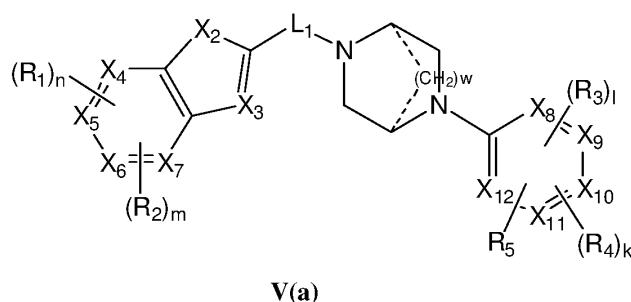


WHAT IS CLAIMED:

1. A compound represented by the structure of formula **V(a)**:



5 wherein

L_1 is CH_2 , CHR , $C(R)_2$, or $C=O$;

R_1 and R_2 are each independently H, F, Cl, Br, I, OH, SH, R_8-OH , R_8-SH , $-R_8-O-R_{10}$ (e.g., $CH_2-CH_2-O-CH_3$, $CH_2-O-CH_2-CH_2-O-CH_3$), $-O-R_8-O-R_{10}$ (e.g., $O-CH_2-CH_2-O-CH_3$), $R_8-(C_3-C_8$ cycloalkyl), $R_8-(C_3-C_8$ heterocyclic ring), $O-R_{20}$, CF_3 , CD_3 , OCD_3 , CN, NO_2 , $-CH_2CN$, $-R_8CN$, NH_2 , NHR , $N(R)_2$, $R_8-N(R_{10})(R_{11})$, $R_9-R_8-N(R_{10})(R_{11})$, $B(OH)_2$, $-OC(O)CF_3$, $-OCH_2Ph$, $NHC(O)-R$ (e.g., $NHCO-Ph$; $NHCO-CH_3$), $NHC(O)-R_{10}$ (e.g., $NHCO-CH_3$), $NHCO-N(R_{10})(R_{11})$, $COOH$, $-C(O)Ph$, $C(O)O-R_{10}$, $R_8-C(O)-R_{10}$, $C(O)H$, $C(O)-R_{10}$, C_1-C_5 linear or branched $C(O)$ -haloalkyl, $-C(O)NH_2$, $C(O)NHR$ (e.g., $C(O)NH-Ph$), $C(O)N(R_{10})(R_{11})$, SO_2R , $SO_2N(R_{10})(R_{11})$, $NHSO_2(R_{10})$ (e.g., $NHSO_2CH_3$), $CH(CF_3)(NH-R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear, branched or cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear, branched or cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl), substituted or unsubstituted C_3-C_8 heterocyclic ring (e.g., pyridine), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted benzyl;

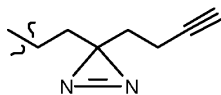
or R_2 and R_1 are joined together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic (e.g., benzene) or heterocyclic (e.g., pyridine) ring;

R_3 , R_4 and R_5 are each independently H, F, Cl, Br, I, OH, SH, R_8-OH , R_8-SH , $-R_8-O-R_{10}$ (e.g., $CH_2-CH_2-O-CH_3$, $CH_2-O-CH_2-CH_2-O-CH_3$), $R_8-(C_3-C_8$ cycloalkyl), $R_8-(C_3-C_8$ heterocyclic ring), $O-R_{20}$, CF_3 , CD_3 , OCD_3 , CN, NO_2 , $-CH_2CN$, $-R_8CN$, NH_2 , NHR , $N(R)_2$, $R_8-N(R_{10})(R_{11})$, $R_9-R_8-N(R_{10})(R_{11})$, $B(OH)_2$, $-OC(O)CF_3$, $-OCH_2Ph$, $NHC(O)-R_{10}$, $NHCO-N(R_{10})(R_{11})$, $COOH$, $-C(O)Ph$, $C(O)O-R_{10}$, $R_8-C(O)-R_{10}$, $C(O)H$, $C(O)-R_{10}$, C_1-C_5 linear or branched $C(O)$ -haloalkyl, $-C(O)NH_2$, $C(O)NHR$, $C(O)N(R_{10})(R_{11})$, SO_2R , $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH-R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear, branched or cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear, branched or cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g.,

cyclopropyl), substituted or unsubstituted C₃-C₈ heterocyclic ring (e.g., pyrazole, thiazole), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted benzyl;

or **R**₃ and **R**₄ are joined together to form a 5 or 6 membered substituted or unsubstituted, aliphatic (e.g., cyclopentene) or aromatic, carbocyclic (e.g., benzene) or heterocyclic (e.g., thiophene, furane, pyrrol, pyrazole) ring;

R₂₀ is represented by the following structure:



X₂ is NH, S, O, N-R (e.g., N-CH₂-CH₂-O-CH₃);

X₃ is N, C(R) (e.g., CH, C-CH₃, C-Cl, C-CN);

X₄, **X**₅, **X**₆, and **X**₇ are each independently C or N;

X₈, **X**₉, **X**₁₀, **X**₁₁, and **X**₁₂ are each independently C or N;

R is H, OH, F, Cl, Br, I, CN, CF₃, NO₂, C₁-C₅ linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl), C₁-C₅ linear or branched alkoxy, -R₈-O-R₁₀ (e.g., CH₂-CH₂-O-CH₃), C₁-C₅ linear or branched haloalkyl (e.g., CF₃, CF₂CH₃, CH₂CF₃, CF₂CH₂CH₃, CH₂CH₂CF₃, CF₂CH(CH₃)₂, CF(CH₃)-CH(CH₃)₂), R₈-aryl (e.g., CH₂-Ph), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine); or

two geminal **R** substitutions are joined together to form a 3 - 6 membered substituted or unsubstituted, aliphatic (e.g., cyclopropyl, cyclopentene) or aromatic, carbocyclic (e.g., benzene) or heterocyclic (e.g., thiophene, furane, pyrrol, pyrazole) ring;

R₈ is [CH₂]_p

wherein **p** is between 1 and 10 (e.g., 2);

R₉ is [CH]_q, [C]_q

wherein **q** is between 2 and 10;

R₁₀ and **R**₁₁ are each independently H, substituted or unsubstituted, C₁-C₅ linear or branched alkyl (e.g., methyl, ethyl, CH₂-CH₂-O-CH₃), C₁-C₅ linear or branched alkoxy (e.g., O-CH₃), C(O)R, or S(O)₂R;

or **R**₁₀ and **R**₁₁ are joined to form a substituted or unsubstituted C₃-C₈ heterocyclic ring (e.g., piperazine, piperidine),

wherein substitutions include: F, Cl, Br, I, OH, SH, C₁-C₅ linear or branched alkyl, C₁-C₅ linear or branched alkyl-OH (e.g., C(CH₃)₂CH₂-OH, CH₂CH₂-OH), C₃-C₈ heterocyclic ring (e.g., piperidine), alkoxy, N(R)₂, CF₃, aryl, phenyl, halophenyl, (benzyloxy)phenyl, CN, NO₂ or any combination thereof;

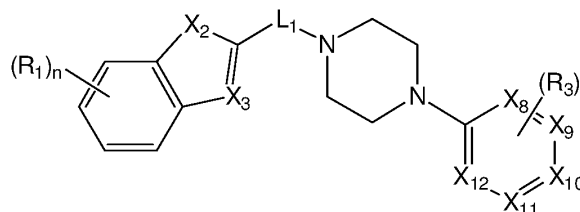
m, **n**, **l** and **k** are each independently an integer between 0 and 4 (e.g., 0, 1 or 2);

w is 0, 1 or 2; wherein if **w**=0, the bridge on the ring is absent;

wherein if **X**₃ is N, then **X**₂ is not NH;

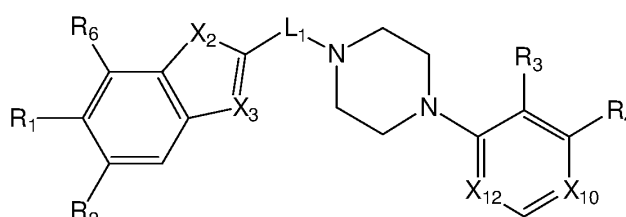
or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), reverse amide, pharmaceutical product or any combination thereof.

2. The compound of claim 1, represented by the structure of formula **VI**:



VI.

3. A compound, represented by the structure of formula **VII**:



VII

10 wherein

L₁ is CH₂, CHR, C(R)₂, or C=O;

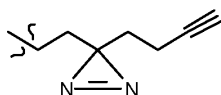
R₁, **R₂**, and **R₆** are each independently H, F, Cl, Br, I, OH, SH, R₈-OH, R₈-SH, -R₈-O-R₁₀ (e.g., CH₂-CH₂-O-CH₃, CH₂-O-CH₂-CH₂-O-CH₃), -O-R₈-O-R₁₀ (e.g., O-CH₂-CH₂-O-CH₃), R₈-(C₃-C₈ cycloalkyl), R₈-(C₃-C₈ heterocyclic ring), O-**R₂₀**, CF₃, CD₃, OCD₃, CN, NO₂, -CH₂CN, -R₈CN, NH₂,
 15 NHR, N(R)₂, R₈-N(R₁₀)(R₁₁), R₉-R₈-N(R₁₀)(R₁₁), B(OH)₂, -OC(O)CF₃, -OCH₂Ph, NHC(O)-R (e.g., NHCO-Ph), NHC(O)-R₁₀ (e.g., NHCO-CH₃), NHCO-N(R₁₀)(R₁₁), COOH, -C(O)Ph, C(O)O-R₁₀, R₈-C(O)-R₁₀, C(O)H, C(O)-R₁₀, C₁-C₅ linear or branched C(O)-haloalkyl, -C(O)NH₂, C(O)NHR (e.g., C(O)NH-Ph), C(O)N(R₁₀)(R₁₁), SO₂R, SO₂N(R₁₀)(R₁₁), NHSO₂(R₁₀) (e.g., NHSO₂CH₃), CH(CF₃)(NH-R₁₀), C₁-C₅ linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl), C₁-C₅ linear or branched, substituted or unsubstituted alkenyl, C₁-C₅ linear, branched or cyclic haloalkyl (e.g., CHF₂),
 20 C₁-C₅ linear, branched or cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH₂) in the alkoxy is replaced with an oxygen atom, C₁-C₅ linear or branched thioalkoxy, C₁-C₅ linear or branched haloalkoxy, C₁-C₅ linear or branched alkoxyalkyl, substituted or unsubstituted C₃-C₈ cycloalkyl (e.g., cyclopropyl), substituted or unsubstituted C₃-C₈ heterocyclic ring (e.g., pyridine),
 25 substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted benzyl;

R₃ and **R₄** are each independently H, F, Cl, Br, I, OH, SH, R₈-OH, R₈-SH, -R₈-O-R₁₀ (e.g., CH₂-CH₂-O-CH₃, CH₂-O-CH₂-CH₂-O-CH₃), R₈-(C₃-C₈ cycloalkyl), R₈-(C₃-C₈ heterocyclic ring), O-**R₂₀**, CF₃, CD₃, OCD₃, CN, NO₂, -CH₂CN, -R₈CN, NH₂, NHR, N(R)₂, R₈-N(R₁₀)(R₁₁), R₉-R₈-N(R₁₀)(R₁₁), B(OH)₂, -OC(O)CF₃, -OCH₂Ph, NHC(O)-R₁₀, NHCO-N(R₁₀)(R₁₁), COOH, -C(O)Ph, C(O)O-R₁₀, R₈-C(O)-R₁₀, C(O)H, C(O)-R₁₀, C₁-C₅ linear or branched C(O)-haloalkyl, -C(O)NH₂, C(O)NHR,
 30

C(O)N(R₁₀)(R₁₁), SO₂R, SO₂N(R₁₀)(R₁₁), CH(CF₃)(NH-R₁₀), C₁-C₅ linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl), C₁-C₅ linear or branched, substituted or unsubstituted alkenyl, C₁-C₅ linear, branched or cyclic haloalkyl (e.g., CHF₂), C₁-C₅ linear, branched or cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH₂) in the alkoxy is replaced with an oxygen atom, C₁-C₅ linear or branched thioalkoxy, C₁-C₅ linear or branched haloalkoxy, C₁-C₅ linear or branched alkoxyalkyl, substituted or unsubstituted C₃-C₈ cycloalkyl (e.g., cyclopropyl), substituted or unsubstituted C₃-C₈ heterocyclic ring (e.g., pyrazole, thiazole, imidazole), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted benzyl;

or **R**₃ and **R**₄ are joined together to form a 5 or 6 membered substituted or unsubstituted, aliphatic (e.g., cyclopentene) or aromatic, carbocyclic (e.g., benzene) or heterocyclic (e.g., thiophene, furane, pyrrol, pyrazole) ring;

R₂₀ is represented by the following structure:



X₂ is NH, S, O, N-R (e.g., N-CH₂-CH₂-O-CH₃);

X₃ is N, C(R) (e.g., CH, C-CH₃, C-Cl, C-CN);

X₁₀ and **X**₁₂ are each independently C or N;

R is H, OH, F, Cl, Br, I, CN, CF₃, NO₂, C₁-C₅ linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl), C₁-C₅ linear or branched alkoxy, -R₈-O-R₁₀ (e.g., CH₂-CH₂-O-CH₃), C₁-C₅ linear or branched haloalkyl (e.g., CF₃, CF₂CH₃, CH₂CF₃, CF₂CH₂CH₃, CH₂CH₂CF₃, CF₂CH(CH₃)₂, CF(CH₃)-CH(CH₃)₂), R₈-aryl (e.g., CH₂-Ph), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine), ; or

two geminal **R** substitutions are joined together to form a 3 - 6 membered substituted or unsubstituted, aliphatic (e.g., cyclopropyl, cyclopentene) or aromatic, carbocyclic (e.g., benzene) or heterocyclic (e.g., thiophene, furane, pyrrol, pyrazole) ring;

R₈ is [CH₂]_p

wherein **p** is between 1 and 10 (e.g., 2);

R₉ is [CH]_q, [C]_q

wherein **q** is between 2 and 10;

R₁₀ and **R**₁₁ are each independently H, C₁-C₅ substituted or unsubstituted, linear or branched alkyl (e.g., methyl, ethyl, CH₂-CH₂-O-CH₃), C₁-C₅ linear or branched alkoxy (e.g., O-CH₃), C(O)R, or S(O)₂R;

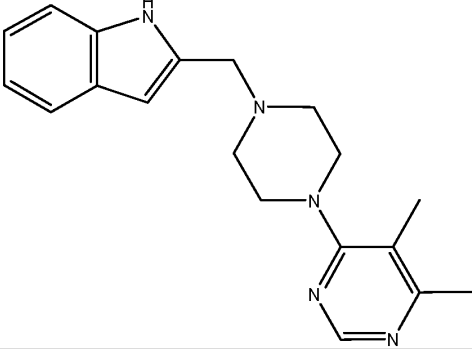
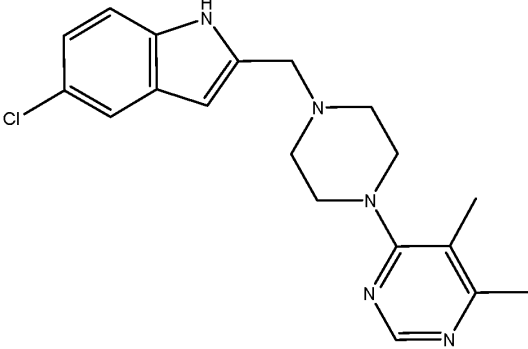
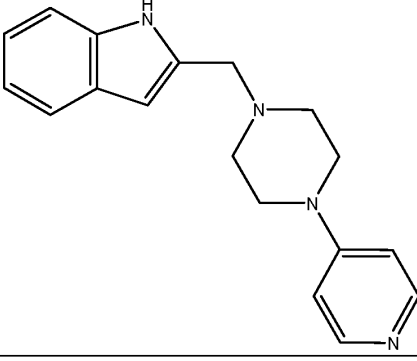
or **R**₁₀ and **R**₁₁ are joined to form a substituted or unsubstituted C₃-C₈ heterocyclic ring (e.g., piperazine, piperidine),

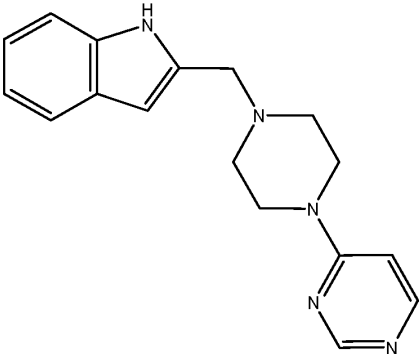
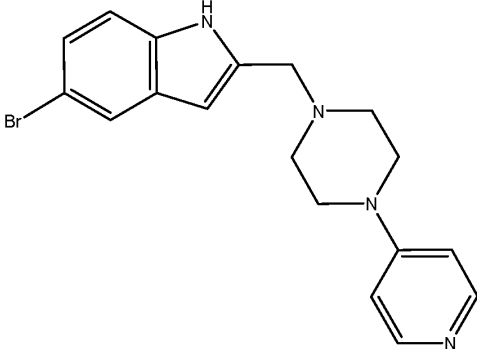
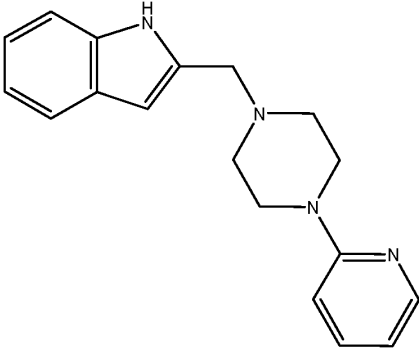
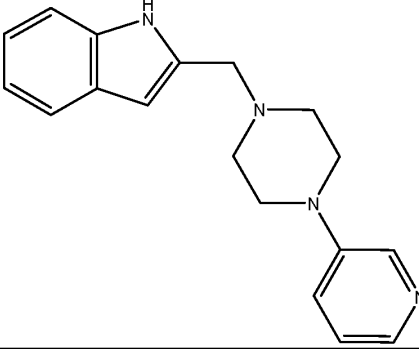
wherein substitutions include: F, Cl, Br, I, OH, SH, C₁-C₅ linear or branched alkyl, C₁-C₅ linear or branched alkyl-OH (e.g., C(CH₃)₂CH₂-OH, CH₂CH₂-OH), C₃-C₈ heterocyclic ring (e.g., piperidine), alkoxy, N(R)₂, CF₃, aryl, phenyl, halophenyl, (benzyloxy)phenyl, CN, NO₂ or any combination thereof;

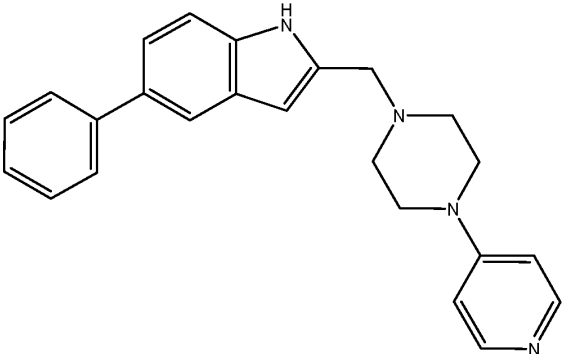
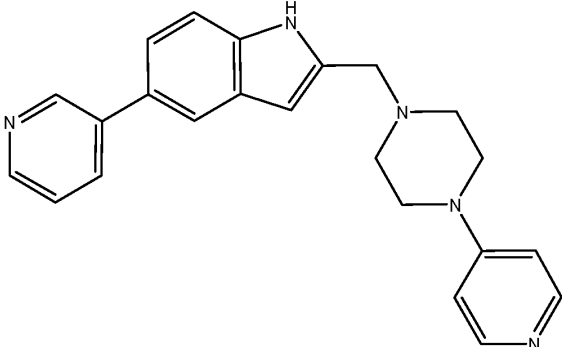
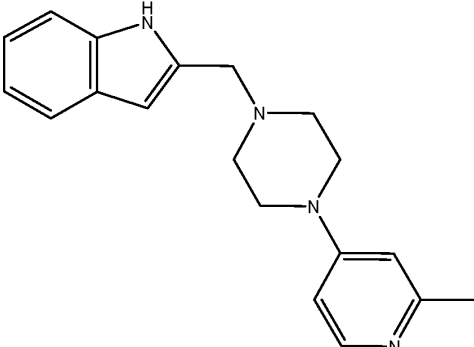
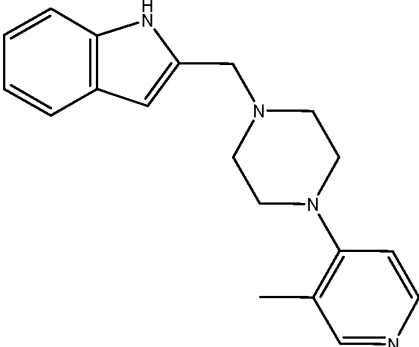
wherein if X₃ is N, then X₂ is not NH;

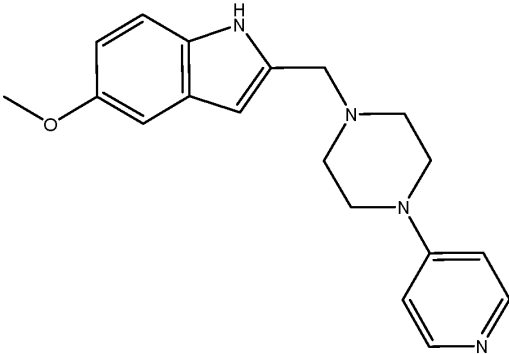
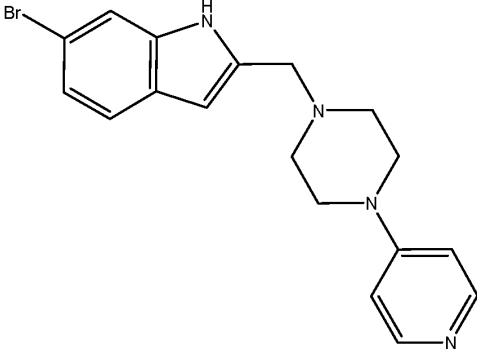
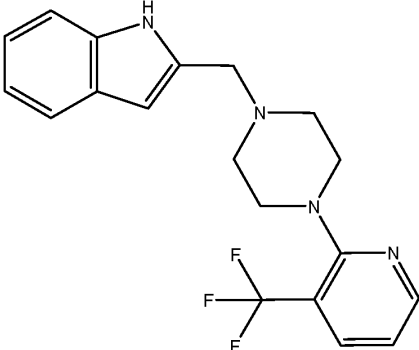
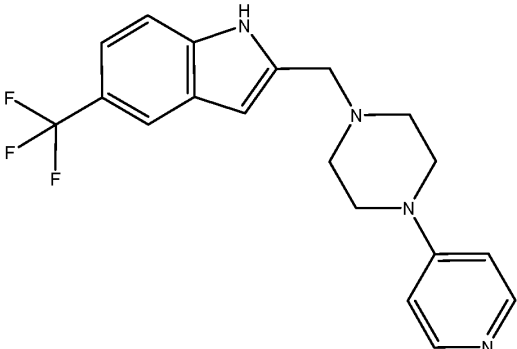
or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, prodrug, isotopic variant (e.g., deuterated analog), reverse amide, pharmaceutical product or any combination thereof.

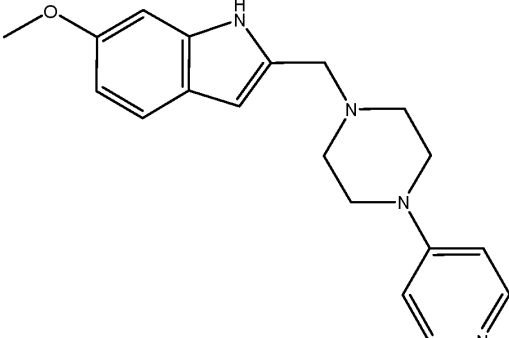
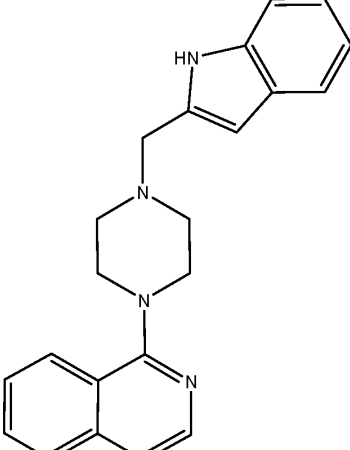
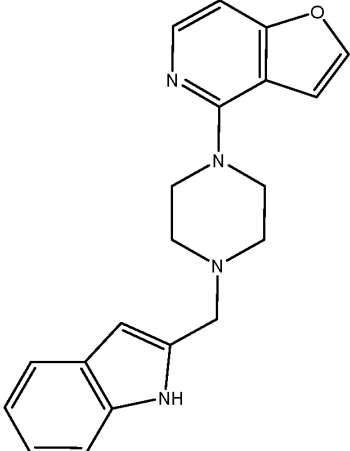
4. The compound of any one of claims 1 or 2, wherein at least one of X₈, X₉, X₁₀, X₁₁, and X₁₂ is N.
5. The compound of any one of claims 3 or 4, wherein at least one of X₁₀ and X₁₂ is N.
6. The compound of claim 1, selected from the following:

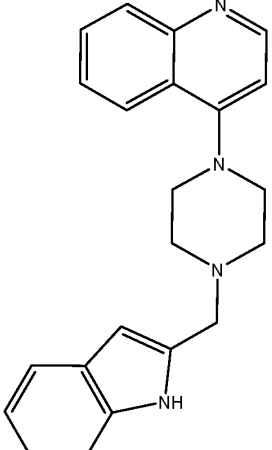
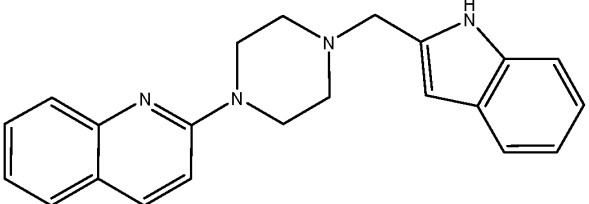
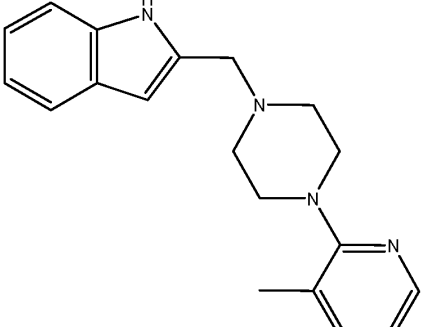
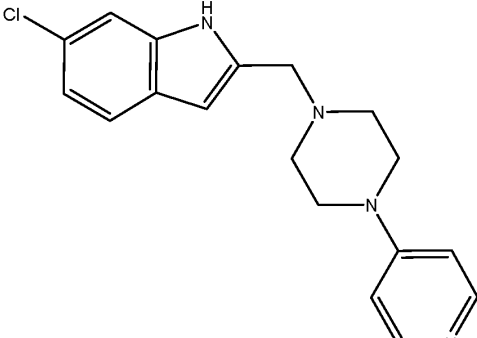
Compound Number	Compound Structure
202	
210	
212	

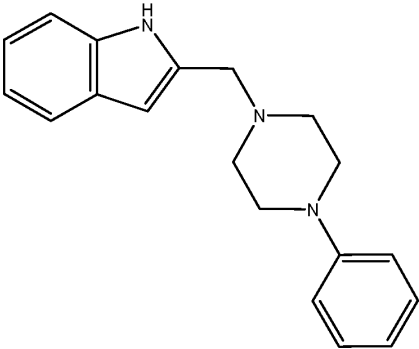
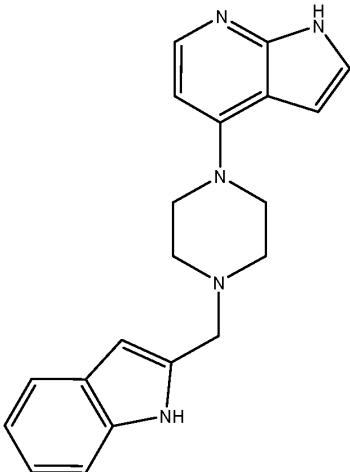
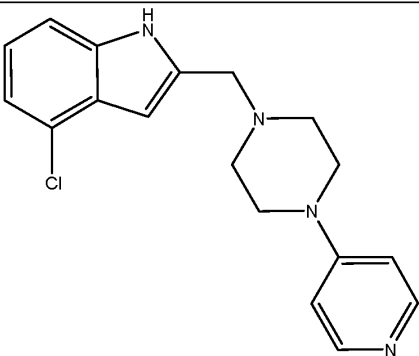
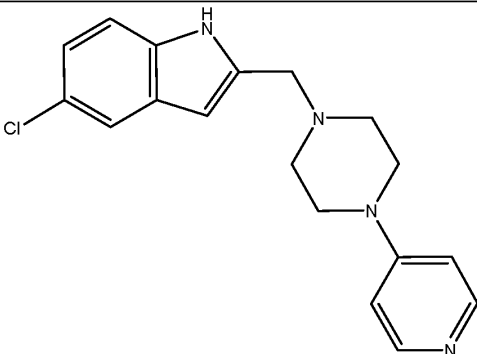
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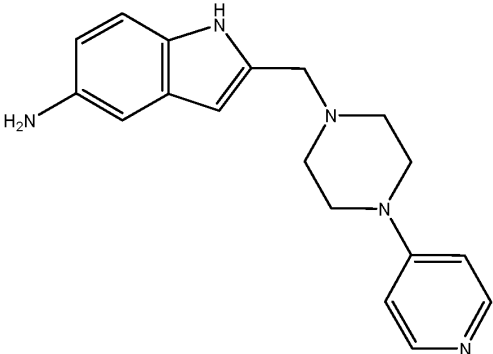
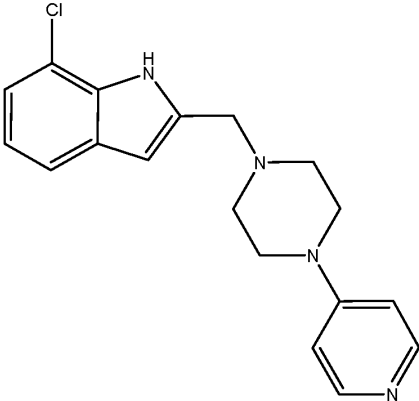
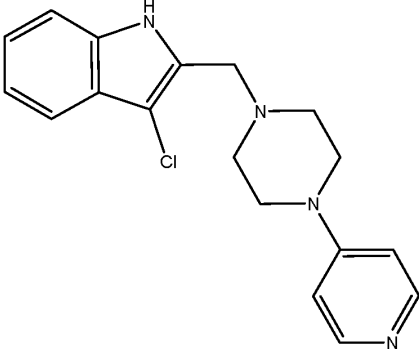
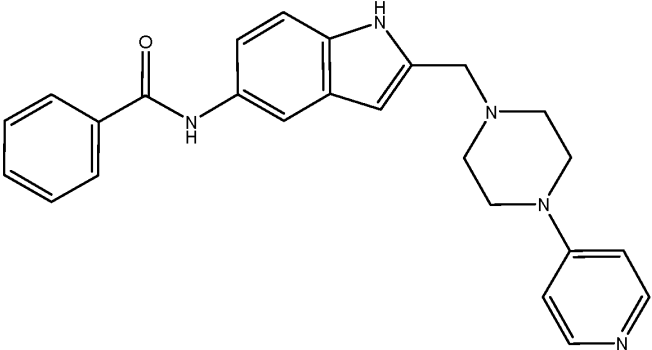
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220	 <chem>c1ccc2c(c1)c[nH]2CN(C3CCN(C3)c4cccnc4)Cc5cccnc5</chem>
221	 <chem>Cc1ccncc1N2CCN(C2)Cc3c[nH]c4ccccc34</chem>
222	 <chem>Cc1ccncc1N2CCN(C2)Cc3c[nH]c4ccccc34</chem>

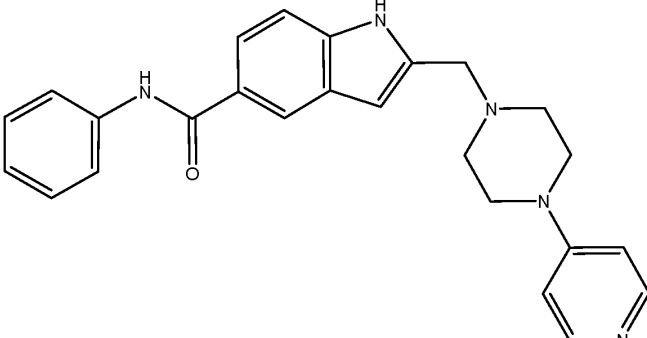
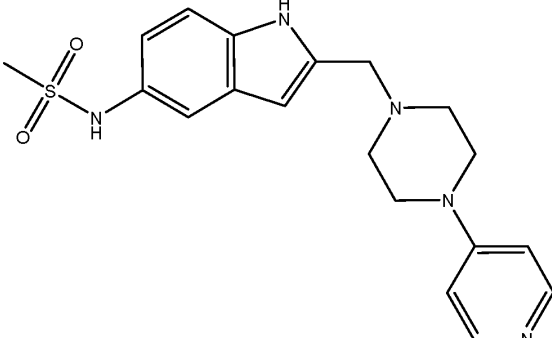
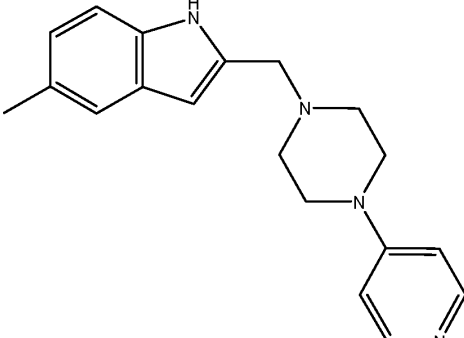
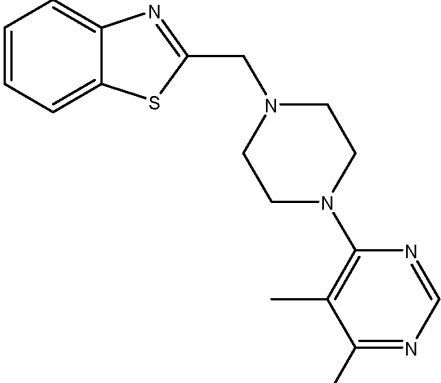
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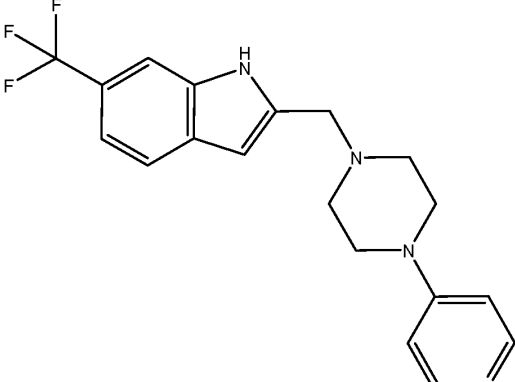
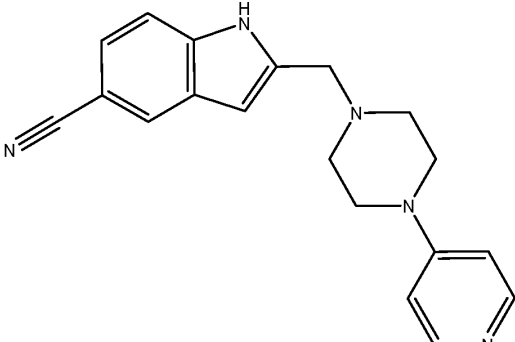
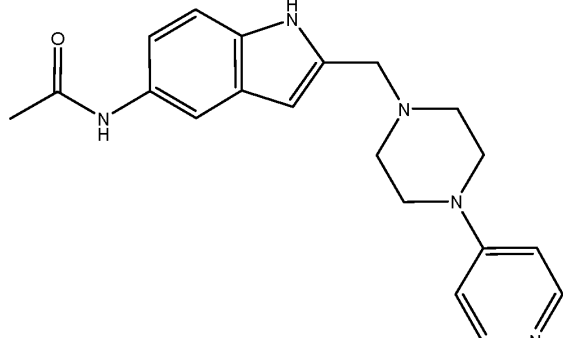
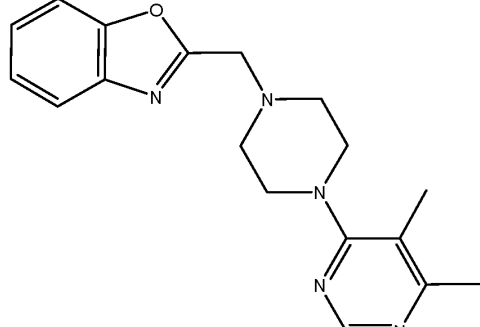
228	 <chem>COc1ccc2c(c1)c(c[nH]2)CCN3CCN(C3)c4cccnc4</chem>
234	 <chem>c1ccc2c(c1)c(c[nH]2)CCN3CCN(C3)c4nc5ccccc5cc4</chem>
235	 <chem>c1ccc2c(c1)c(c[nH]2)CCN3CCN(C3)c4nc5cc6c(c5)occc6n4</chem>

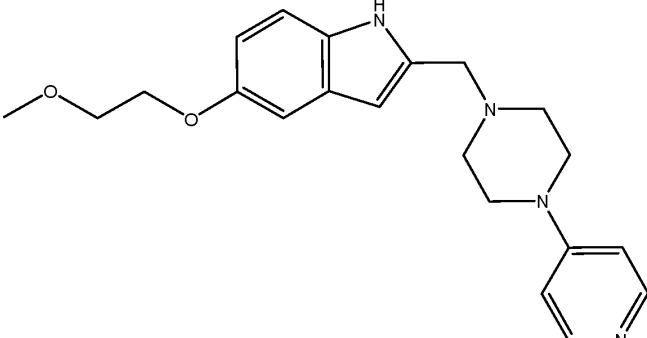
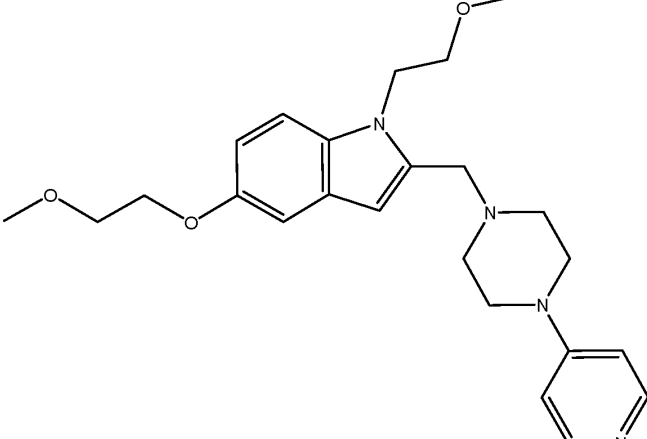
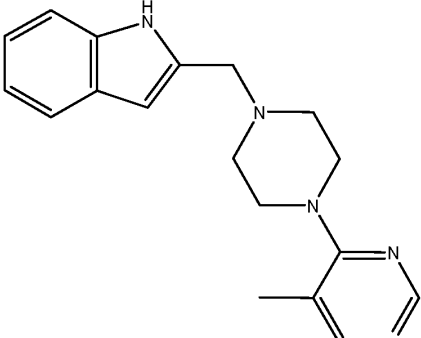
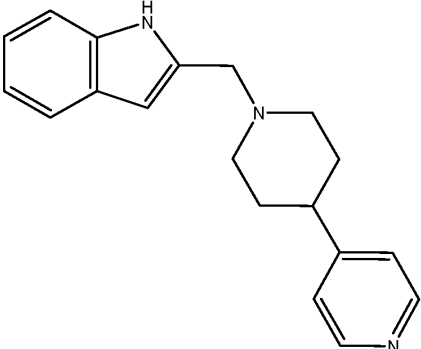
236	 <chem>c1ccc2nc(c1)ccc2N3CCN(CC3Cc4c[nH]c5ccccc45)CC6</chem>
237	 <chem>c1ccc2nc(c1)ccc2N3CCN(CC3Cc4c[nH]c5ccccc45)CC6</chem>
238	 <chem>Cc1ccncc1N2CCN(CC2Cc3c[nH]c4ccccc34)CC5</chem>
240	 <chem>Clc1ccc2c(c1)c[nH]2Cc3c[n+]4ccccc34N5CCN(CC5)CC6</chem>

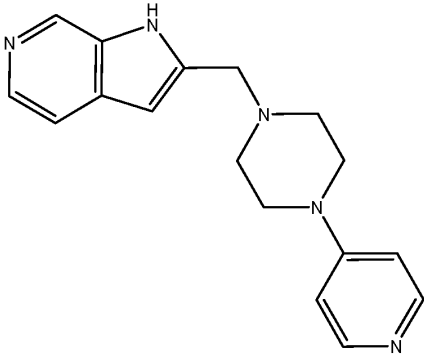
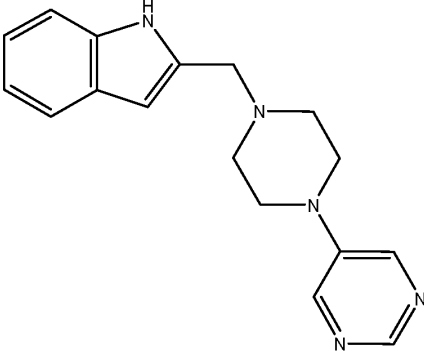
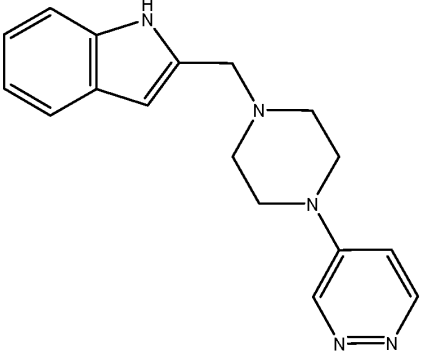
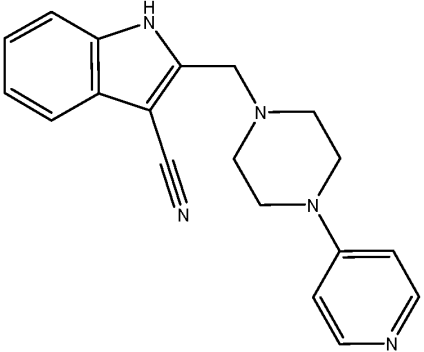
241	 <chem>c1ccc2c(c1)c(c[nH]2)CN3CCN(C3)c4ccccc4</chem>
242	 <chem>c1ccc2c(c1)c(c[nH]2)CN3CCN(C3)c4c[nH]c5cccnc45</chem>
243	 <chem>Clc1ccc2c(c1)c(c[nH]2)CN3CCN(C3)c4ccncc4</chem>
245	 <chem>Clc1ccc2c(c1)c(c[nH]2)CN3CCN(C3)c4ccncc4</chem>

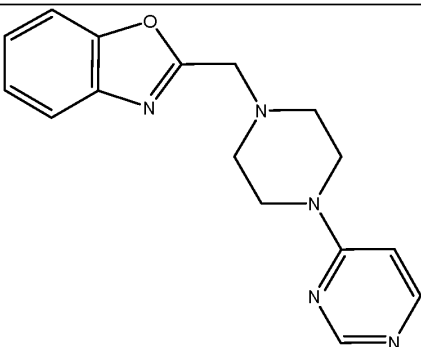
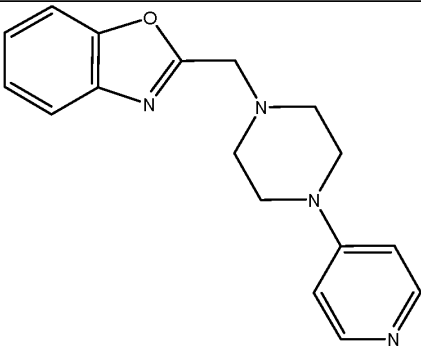
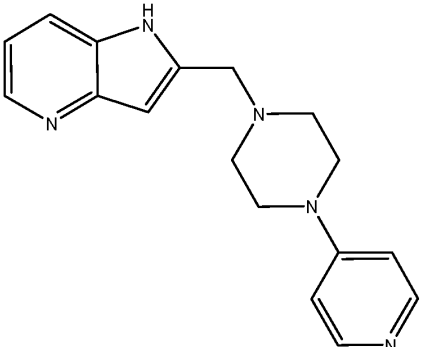
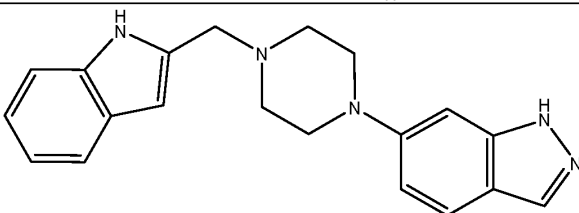
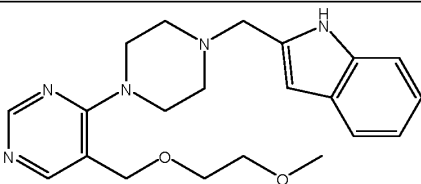
246	 <chem>Nc1ccc2c(c1)c(c[nH]2)CN3CCN(C3c4cccnc4)CC5=CC=CC=C5</chem>
247	 <chem>Clc1ccc2c(c1)c(c[nH]2)CN3CCN(C3c4cccnc4)CC5=CC=CC=C5</chem>
248	 <chem>Clc1c2c(c[nH]1)ccc2CN3CCN(C3c4cccnc4)CC5=CC=CC=C5</chem>
249	 <chem>O=C(Nc1ccc2c(c1)c(c[nH]2)CN3CCN(C3c4cccnc4)CC5=CC=CC=C5)c6ccccc6</chem>

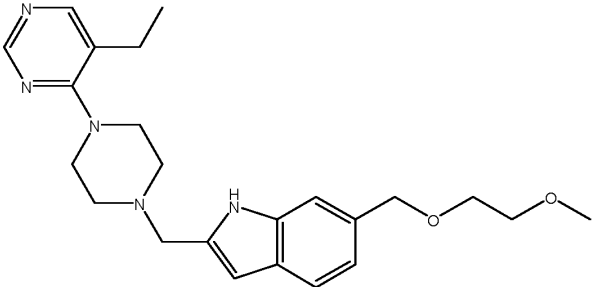
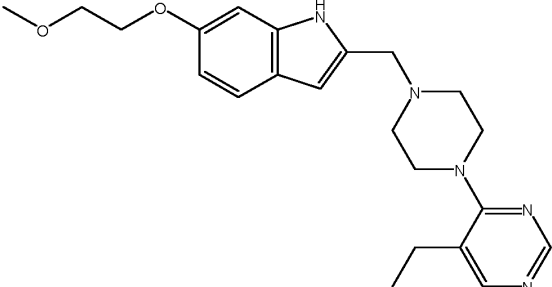
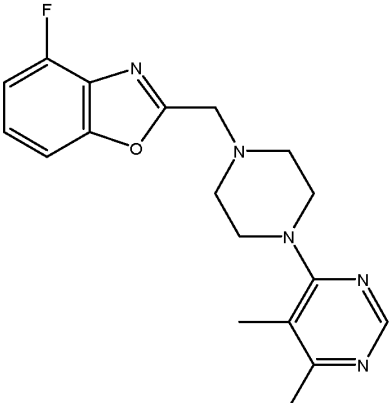
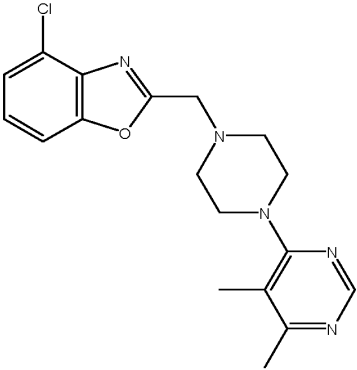
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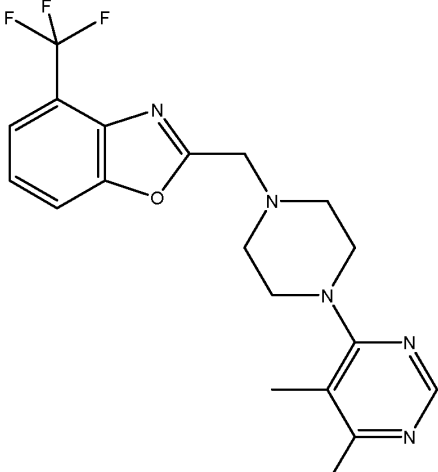
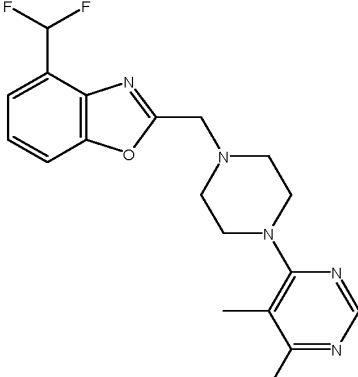
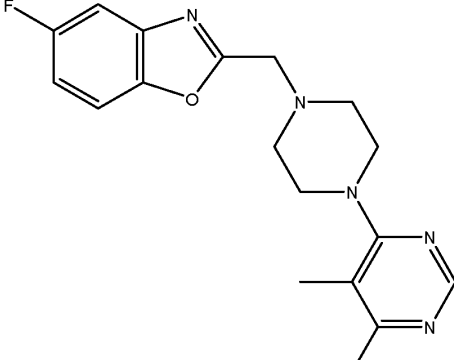
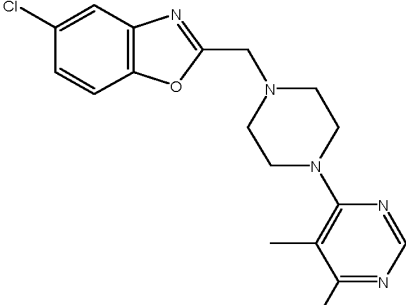
255	 <chem>FC(F)(F)c1ccc2c(c1)c[nH]c2CN3CCN(C3)c4cccnc4</chem>
256	 <chem>N#Cc1ccc2c(c1)c[nH]c2CN3CCN(C3)c4cccnc4</chem>
258	 <chem>CC(=O)Nc1ccc2c(c1)c[nH]c2CN3CCN(C3)c4cccnc4</chem>
259	 <chem>Cc1nc(C)cnc1CC2=CN3C=CC=CC=C3O2</chem>

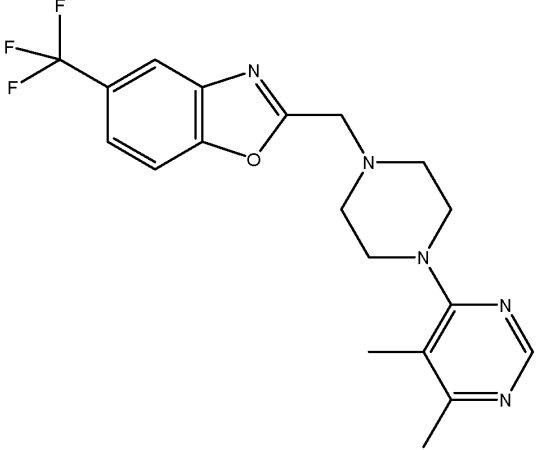
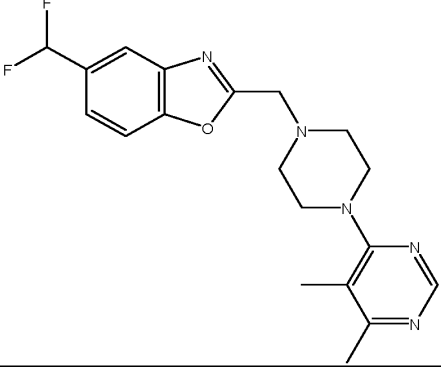
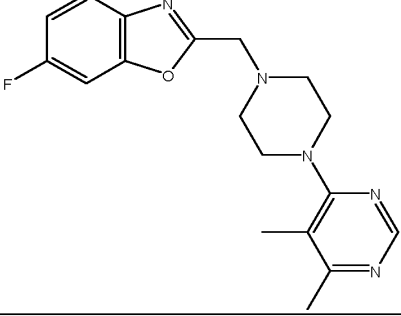
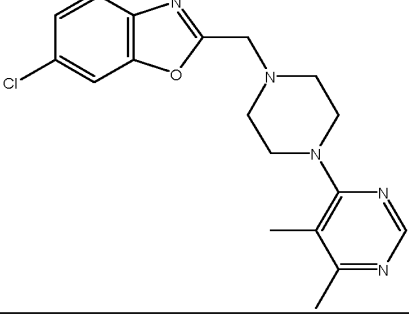
260	 <chem>COCCCOc1ccc2c(c1)c[nH]c2CN3CCN(C3c4cccnc4)C5=CC=CC=N5</chem>
261	 <chem>COCCCOc1ccc2c(c1)c[nH]c2CN(CCCOC)CN3CCN(C3c4cccnc4)C5=CC=CC=N5</chem>
266	 <chem>Cc1ccnc2n(CCN2c3c[nH]c4ccccc34)c1</chem>
269	 <chem>c1cccnc1C4CCN(CC4Cc5c[nH]c6ccccc56)C7=CC=CC=N7</chem>

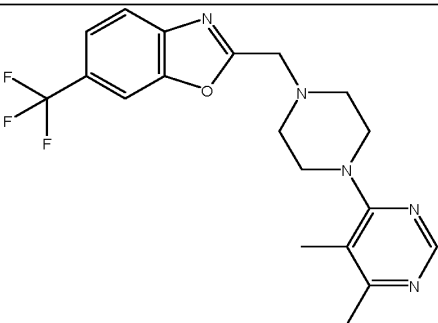
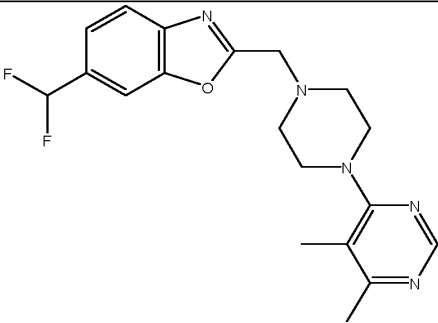
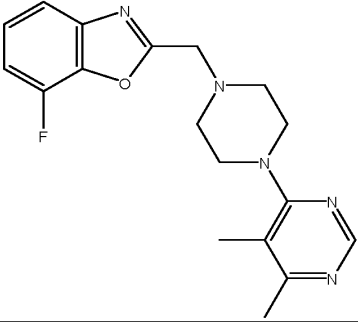
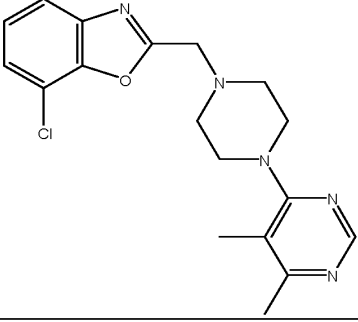
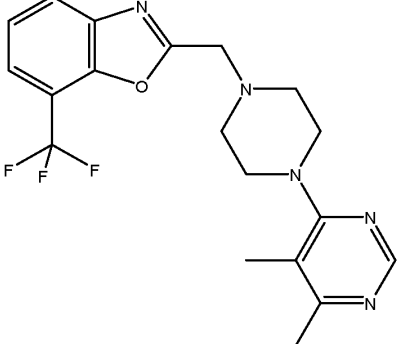
270	 <chem>c1ccc2c(c1)c(c[nH]2)CCN3CCN(CC3c4cccnc4)Cc5cccnc5</chem>
278	 <chem>c1ccc2c(c1)c(c[nH]2)CCN3CCN(CC3c4cccnc4)c5ccccc5</chem>
279	 <chem>c1ccc2c(c1)c(c[nH]2)CCN3CCN(CC3c4cccnc4)c5ccccc5</chem>
280	 <chem>N#Cc1c2c(c[nH]1)c3ccccc3c2CCN4CCN(CC4c5cccnc5)c6ccccc6</chem>

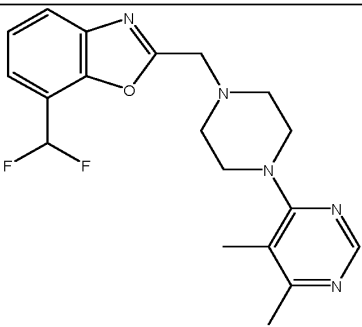
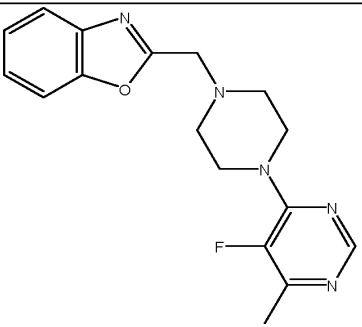
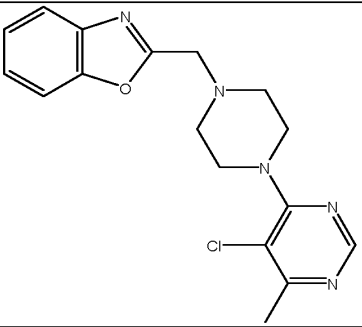
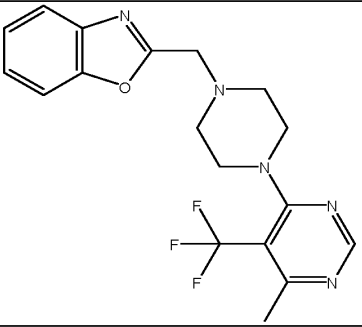
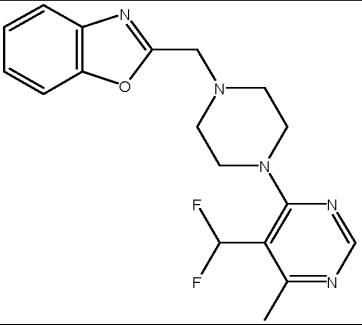
281	 <chem>c1ccc2c(c1)oc(CCN3CCN(C3)c4ccncc4)n2</chem>
282	 <chem>c1ccc2c(c1)oc(CCN3CCN(C3)c4ccncc4)n2</chem>
284	 <chem>c1ccc2c(c1)c(CCN3CCN(C3)c4ccncc4)n[nH]2</chem>
286	 <chem>c1ccc2c(c1)c(CCN3CCN(C3)c4ccc5c(c4)c[nH]5)n[nH]2</chem>
287	 <chem>COCCOCc1ccncc1N2CCN(CCN2Cc3c[nH]c4ccccc34)c5ccncc5</chem>

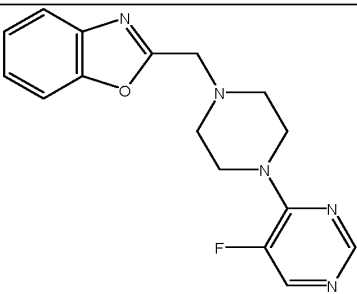
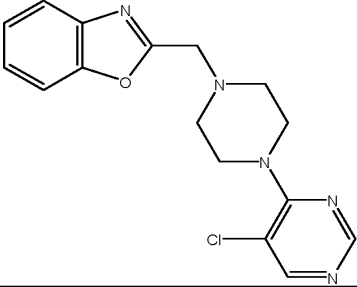
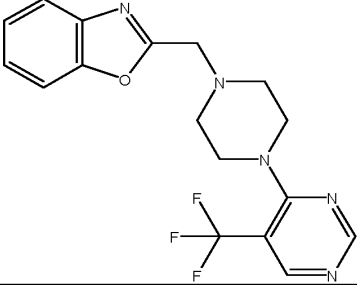
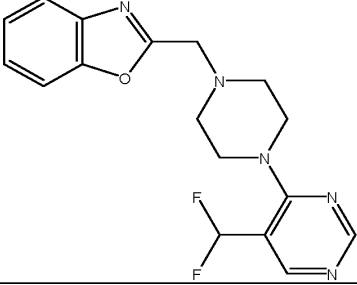
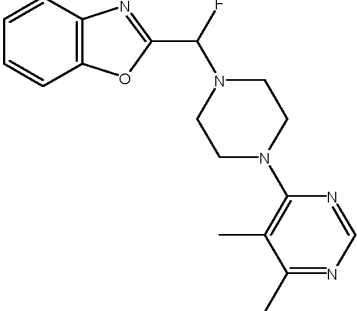
291	 <chem>CCc1ncnc2n(c1)CN3CCN(CCN3Cc4c[nH]c5ccc(cc45)COCCOC)c6[nH]c7ccccc7n6</chem>
292	 <chem>COCCOCc1c[nH]c2ccccc2n1CN3CCN(CCN3Cc4c[nH]c5ccc(cc45)COCCOC)c6nc7ccccc7n6</chem>
293	 <chem>Fc1c[nH]c2ccccc2n1CN3CCN(CCN3Cc4c[nH]c5ccc(cc45)COCCOC)c6nc7ccccc7n6</chem>
294	 <chem>Clc1c[nH]c2ccccc2n1CN3CCN(CCN3Cc4c[nH]c5ccc(cc45)COCCOC)c6nc7ccccc7n6</chem>

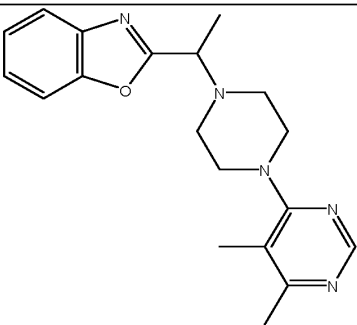
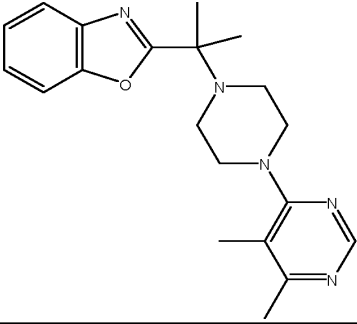
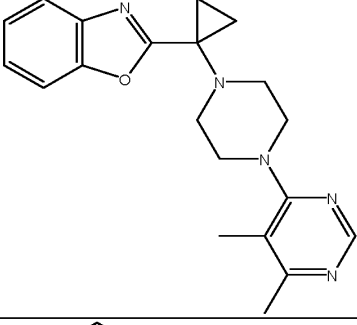
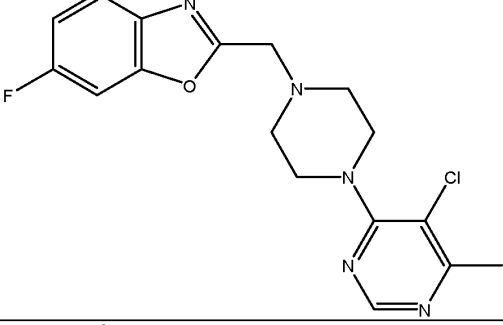
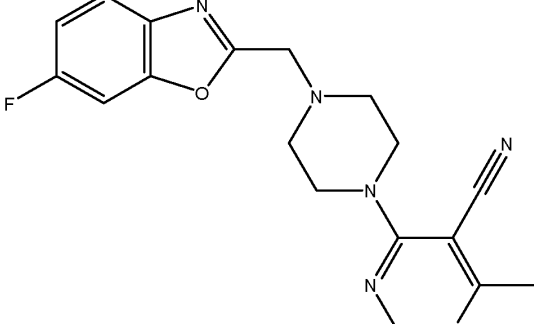
295	 <chem>CC1=NC2=C(N1)N=CN=C2N3CCN(CC3Cc4nc5ccccc5o4)C(F)(F)F</chem>
296	 <chem>CC1=NC2=C(N1)N=CN=C2N3CCN(CC3Cc4nc5ccccc5o4)C(F)F</chem>
297	 <chem>CC1=NC2=C(N1)N=CN=C2N3CCN(CC3Cc4nc5ccccc5o4)F</chem>
298	 <chem>CC1=NC2=C(N1)N=CN=C2N3CCN(CC3Cc4nc5ccccc5o4)Cl</chem>

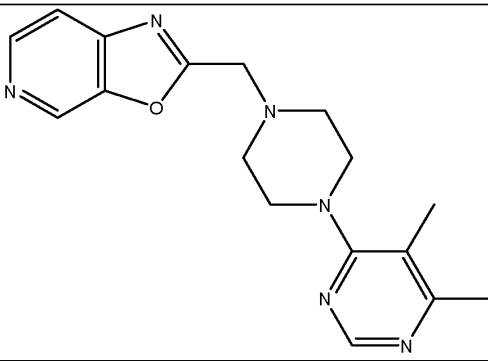
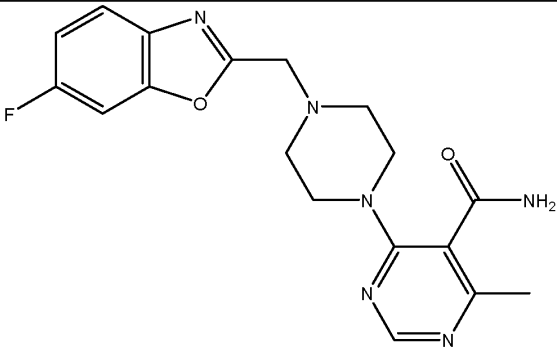
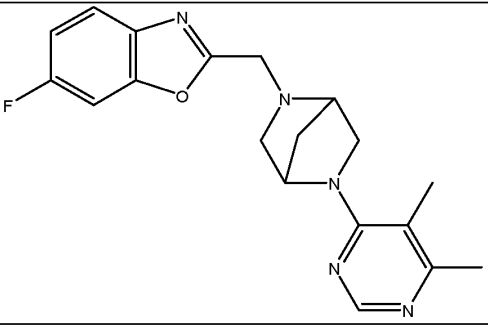
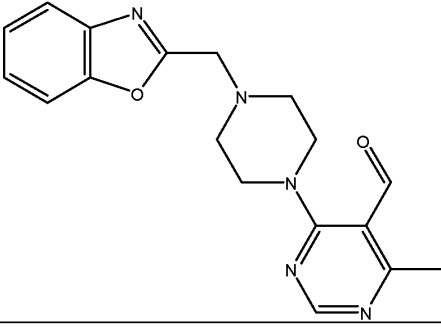
299	 <chem>Cc1nc(C)c2nc(C)nc2n1CCc3nc4cc(C(F)(F)F)ccc4o3</chem>
300	 <chem>Cc1nc(C)c2nc(C)nc2n1CCc3nc4cc(C(F)F)ccc4o3</chem>
301	 <chem>Cc1nc(C)c2nc(C)nc2n1CCc3nc4cc(F)ccc4o3</chem>
302	 <chem>Cc1nc(C)c2nc(C)nc2n1CCc3nc4cc(Cl)ccc4o3</chem>

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308	 <chem>CC1=CN=CN=C1CN(CCN1Cc2cc3ccccc3o2)C(F)F</chem>
309	 <chem>CC1=CN=CN=C1CN(CCN1Cc2cc3ccccc3o2)F</chem>
310	 <chem>CC1=CN=CN=C1CN(CCN1Cc2cc3ccccc3o2)Cl</chem>
311	 <chem>CC1=CN=CN=C1CN(CCN1Cc2cc3ccccc3o2)C(F)F</chem>
312	 <chem>CC1=CN=CN=C1CN(CCN1Cc2cc3ccccc3o2)C(F)F</chem>

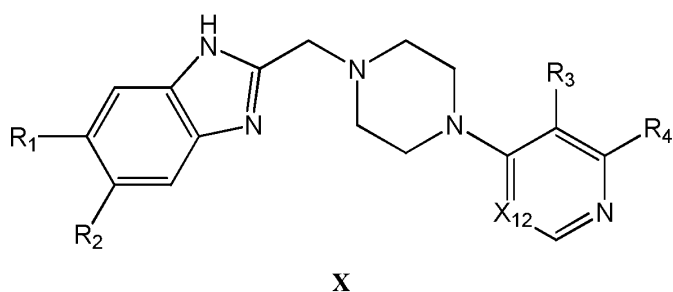
313	 <chem>Fc1ccnc2n(c1)CCN3CCN(C3)c4ccnc42</chem>
314	 <chem>Clc1ccnc2n(c1)CCN3CCN(C3)c4ccnc42</chem>
315	 <chem>FC(F)(F)c1ccnc2n(c1)CCN3CCN(C3)c4ccnc42</chem>
316	 <chem>FC(F)c1ccnc2n(c1)CCN3CCN(C3)c4ccnc42</chem>
317	 <chem>Cc1cc(C)ncc2n(c1)CCN3CCN(C3)c4ccnc42</chem>

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330	 <chem>Cc1nc(C)c2nc(C)nc2n1N3CCN(CC3)CCc4oc5cccnc5c4</chem>
333	 <chem>NC(=O)c1c(C)nc2nc(C)nc12N3CCN(CC3)CCc4oc5cc(F)ccc5o4</chem>
334	 <chem>Cc1nc(C)c2nc(C)nc12N3CCN(CC3)CCc4oc5cc(F)ccc5o4</chem>
336	 <chem>Cc1nc(C)c2nc(C)nc12N3CCN(CC3)CCc4oc5ccccc5o4</chem>



7. A compound, represented by the structure of formula **X**:



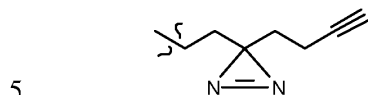
5 wherein

R₁ and **R₂** are each independently H, Cl, -R₈-O-R₁₀ (e.g., CH₂-CH₂-O-CH₃, CH₂-O-CH₂-CH₂-O-CH₃), -O-R₈-O-R₁₀ (e.g., O-CH₂-CH₂-O-CH₃), O-**R₂₀**, or CF₃;

R₃ and **R₄** are each independently H, O-**R₂₀**, C₁-C₅ linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl), substituted or unsubstituted C₃-C₈ heterocyclic ring (e.g., imidazole), (wherein substitutions include: F, Cl, Br, I, C₁-C₅ linear or branched alkyl, OH, alkoxy, CF₃, aryl, phenyl, heteroaryl, C₃-C₈ cycloalkyl, halophenyl, (benzyloxy)phenyl, CN, NO₂ or any combination thereof);

or **R₃** and **R₄** are joined together to form a 5 or 6 membered substituted or unsubstituted, aliphatic (e.g., cyclopentene) or aromatic, carbocyclic (e.g., benzene) or heterocyclic (e.g., thiophene, furane, pyrrol, pyrazole) ring;

R₂₀ is represented by the following structure:



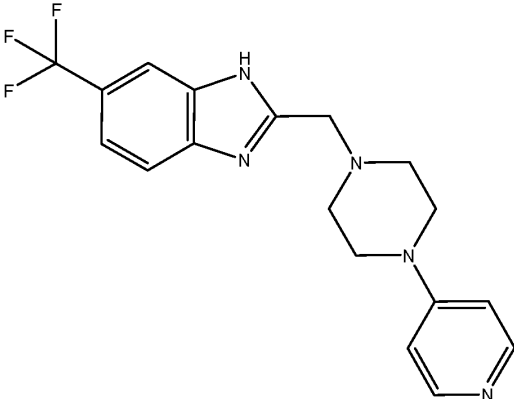
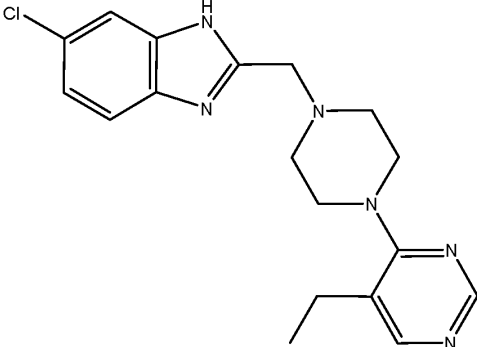
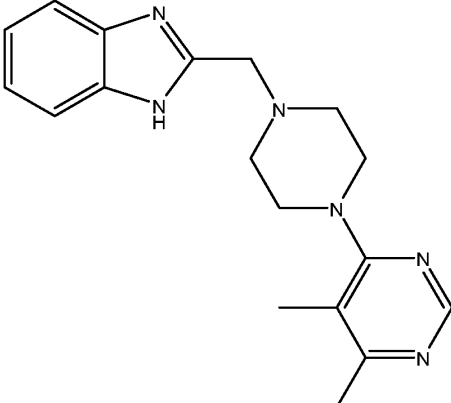
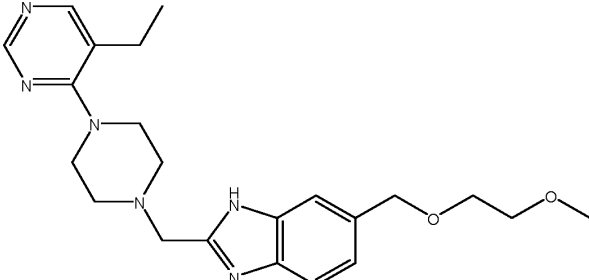
X₁₂ is C or N;

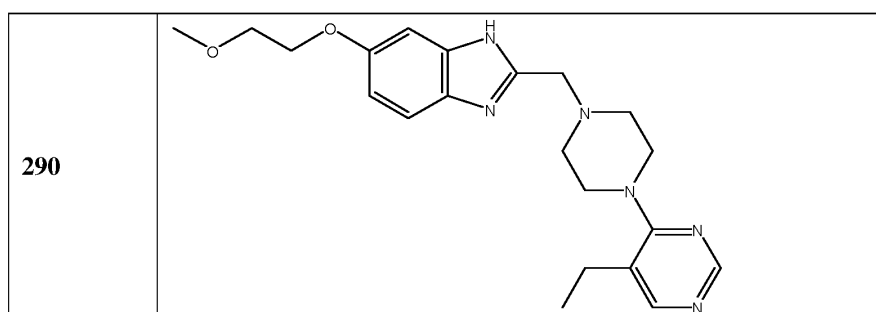
wherein if **R₃** is ethyl, then **R₁** or **R₂** is not CF₃;

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, prodrug, isotopic variant (e.g., deuterated analog), pharmaceutical product or any combination thereof.

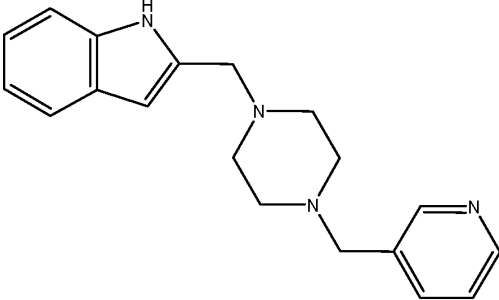
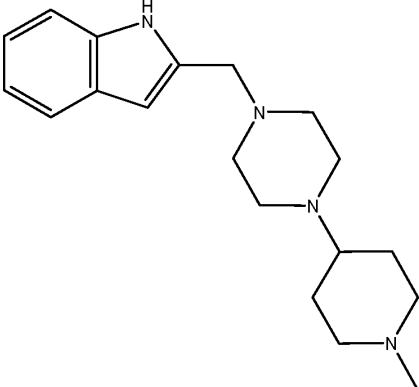
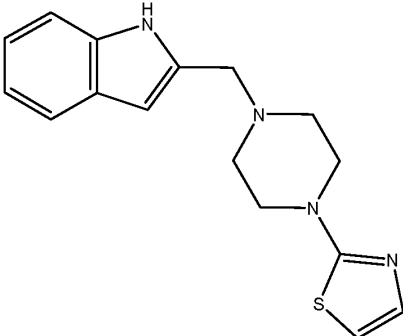
10 8. The compound of claim 7, selected from the following:

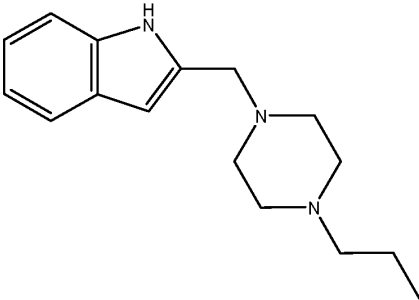
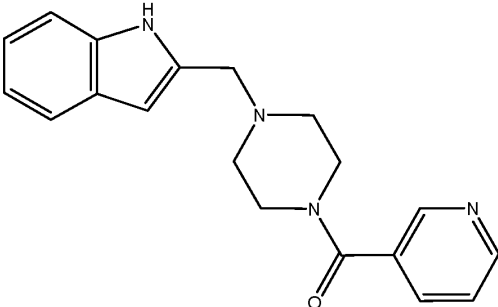
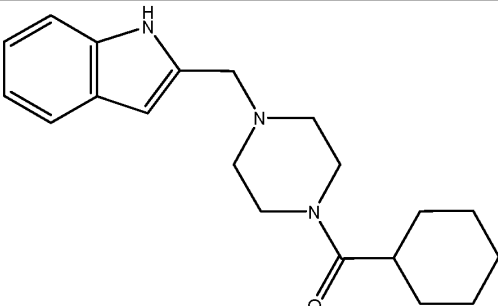
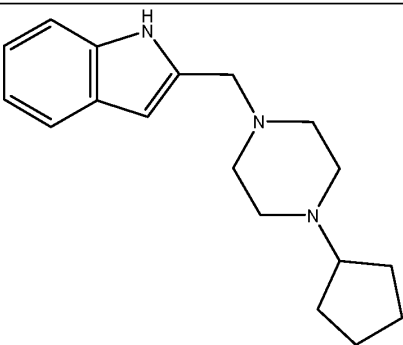
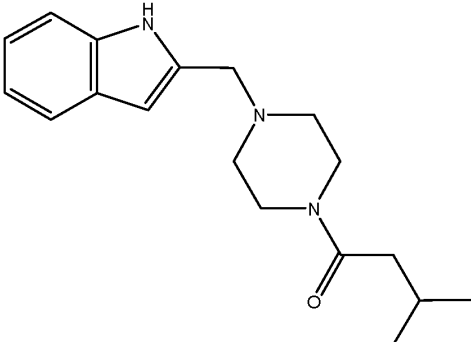
Compound Number	Compound Structure
201	
203	

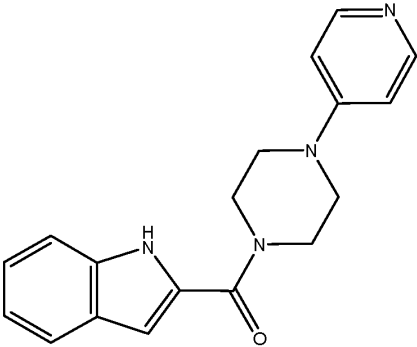
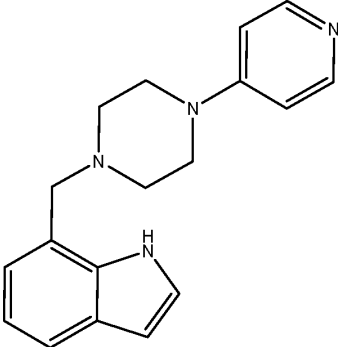
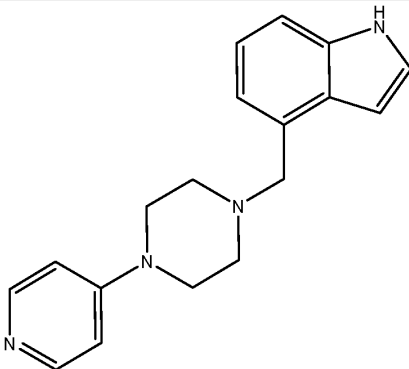
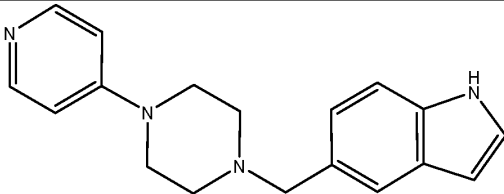
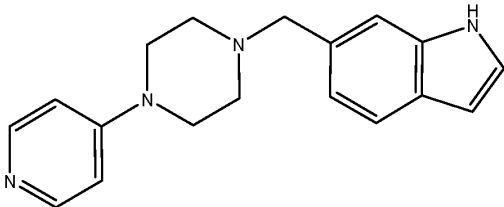
209	
211	
257	
289	

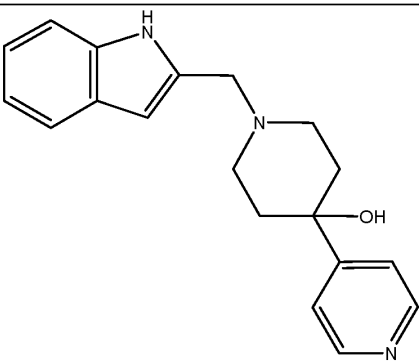
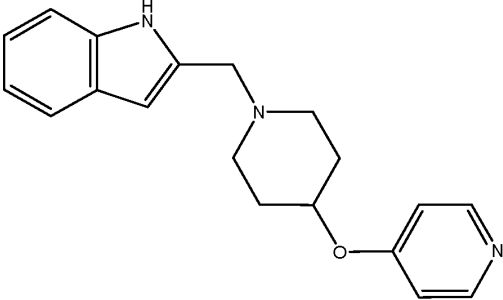
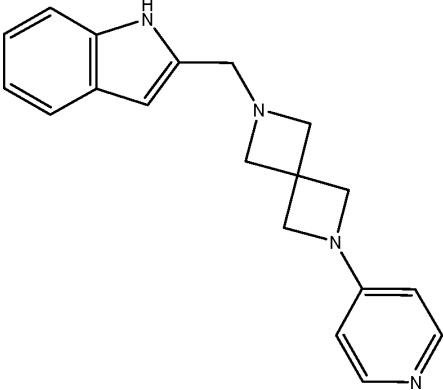
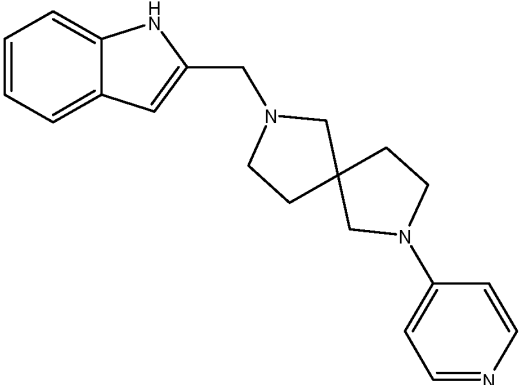


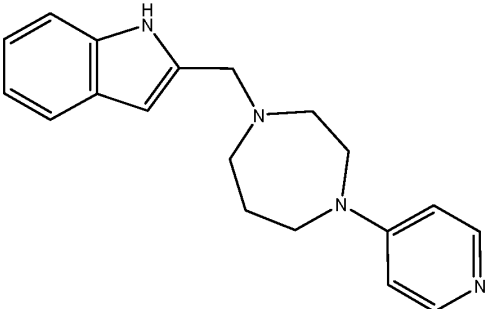
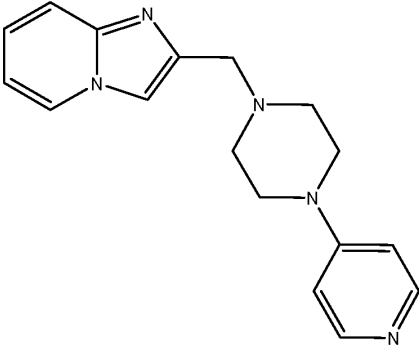
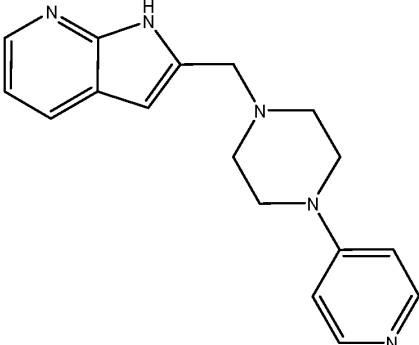
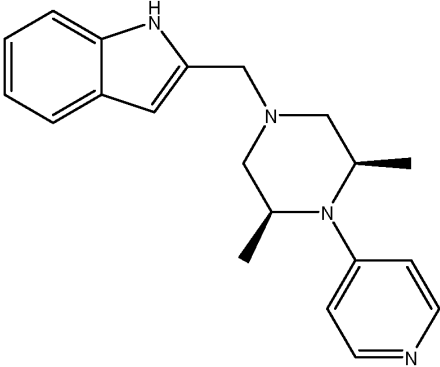
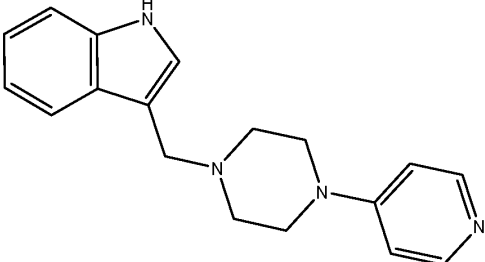
9. A compound represented by the structure of the following compounds:

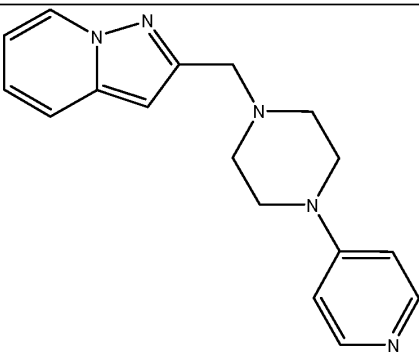
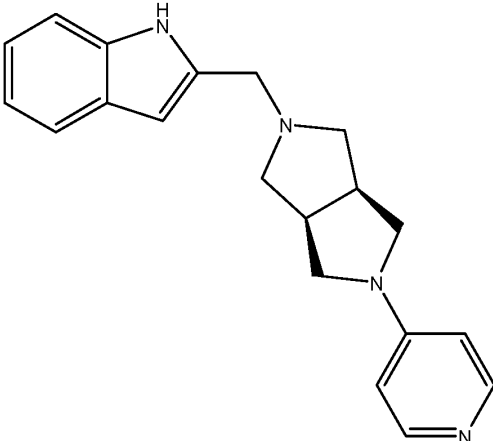
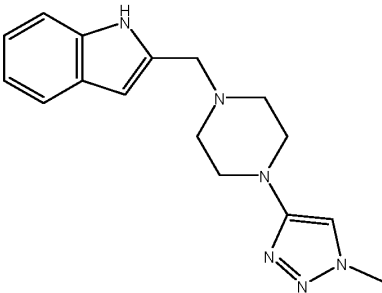
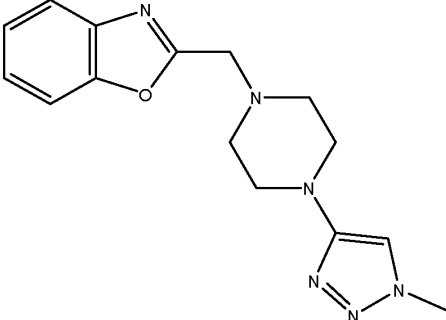
Compound Number	Compound Structure
218	
227	
229	

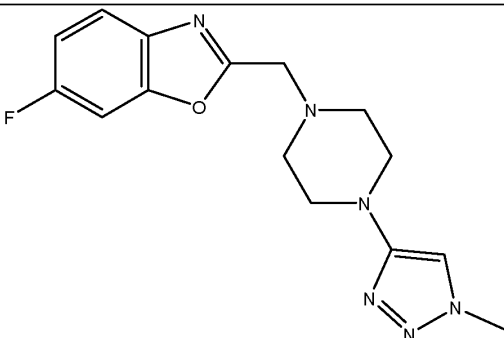
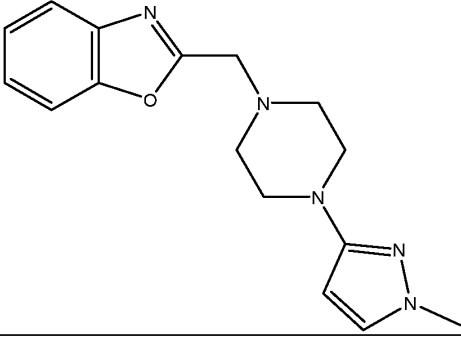
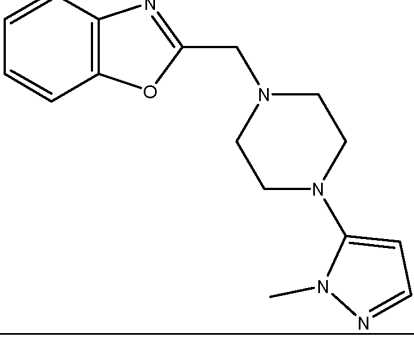
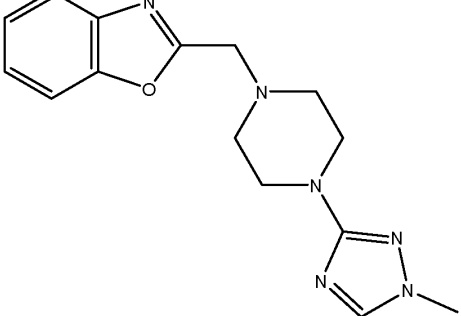
230	
231	
232	
233	
239	

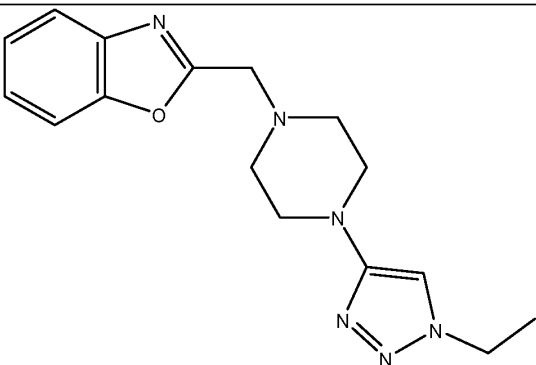
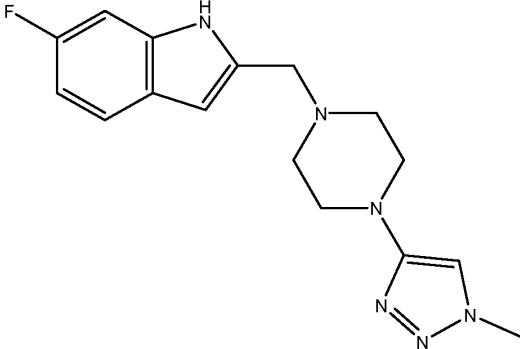
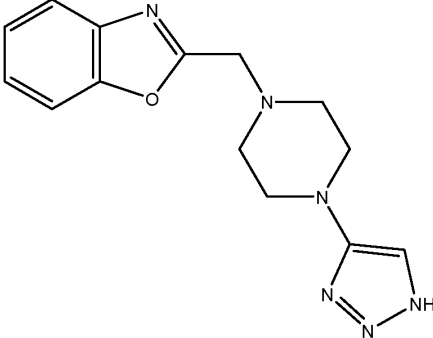
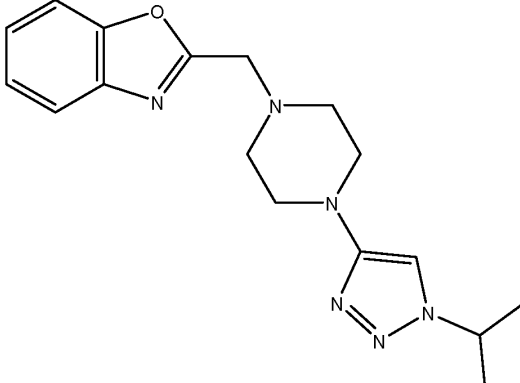
244	 <chem>O=C(c1c[nH]c2ccccc12)N1CCN(CC1)C3=CC=CC=N3</chem>
262	 <chem>c1c[nH]c2ccccc12CN1CCN(CC1)C3=CC=CC=N3</chem>
263	 <chem>c1c[nH]c2ccccc12CN1CCN(CC1)C3=CC=CC=N3</chem>
264	 <chem>c1c[nH]c2ccccc12CN1CCN(CC1)C3=CC=CC=N3</chem>
265	 <chem>c1c[nH]c2ccccc12CN1CCN(CC1)C3=CC=CC=N3</chem>

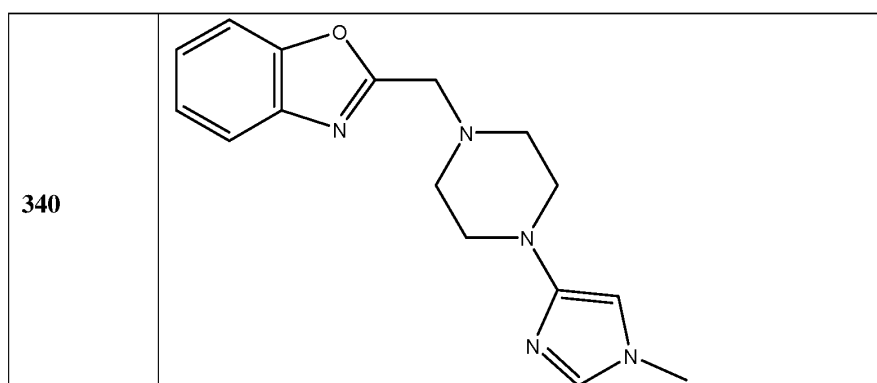
267	 <chem>Oc1cccnc1C2CCN(CC2)Cc3c[nH]c4ccccc34</chem>
268	 <chem>c1cccnc1OC2CCN(CC2)Cc3c[nH]c4ccccc34</chem>
271	 <chem>c1cccnc1N2CC3CCN(C3)CC2Cc4c[nH]c5ccccc45</chem>
272	 <chem>c1cccnc1N2CC3CCN(C3)CC2Cc4c[nH]c5ccccc45</chem>

273	
274	
275	
276	
277	

283	 <chem>C1=CN2C(=N1)C=CC=C2CN3CCN(C3)c4cccnc4</chem>
285	 <chem>C1=CN2C(=C1)c3ccccc3N2CN3CCN(C3)c4cccnc4</chem>
288	 <chem>C1=CN2C(=C1)c3ccccc3N2CN4CCN(C4)c5nn[nH]5</chem>
322	 <chem>C1=CN2C(=N1)C(=O)OC2c3ccccc3CN4CCN(C4)c5nn[nH]5</chem>

323	
324	
325	
326	

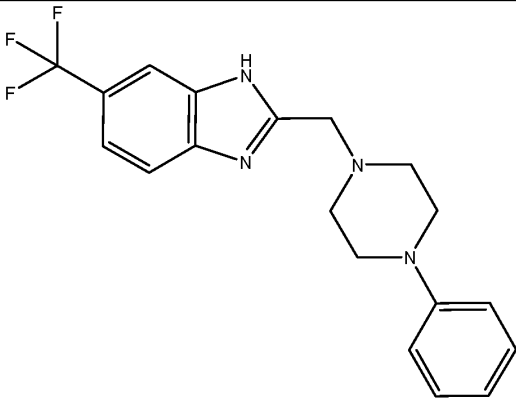
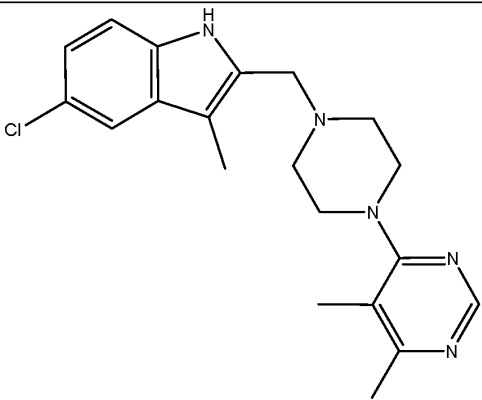
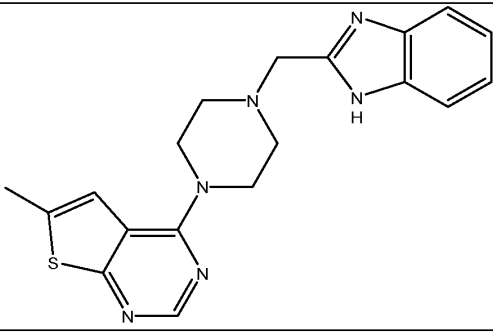
328	 <chem>CCN1C=NC2=C1N=CN2N3CCN(CC3)CCc4nc5ccccc5o4</chem>
331	 <chem>CN1C=NC2=C1N=CN2N3CCN(CC3)CCc4c[nH]c5cc(F)ccc45</chem>
332	 <chem>N1C=NC2=C1N=CN2N3CCN(CC3)CCc4nc5ccccc5o4</chem>
339	 <chem>CC(C)N1C=NC2=C1N=CN2N3CCN(CC3)CCc4nc5ccccc5o4</chem>

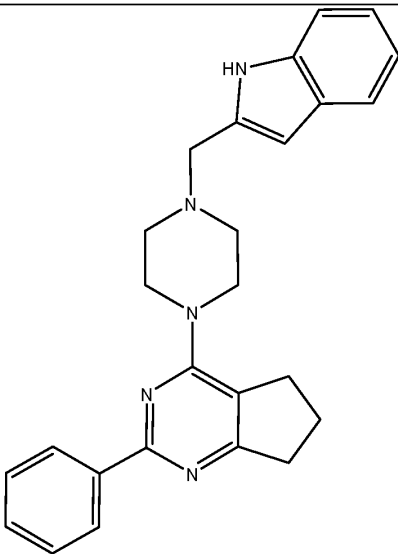
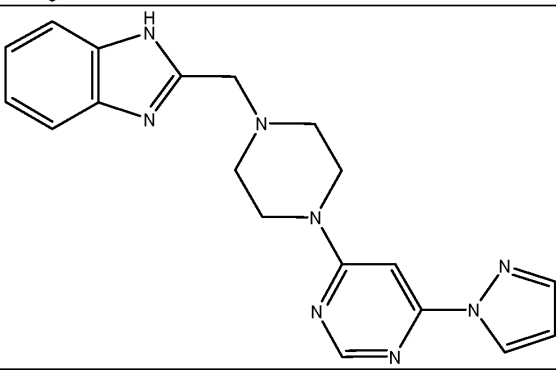
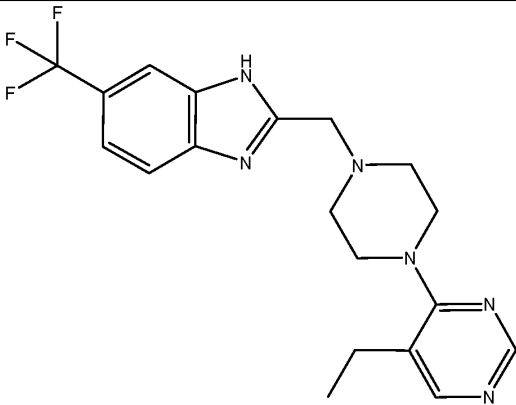
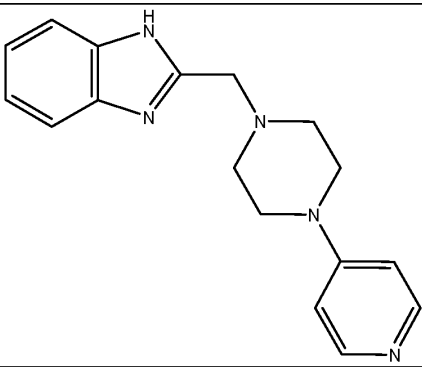


10. The compound according to any one of claims 1-9, wherein the compound is a collagen translation inhibitor.
11. The compound according to any one of claims 1-5, wherein **R₃** is H, Cl, F, CF₃, CHF₂, CN, C(O)H, O-**R₂₀**, CH₃, C₂H₅, -R₈-O-R₁₀, CH₂-O-CH₂-CH₂-O-CH₃, -O-R₈-O-R₁₀, or O-CH₂-CH₂-O-CH₃.
12. The compound according to any one of claims 1-5, wherein **R₁** is H, Cl, F, CN, CHF₂, NH(CO)-Ph, -R₈-O-R₁₀, CH₂-O-CH₂-CH₂-O-CH₃, -O-R₈-O-R₁₀, O-CH₂-CH₂-O-CH₃, O-**R₂₀** or CF₃.
13. The compound according to any one of claims 1-5, wherein **X₂** is NH or O and **X₃** is CH or C-Cl.
14. The compound according to any one of claims 1-5, wherein **L₁** is CH₂ and/or w is 1 or 0.
15. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting fibrosis in a subject.
16. The compound of claim 15, wherein said fibrosis is a systemic fibrotic disease.
17. The compound of claim 16, wherein said systemic fibrotic disease is systemic sclerosis, multifocal fibrosclerosis (IgG4-associated fibrosis), nephrogenic systemic fibrosis, sclerodermatous graft vs. host disease, or any combination thereof.
18. The compound of claim 15, wherein said fibrosis is an organ-specific fibrotic disease.
19. The compound of claim 18, wherein said organ-specific fibrotic disease is lung fibrosis, cardiac fibrosis, kidney fibrosis, pulmonary fibrosis, liver and portal vein fibrosis, radiation-induced fibrosis, bladder fibrosis, intestinal fibrosis, peritoneal sclerosis, diffuse fasciitis, wound healing, scarring, or any combination thereof.
20. The compound of claim 19, wherein said lung fibrosis is idiopathic pulmonary fibrosis (IPF).
21. The compound of claim 19, wherein said cardiac fibrosis is hypertension-associated cardiac fibrosis, Post-myocardial infarction, Chagas disease-induced myocardial fibrosis or any combination thereof.
22. The compound of claim 19, wherein said kidney fibrosis is diabetic and hypertensive nephropathy, urinary tract obstruction-induced kidney fibrosis, inflammatory/autoimmune-induced kidney fibrosis, aristolochic acid nephropathy, polycystic kidney disease, or any combination thereof.
23. The compound of claim 19, wherein said pulmonary fibrosis is idiopathic pulmonary fibrosis, silica-induced pneumoconiosis (silicosis), asbestos-induced pulmonary fibrosis (asbestosis), chemotherapeutic agent-induced pulmonary fibrosis, or any combination thereof.

24. The compound of claim 19, wherein said liver and portal vein fibrosis is alcoholic and nonalcoholic liver fibrosis, hepatitis C-induced liver fibrosis, primary biliary cirrhosis, parasite-induced liver fibrosis (schistosomiasis), or any combination thereof.
25. The compound of claim 19, wherein said diffuse fasciitis is localized scleroderma, keloids, dupuytren's disease, peyronie's disease, myelofibrosis, oral submucous fibrosis, or any combination thereof.
26. The compound of claim 15, wherein said fibrosis is primary or secondary fibrosis.
27. The compound of claim 15, wherein said fibrosis is a result of systemic sclerosis, graft-versus host disease (GVHD), pulmonary fibrosis, autoimmune disorder, tissue injury, inflammation, oxidative stress or any combination thereof.
28. The compound of claim 15, wherein the fibrosis is hepatic fibrosis, lung fibrosis or dermal fibrosis.
29. The compound of any one of claims 15 or 24, wherein said subject has a liver cirrhosis.
30. The compound of claim 28, wherein the dermal fibrosis is scleroderma.
31. The compound of claim 28, wherein the dermal fibrosis is a result of a localized or generalized morphea, keloids, hypertrophic scars, familial cutaneous collagenoma, connective tissue nevi of the collagen type, or any combination thereof.
32. The compound of claim 28, wherein the hepatic fibrosis is a result of hepatic scarring or chronic liver injury.
33. The compound of claim 32, wherein the chronic liver injury results from alcoholism, malnutrition, hemochromatosis, exposure to poisons, toxins or drugs.
34. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting lung fibrosis in a subject.
35. The compound of claim 34, wherein the lung fibrosis is idiopathic pulmonary fibrosis (IPF).
36. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting idiopathic pulmonary fibrosis (IPF) in a subject.
37. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting hepato-fibrotic disorder in a subject.
38. The compound of claim 37, wherein the hepato-fibrotic disorder is a portal hypertension, cirrhosis, congenital hepatic fibrosis or any combination thereof.
39. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting cirrhosis in a subject.
40. The compound of claim 39, wherein the cirrhosis is a result of hepatitis or alcoholism.
41. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting alcoholic steatohepatitis (ASH) in a subject.
42. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting non-alcoholic steatohepatitis (NASH) in a subject.
43. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting alcoholic fatty liver disease (AFLD) in a subject.

44. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting non alcoholic fatty liver disease (NAFLD) in a subject.
45. A compound according to any one of claims 1 to 14 for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting an autoimmune disease or disorder in a subject.
46. A pharmaceutical composition comprising a compound according to any one of claims 1 to 14 and a pharmaceutically acceptable carrier.
47. A compound represented by any one of the following structures:

Compound Number	Compound Structure
200	
204	
205	

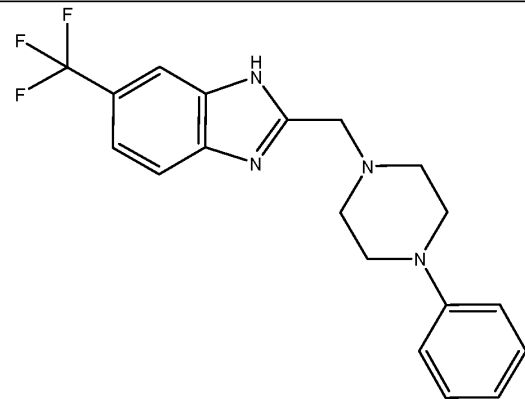
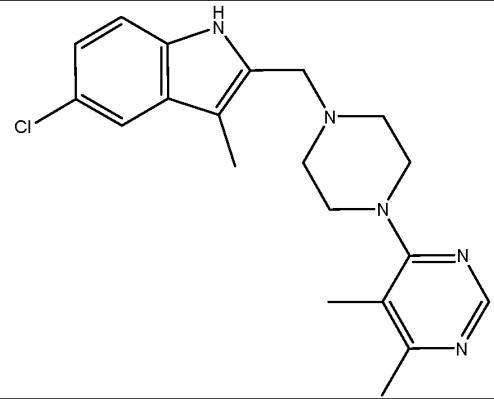
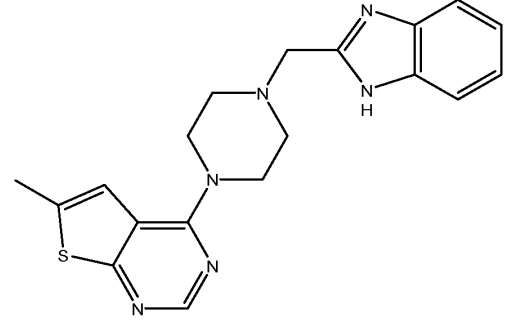
207	
208	
214	
253	

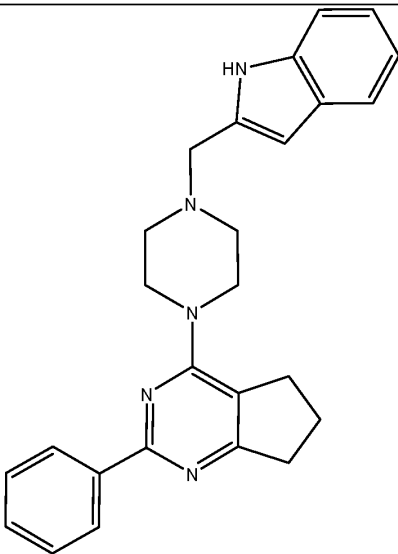
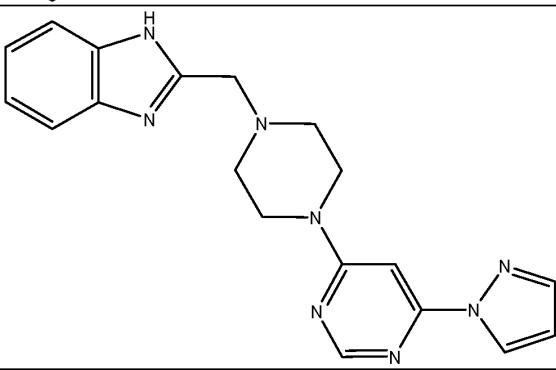
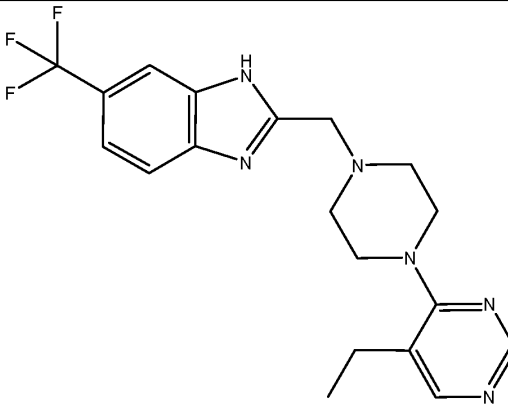
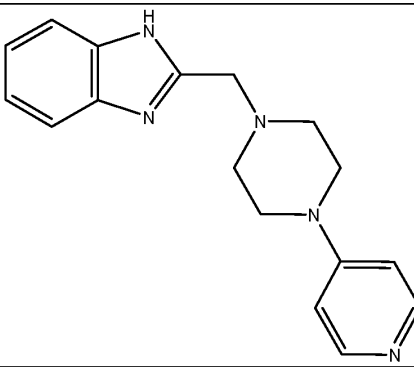
for treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting fibrosis in a subject.

48. The compound of claim 47, wherein said fibrosis is a systemic fibrotic disease.
49. The compound of claim 48, wherein said systemic fibrotic disease is systemic sclerosis, multifocal
5 fibrosclerosis (IgG4-associated fibrosis), nephrogenic systemic fibrosis, sclerodermatous graft vs. host disease, or any combination thereof.
50. The compound of claim 47, wherein said fibrosis is an organ-specific fibrotic disease.
51. The compound of claim 50, wherein said organ-specific fibrotic disease is lung fibrosis, cardiac fibrosis,
kidney fibrosis, pulmonary fibrosis, liver and portal vein fibrosis, radiation-induced fibrosis, bladder
10 fibrosis, intestinal fibrosis, peritoneal sclerosis, diffuse fasciitis, wound healing, scarring, or any combination thereof.
52. The compound of claim 51, wherein said lung fibrosis is idiopathic pulmonary fibrosis (IPF).
53. The compound of claim 51, wherein said cardiac fibrosis is hypertension-associated cardiac fibrosis, Post-myocardial infarction, Chagas disease-induced myocardial fibrosis or any combination thereof.
- 15 54. The compound of claim 51, wherein said kidney fibrosis is diabetic and hypertensive nephropathy, urinary tract obstruction-induced kidney fibrosis, inflammatory/autoimmune-induced kidney fibrosis, aristolochic acid nephropathy, polycystic kidney disease, or any combination thereof.
55. The compound of claim 51, wherein said pulmonary fibrosis is idiopathic pulmonary fibrosis, silica-induced pneumoconiosis (silicosis), asbestos-induced pulmonary fibrosis (asbestosis),
20 chemotherapeutic agent-induced pulmonary fibrosis, or any combination thereof.
56. The compound of claim 51, wherein said liver and portal vein fibrosis is alcoholic and nonalcoholic liver fibrosis, hepatitis C-induced liver fibrosis, primary biliary cirrhosis, parasite-induced liver fibrosis (schistosomiasis), or any combination thereof.
57. The compound of claim 51, wherein said diffuse fasciitis is localized scleroderma, keloids, dupuytren's
25 disease, peyronie's disease, myelofibrosis, oral submucous fibrosis, or any combination thereof.
58. The compound of claim 47, wherein said fibrosis is primary or secondary fibrosis.
59. The compound of claim 47, wherein said fibrosis is a result of systemic sclerosis, graft-versus host disease (GVHD), pulmonary fibrosis, autoimmune disorder, tissue injury, inflammation, oxidative stress or any combination thereof.
- 30 60. The compound of claim 47, wherein the fibrosis is hepatic fibrosis, lung fibrosis or dermal fibrosis.
61. The compound of any one of claims 47 or 56, wherein said subject has a liver cirrhosis.
62. The compound of claim 60, wherein the dermal fibrosis is scleroderma.
63. The compound of claim 60, wherein the dermal fibrosis is a result of a localized or generalized morphea, keloids, hypertrophic scars, familial cutaneous collagenoma, connective tissue nevi of the collagen type,
35 or any combination thereof.
64. The compound of claim 60, wherein the hepatic fibrosis is a result of hepatic scarring or chronic liver injury.

65. The compound of claim 64, wherein the chronic liver injury results from alcoholism, malnutrition, hemochromatosis, exposure to poisons, toxins or drugs.

66. A compound represented by any one of the following structures:

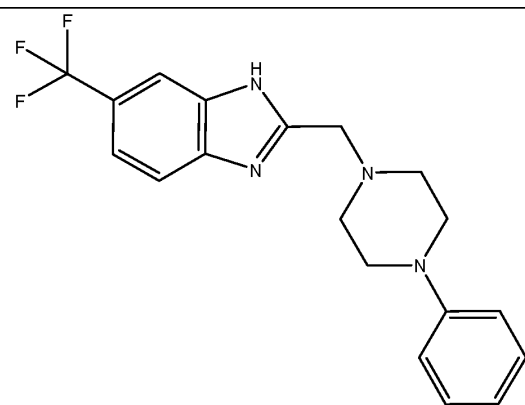
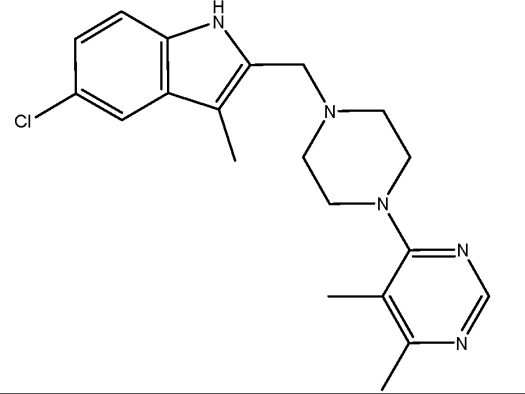
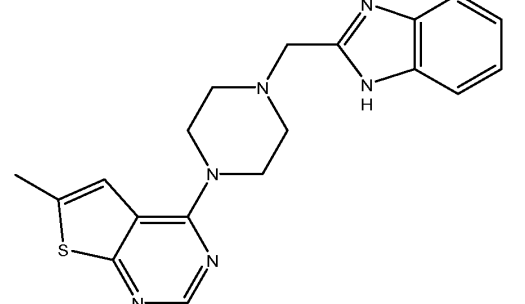
Compound Number	Compound Structure
200	
204	
205	

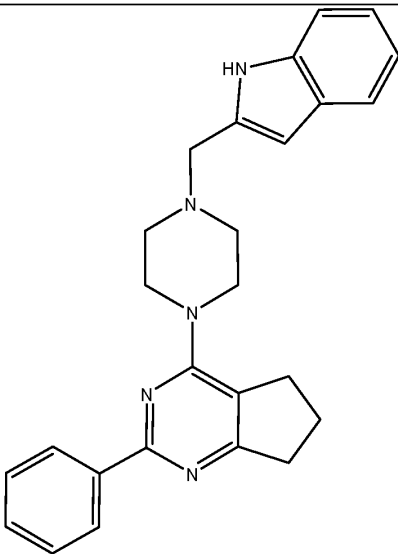
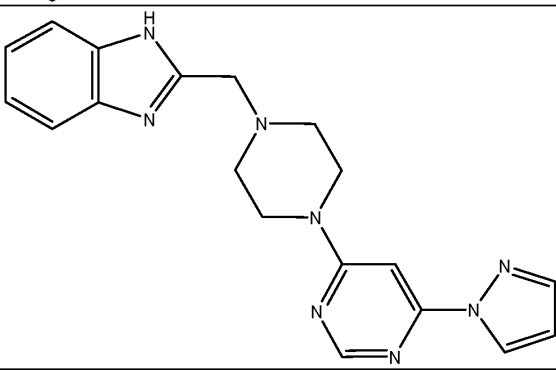
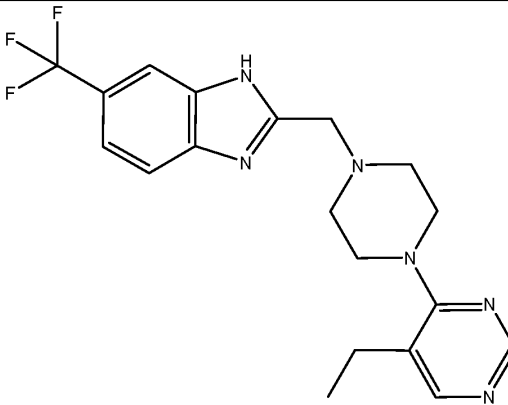
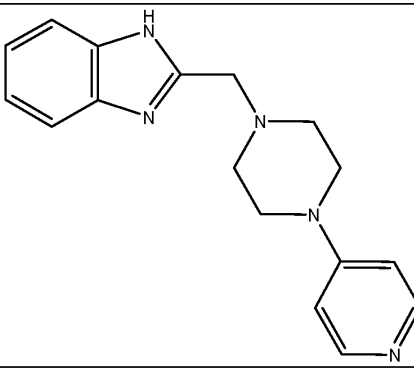
207	
208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting lung fibrosis in a subject.

67. The compound of claim 66, wherein the lung fibrosis is idiopathic pulmonary fibrosis (IPF).

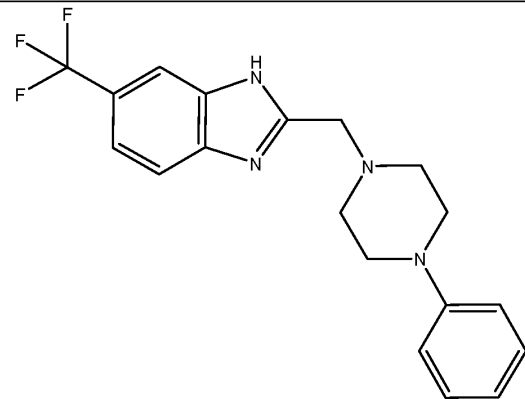
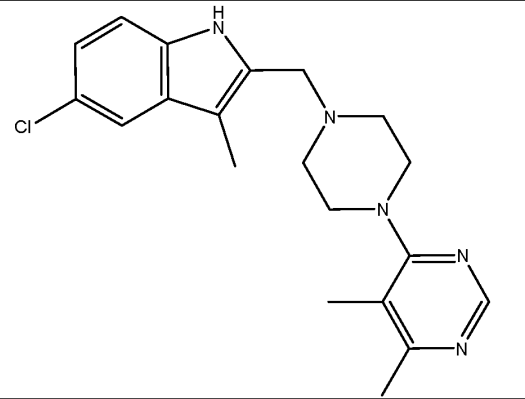
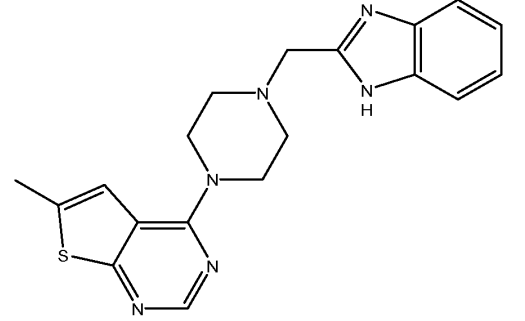
68. A compound represented by any one of the following structures:

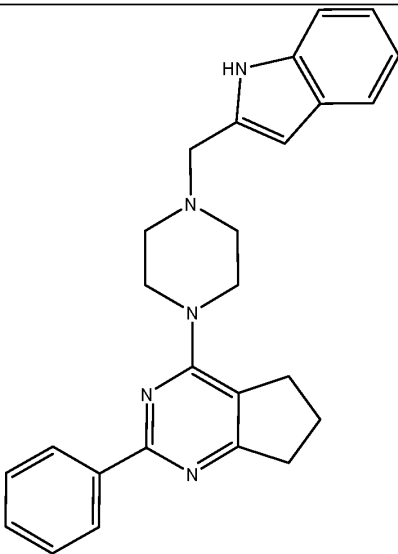
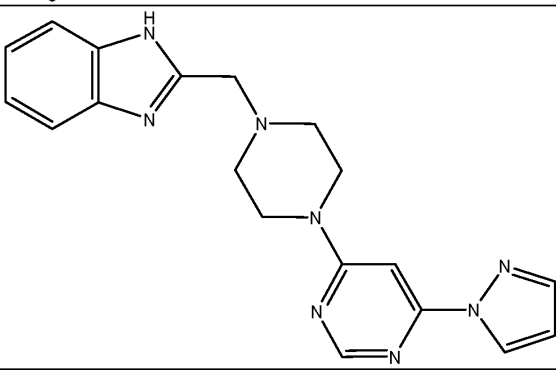
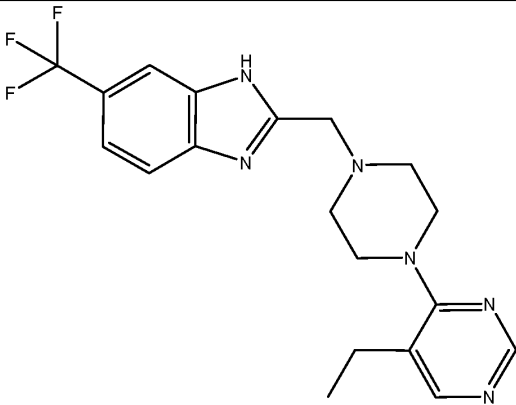
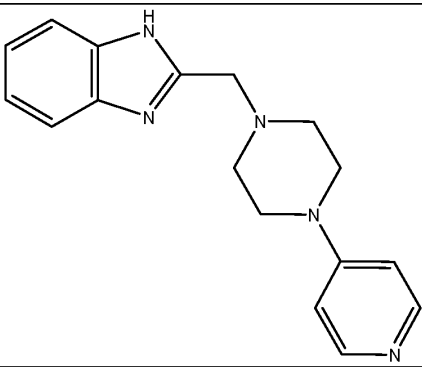
Compound Number	Compound Structure
200	
204	
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207	
208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting idiopathic pulmonary fibrosis (IPF) in a subject.

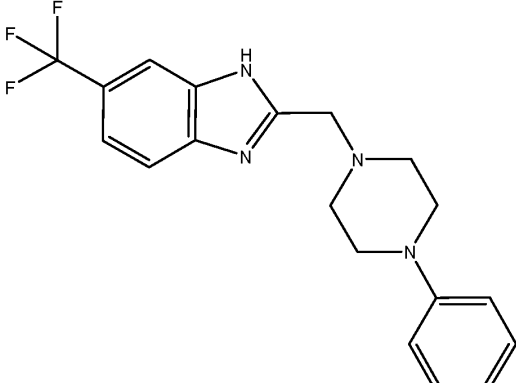
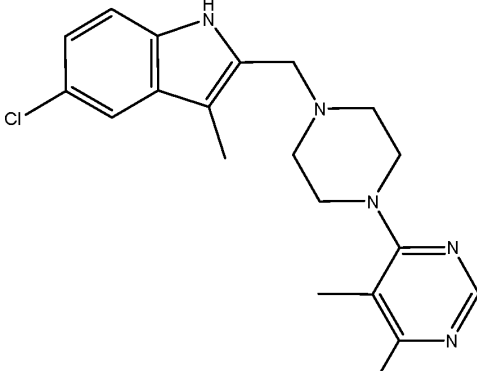
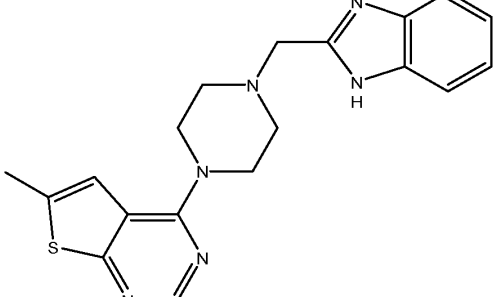
69. A compound represented by any one of the following structures:

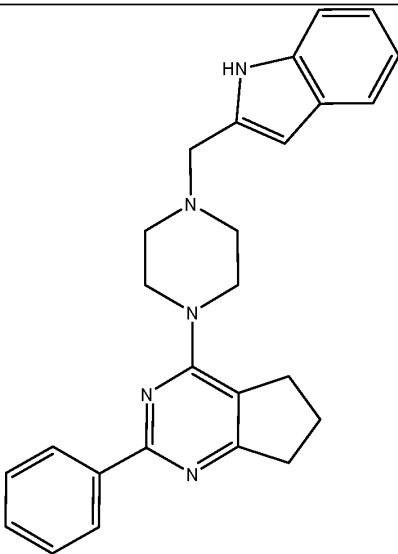
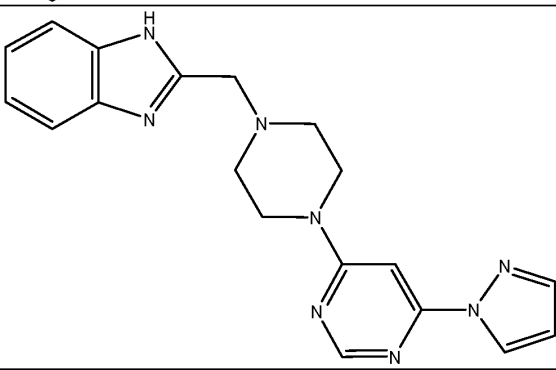
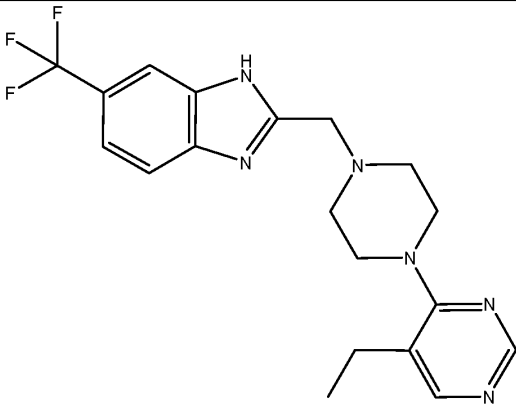
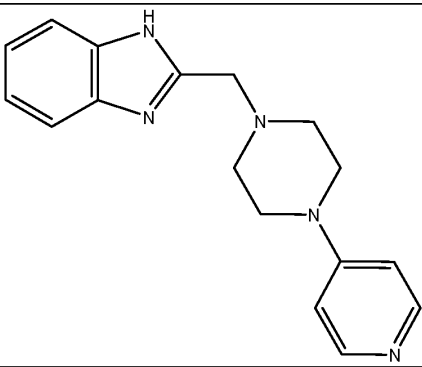
Compound Number	Compound Structure
200	
204	
205	

207	
208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting hepato-fibrotic disorder in a subject.

70. The compound of claim 69, wherein the hepato-fibrotic disorder is a portal hypertension, cirrhosis, congenital hepatic fibrosis or any combination thereof.
- 5 71. A compound represented by any one of the following structures:

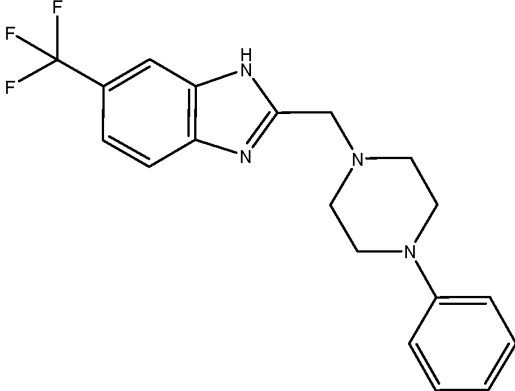
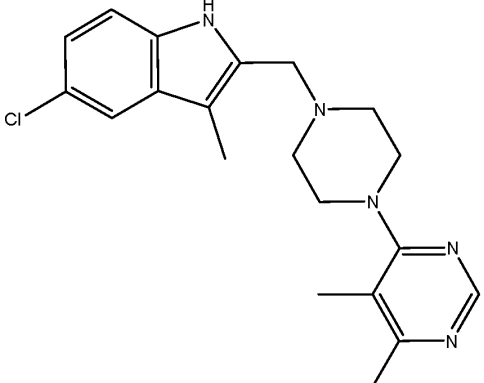
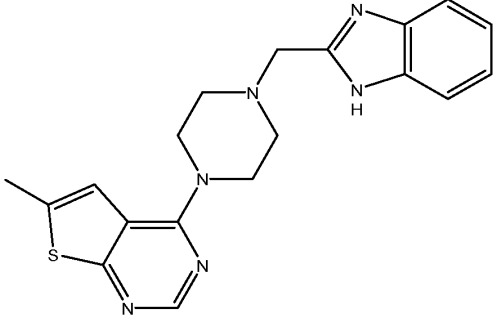
Compound Number	Compound Structure
200	
204	
205	

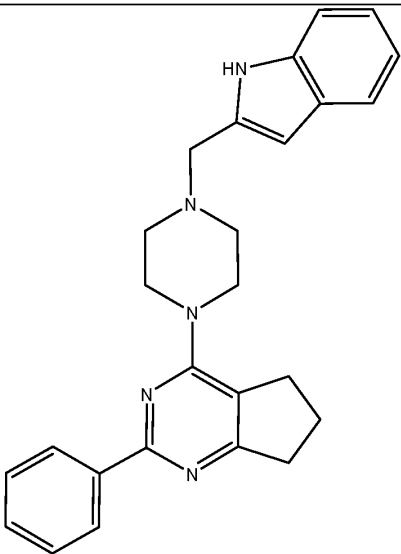
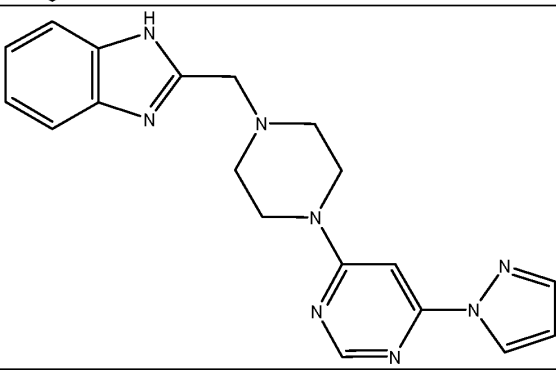
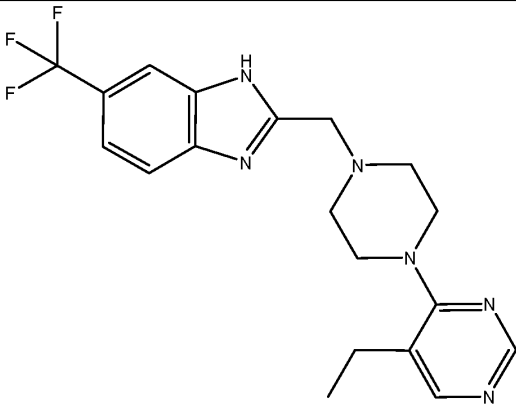
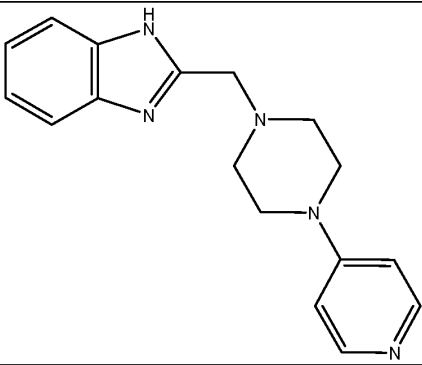
207	
208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting cirrhosis in a subject.

72. The compound of claim 71, wherein the cirrhosis is a result of hepatitis or alcoholism.

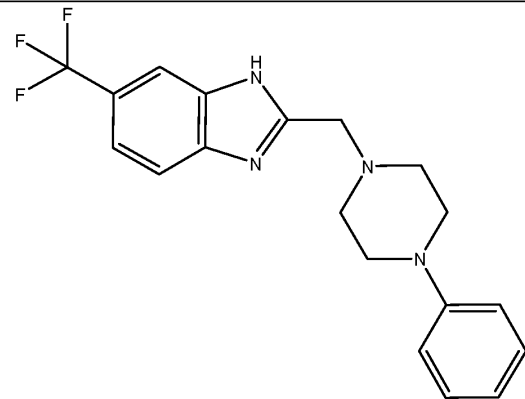
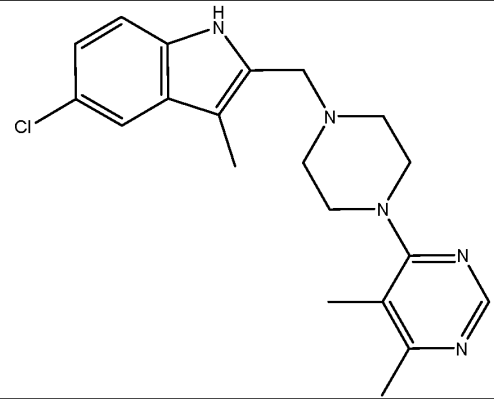
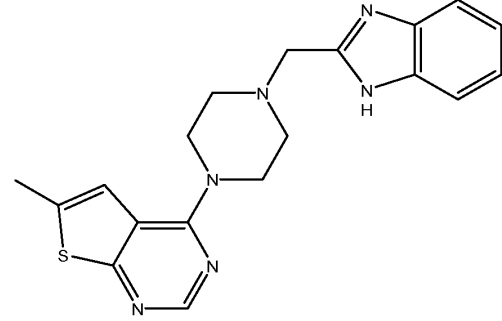
73. A compound represented by any one of the following structures:

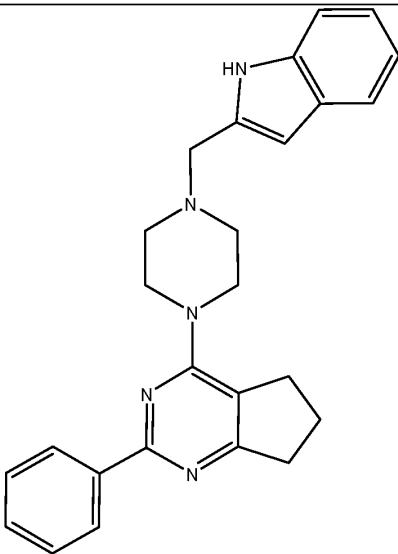
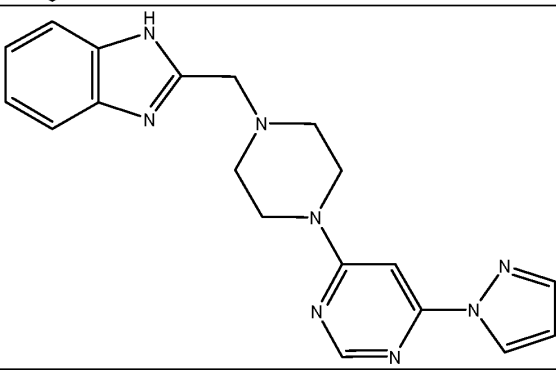
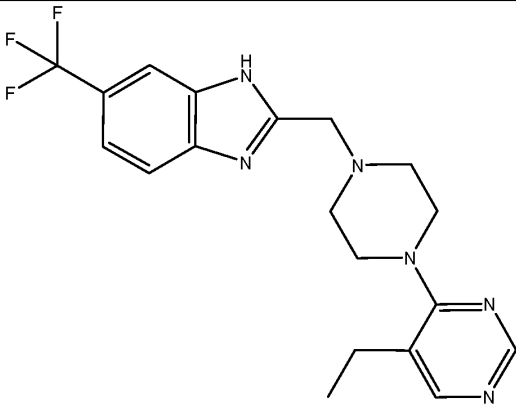
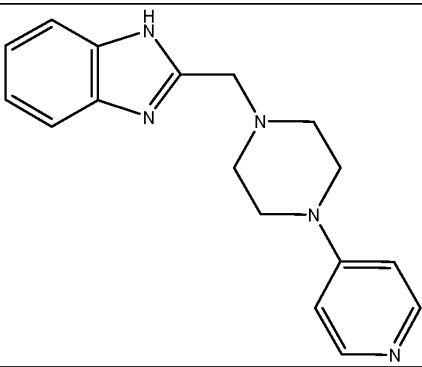
Compound Number	Compound Structure
200	
204	
205	

207	
208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting alcoholic steatohepatitis (ASH) in a subject.

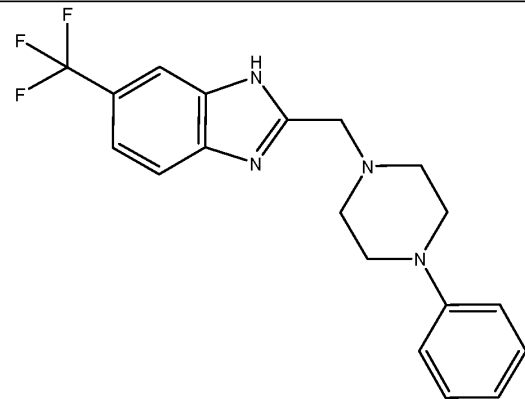
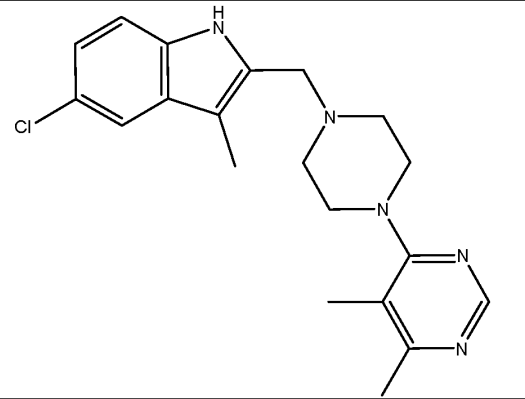
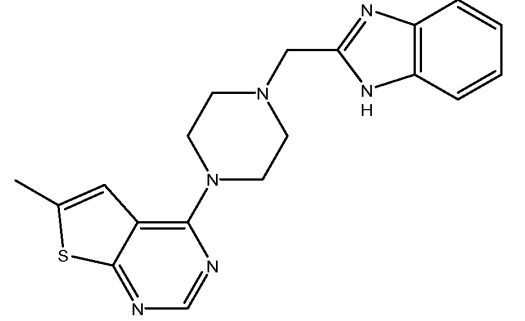
74. A compound represented by any one of the following structures:

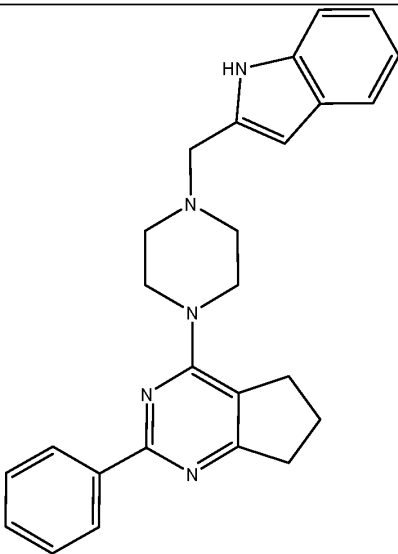
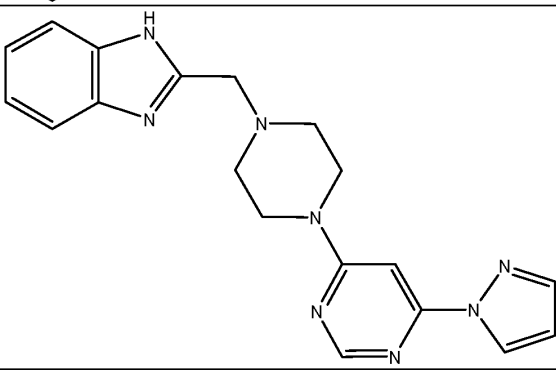
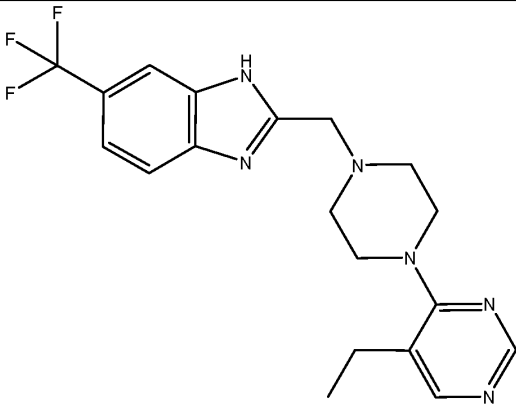
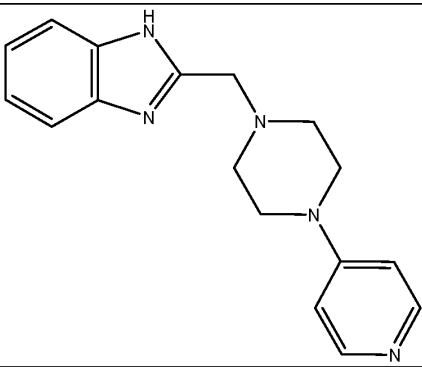
Compound Number	Compound Structure
200	
204	
205	

207	
208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting non-alcoholic steatohepatitis (NASH) in a subject.

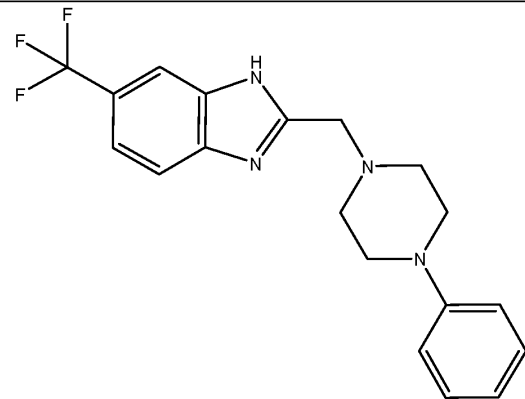
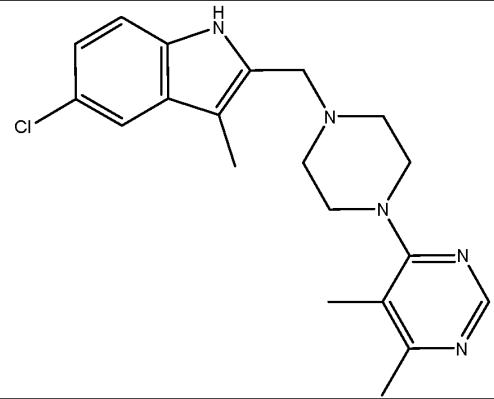
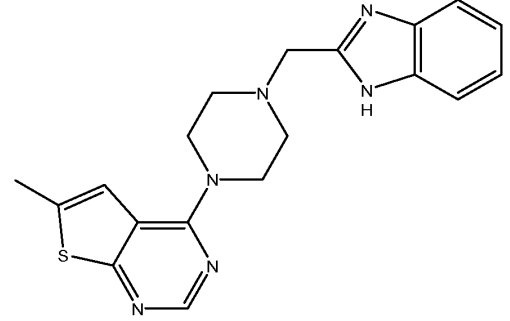
75. A compound represented by any one of the following structures:

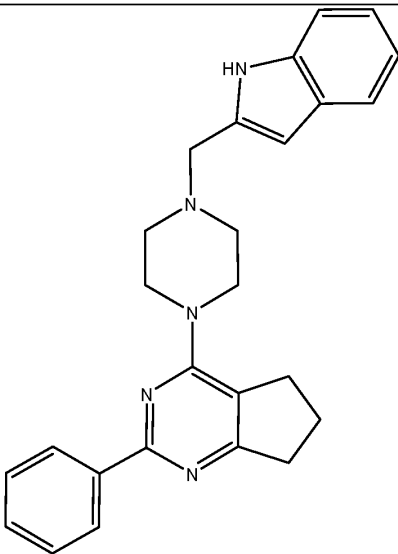
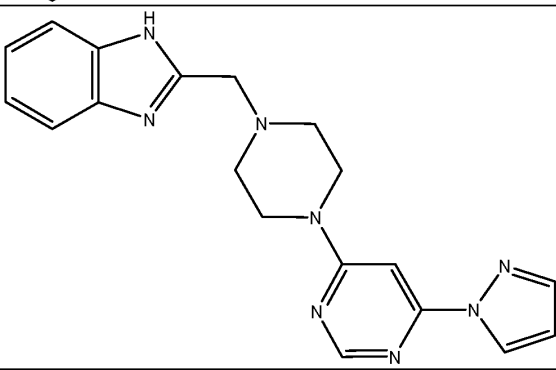
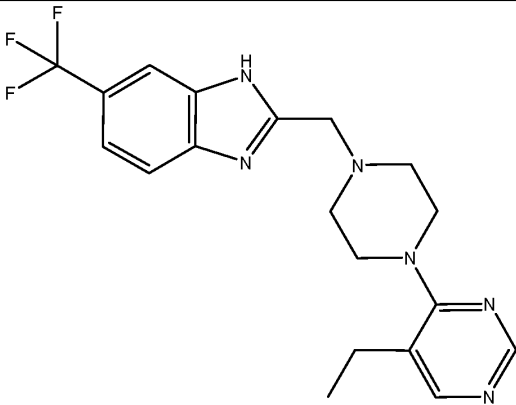
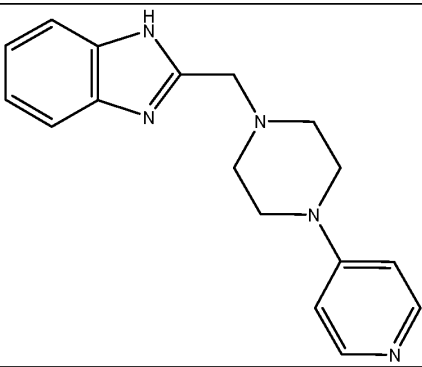
Compound Number	Compound Structure
200	
204	
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214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting alcoholic fatty liver disease (AFLD) in a subject.

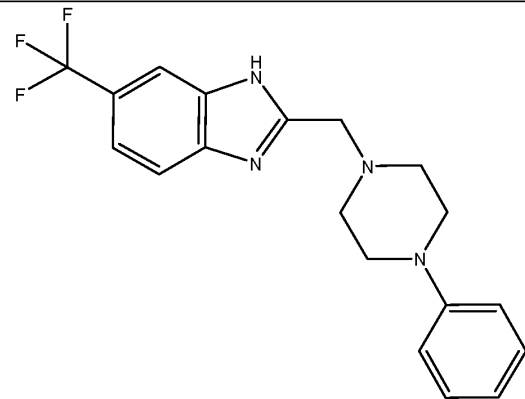
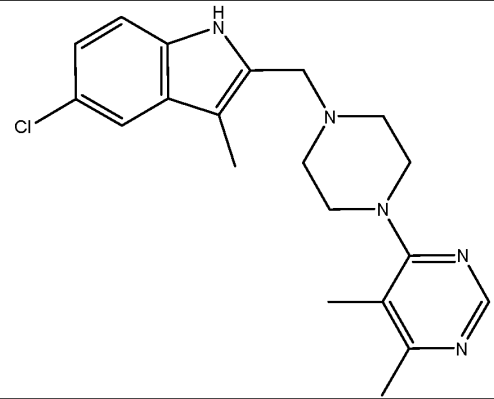
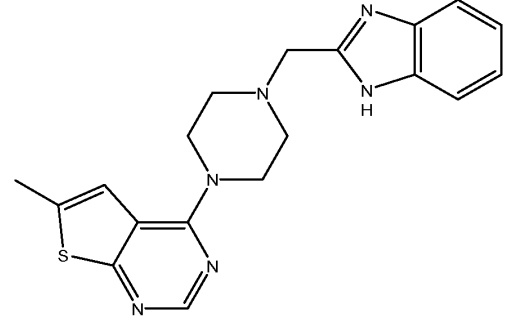
76. A compound represented by any one of the following structures:

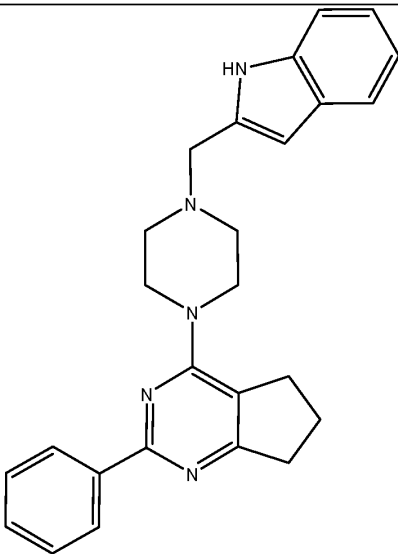
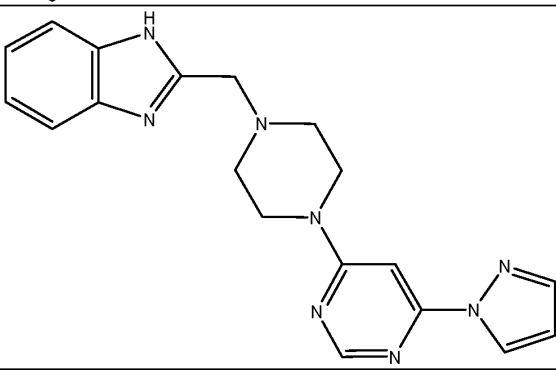
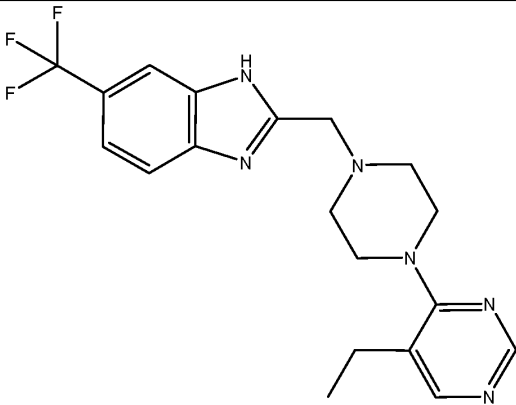
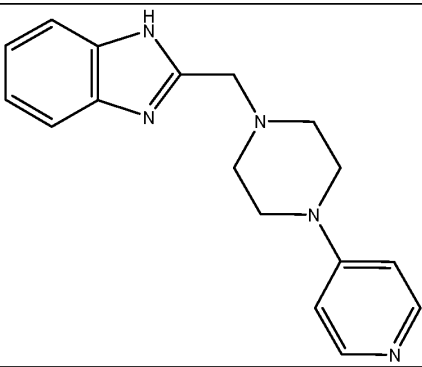
Compound Number	Compound Structure
200	
204	
205	

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208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting non alcoholic fatty liver disease (NAFLD) in a subject.

77. A compound represented by any one of the following structures:

Compound Number	Compound Structure
200	
204	
205	

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208	
214	
253	

for use in treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting an autoimmune disease or disorder in a subject.