^a$, N$R^a$C(O)$R^a$, NHC(O)O$R^a$, N$R^a$C(O)O$R^a$, N$R^a$C(O)NH$R^a$, N$R^a$C(O)N($R^a$)$_2$, N$R^a$C(O)N$H_2$, NHC(O)NH$R^a$, NHC(O)N($R^a$)$_2$, NHC(O)N$H_2$, =NH, =NOH, =NO$R^a$, N$R^a$S(O)$_pNHR^a$, N$R^a$S(O)$_p$N($R^a$)$_2$, N$R^a$S(O)$_pNH_2$, NHS(O)$_pNHR^a$, NHS(O)$_p$N($R^a$)$_2$, NHS(O)$_pNH_2$, -OC(=O)$R^a$, -OP(O)$(OH)_2$ or R^a.

43. A compound of any one of claims 1-31 or a pharmaceutically acceptable salt or ester thereof or composition thereof for use in medical therapy.

44. The compound of claim 42 or claim 43 further comprising administering a therapeutically effective amount of at least one other therapeutic agent or composition thereof selected from the group consisting of ribavirin, palivizumab, motavizumab, RSV-IGIV, MEDI-557, A-60444, MDT-63, BMS-433771, ALN-RSV0 and ALX-0171 or mixtures thereof.

45. The use of a compound of Formula IX:



Formula IX

or a pharmaceutically acceptable salt or ester thereof, for the manufacture of a medicament for the treatment of a *Pneumovirinae* virus infection or a respiratory syncytial virus infection.

wherein:

A is –($C(R^4)_2$)$_n$- wherein any one $C(R^4)_2$ of said –($C(R^4)_2$)$_n$- may be optionally replaced with -O-, -S-, S(O)$_p$-, NH or NR^a;

n is 3, 4, 5 or 6;

each p is 1 or 2;

Ar is a C_2–C_{20} heterocyclyl group or a C_6-C_{20} aryl group, wherein the C_2–C_{20} heterocyclyl group or the C_6-C_{20} aryl group is optionally substituted with 1 to 5 R^6;

X is -($CR^{13}R^{14}$)-, -$N(CH_2R^{14})$- or X is absent;

Y is N or CR^7;

each R^1, R^2, R^3, R^4, R^5, R^6, R^7 or R^8 is independently H, oxo, OR^{11}, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, N_3, CN, NO_2, SR^{11}, $S(O)_pR^a$, $NR^{11}S(O)_pR^a$, -$C(=O)R^{11}$, -$C(=O)OR^{11}$, -$C(=O)NR^{11}R^{12}$, -$C(=O)SR^{11}$, -$S(O)_p(OR^{11})$, –$SO_2NR^{11}R^{12}$, -$NR^{11}S(O)_p(OR^{11})$, –$NR^{11}SO_pNR^{11}R^{12}$, $NR^{11}C(=NR^{11})NR^{11}R^{12}$, halogen, ($C_1$–$C_8$)alkyl, ($C_2$–$C_8$)alkenyl, ($C_2$–$C_8$)alkynyl, aryl($C_1$-$C_8$)alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4–C_8)carbocyclylalkyl;

two R^4 on adjacent carbon atoms, when taken together, may form a double bond between the two carbons to which they are attached or may form a (C_3-C_7)cycloalkyl ring wherein one carbon atom of said (C_3-C_7)cycloalkyl ring may be optionally replaced by -O-, -S-, -$S(O)_p$-, -NH- or –NR^a-;

four R^4 on adjacent carbon atoms, when taken together, may form an optionally substituted C_6 aryl ring;

two R^4 on the same carbon atom, when taken together, may form a (C_3-C_7)cycloalkyl ring wherein one carbon atom of said (C_3-C_7)cycloalkyl ring may be optionally replaced by -O-, -S-, -$S(O)_p$-, -NH- or –NR^a-;

two R^6 on adjacent carbon atoms, when taken together, may form a (C_3-C_7)cycloalkyl ring wherein one carbon atom of said (C_3-C_7)cycloalkyl ring may be optionally replaced by -O-, -S-, -$S(O)_p$-, -NH- or –NR^a-;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^3, may form a bond or a –$(C(R^5)_2)_m$- group wherein m is 1 or 2;

any R^6 adjacent to the obligate carbonyl group of said Ar, when taken together with R^2, may form a bond;

each R^a is independently (C_1-C_8)alkyl, (C_1-C_8)haloalkyl, (C_2-C_8)alkenyl, (C_2-C_8)alkynyl, aryl(C_1-C_8)alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4–C_8)carbocyclylalkyl wherein any (C_1-C_8)alkyl, (C_1-C_8)haloalkyl, (C_2-C_8)alkenyl or (C_2-C_8)alkynyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20}

heterocyclyl, and wherein any aryl(C_1-C_8)alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4–C_8)carbocyclylalkyl of R^a is optionally substituted with one or more OH, NH_2, CO_2H, C_2–C_{20} heterocyclyl or (C_1-C_8)alkyl;

each R^{11} or R^{12} is independently H, (C_1-C_8)alkyl, (C_2-C_8)alkenyl, (C_2-C_8)alkynyl, aryl(C_1-C_8)alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, (C_3-C_7)cycloalkyl, (C_4–C_8)carbocyclylalkyl, $-C(=O)R^a$, $-S(O)_pR^a$, or aryl(C_1-C_8)alkyl; or R^{11} and R^{12} taken together with a nitrogen to which they are both attached form a 3 to 7 membered heterocyclic ring wherein any one carbon atom of said heterocyclic ring can optionally be replaced with -O-, -S-, $-S(O)_p$-, -NH-, $-NR^a$- or -C(O)-;

R^{13} is H or (C_1-C_8)alkyl;

R^{14} is H, (C_1-C_8)alkyl, $NR^{11}R^{12}$, $NR^{11}C(O)R^{11}$, $NR^{11}C(O)OR^{11}$, $NR^{11}C(O)NR^{11}R^{12}$, $NR^{11}S(O)_pR^a$, $-NR^{11}S(O)_p(OR^{11})$ or $NR^{11}SO_pNR^{11}R^{12}$; and

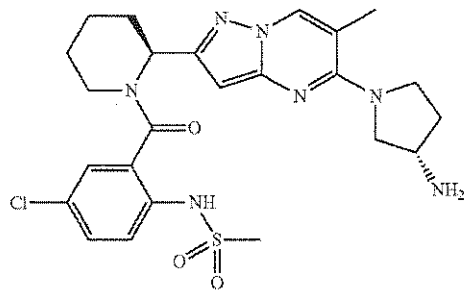
wherein each (C_1-C_8)alkyl, (C_2-C_8)alkenyl, (C_2-C_8)alkynyl, aryl(C_1-C_8)alkyl, C_6–C_{20} aryl, C_2–C_{20} heterocyclyl, (C_3-C_7)cycloalkyl or (C_4-C_8)carbocyclylalkyl of each R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^{11} or R^{12} is, independently, optionally substituted with one or more oxo, halogen, hydroxy, NH_2, CN, N_3, $N(R^a)_2$, NHR^a, SH, SR^a, $S(O)_pR^a$, OR^a, (C_1-C_8)alkyl, (C_1-C_8)haloalkyl, $-C(O)R^a$, -C(O)H, $-C(=O)OR^a$, -C(=O)OH, $-C(=O)N(R^a)_2$, $-C(=O)NHR^a$, $-C(=O)NH_2$, $NHS(O)_pR^a$, $NR^aS(O)_pR^a$, $NHC(O)R^a$, $NR^aC(O)R^a$, $NHC(O)OR^a$, $NR^aC(O)OR^a$, $NR^aC(O)NHR^a$, $NR^aC(O)N(R^a)_2$, $NR^aC(O)NH_2$, $NHC(O)NHR^a$, $NHC(O)N(R^a)_2$, $NHC(O)NH_2$, =NH, =NOH, $=NOR^a$, $NR^aS(O)_pNHR^a$, $NR^aS(O)_pN(R^a)_2$, $NR^aS(O)_pNH_2$, $NHS(O)_pNHR^a$, $NHS(O)_pN(R^a)_2$, $NHS(O)_pNH_2$, $-OC(=O)R^a$, $-OP(O)(OH)_2$ or R^a.

46. The use of a compound of any one of claims 1-31 or a pharmaceutically acceptable salt or ester thereof, for the manufacture of a medicament for the treatment of a *Pneumovirinae* virus infection or a respiratory syncytial virus infection.

47. The use of claim 45 or claim 46 further comprising administering a therapeutically effective amount of at least one other therapeutic agent or composition thereof selected from the group consisting of ribavirin, palivizumab, motavizumab, RSV-IGIV, MEDI-557, A-60444, MDT-63, BMS-433771, ALN-RSV0 and ALX-0171 or mixtures thereof.

What is claimed is:

1. A compound of formula:



or a pharmaceutically acceptable salt thereof.

2. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

3. The pharmaceutical composition of claim 2 further comprising at least one other therapeutic agent selected from ribavirin, palivizumab, motavizumab, RSV-IGIV, MEDI-557, A-60444, MDT-637, BMS-433771, ALN-RSV0 and ALX-0171 or mixtures thereof.