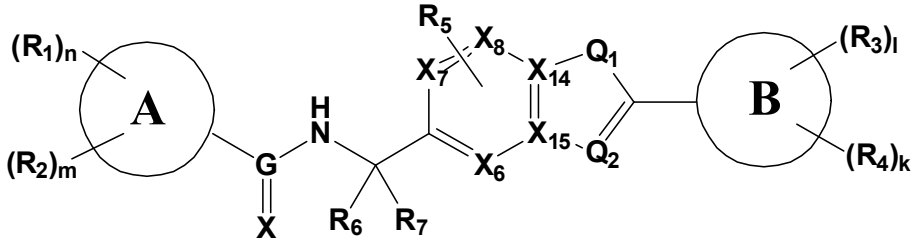
of their ability to reduce the decrease in forced vital capacity (FVC) and to slow the pace of disease progression. To date, however, it is unclear whether these drugs improve symptoms such as dyspnoea and cough, or whether their beneficial effect on functional decline translates to increased survival.

[0012] The compounds of this invention target activated fibroblasts and collagen over production and can therefore be used for treating fibrosis, including primary or secondary fibrosis, such as systemic sclerosis, graft-versus host disease (GVHD), pulmonary fibrosis and autoimmune disorders, lung fibrosis and Idiopathic pulmonary fibrosis (IPF), as well as localized processes, as for example, pulmonary fibrosis and liver cirrhosis, or more generalized processes, like progressive systemic sclerosis. The compounds can be further useful in the treatment of different forms of dermal fibrosis, which in addition to scleroderma, include localized and generalized morphea, keloids, hypertrophic scars, familial cutaneous collagenoma and connective tissue nevi of the collagen type. The compounds can be further useful in the treatment of lung fibrosis and Idiopathic pulmonary fibrosis (IPF), as well as hepatic fibrosis, resulting from hepatic scarring, caused by surgery or other forms of injury associated with mechanical biliary obstruction. Such fibrosis can lead to portal hypertension, in which scarring distorts blood flow through the liver, or cirrhosis as well as other hepato-fibrotic disorders including Non-alcoholic steatohepatitis (NASH), and alcoholic steatohepatitis (ASH), non-alcoholic fatty liver disease (NAFLD) and alcoholic fatty liver disease (AFLD), which can be similarly be treated by compounds of the invention.

SUMMARY

[0013] This disclosure provides a compound or its pharmaceutically acceptable salt, optical isomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variants (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof, represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below. In various examples, the compound is Collagen I translation inhibitor.

[0013a] In one aspect, the present disclosure refers to a compound represented by the structure of formula (I):



(**I**)

wherein A and B rings are each independently a single or fused aromatic or heteroaromatic ring system, or a single or fused C_3-C_{10} cycloalkyl or a single or fused C_3-C_{10} heterocyclic ring;

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}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_2}$ and $\mathbf{R_1}$ are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{R_3}$ and $\mathbf{R_4}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, -O-R_8-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, substituted or unsubstituted C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_3}$ and $\mathbf{R_4}$ are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{R_5}$ is absent or is H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

$\mathbf{R_6}$ and $\mathbf{R_7}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_6}$ and $\mathbf{R_7}$ are joint together to form a 3 to 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

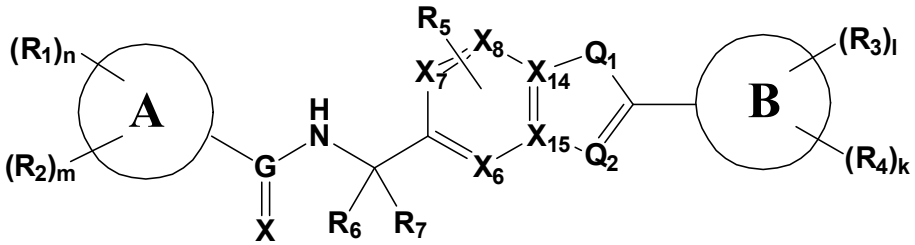
$\mathbf{Q_1}$ is NH, N(R), N-OH or N-OMe;

$\mathbf{Q_2}$ is N, or C-CH_3;

R is H, F, Cl, Br, I, OH, SH, OH, $N(R)_2$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl, R_8-aryl, -R_8-O-R_8-O-R_{10}, -R_8-O-R_{10}, -R_8-R_{10}, substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

G=X is C=O, C=S, S=O, SO_2, CH_2, CHR, or $C(R)_2$;
each $\mathbf{R_8}$ is independently $[\mathbf{CH_2}]_p$
wherein **p** is between 1 and 10;
$\mathbf{R_9}$ is $[CH]_q$, $[C]_q$
wherein **q** is between 2 and 10;
$\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl, C_1-C_5 linear or branched alkoxy, C(O)R, or $S(O)_2R$; or $\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are joint to form a substituted or unsubstituted C_3-C_8 heterocyclic ring,
m, **n, l** and **k** are each independently an integer between 0 and 4 ;
$\mathbf{X_6}$, $\mathbf{X_7}$ and $\mathbf{X_8}$ are each independently C or N;
$\mathbf{X_{14}}$ and $\mathbf{X_{15}}$ are each independently C or N;
or its pharmaceutically acceptable salt, optical isomer, tautomer, hydrate, *N*-oxide, isotopic variant, pharmaceutical product or any combination thereof;
wherein $\mathbf{R_5}$ can only be attached to $\mathbf{X_6}$, $\mathbf{X_7}$ and/or $\mathbf{X_8}$ that are C.

[0013b] In one aspect, the present disclosure refers to a compound represented by the structure of formula (I):



(**I**)

wherein **A** is a single or fused aromatic or heteroaromatic ring system, or a single or fused C_3-C_{10} cycloalkyl or a single or fused C_3-C_{10} heterocyclic ring;
B ring is a single or fused aromatic ring system, or a single or fused C_3-C_{10} cycloalkyl or a single or fused C_3-C_{10} non-aromatic heterocyclic ring;
$\mathbf{R_1}$ and $\mathbf{R_2}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;
or $\mathbf{R_2}$ and $\mathbf{R_1}$ are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;
$\mathbf{R_3}$ and $\mathbf{R_4}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, -O-R_8-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl,

substituted or unsubstituted C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_3}$ and $\mathbf{R_4}$ are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{R_5}$ is absent or is H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

$\mathbf{R_6}$ and $\mathbf{R_7}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_6}$ and $\mathbf{R_7}$ are joint together to form a 3 to 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{Q_1}$ is NH, N(R), N-OH or N-OMe;

$\mathbf{Q_2}$ is C(R);

R is H, F, Cl, Br, I, OH, SH, OH, $N(R)_2$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl, R_8-aryl, -R_8-O-R_8-O-R_{10}, -R_8-O-R_{10}, -R_8-R_{10}, substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

G=X is C=O, C=S, S=O, SO_2, CH_2, CHR, or $C(R)_2$;

each $\mathbf{R_8}$ is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

$\mathbf{R_9}$ is $[CH]_q$, $[C]_q$

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

$\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl, C_1-C_5 linear or branched alkoxy, C(O)R, or $S(O)_2R$; or $\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are joint to form a substituted or unsubstituted C_3-C_8 heterocyclic ring,

m, **n, l** and **k** are each independently an integer between 0 and 4;

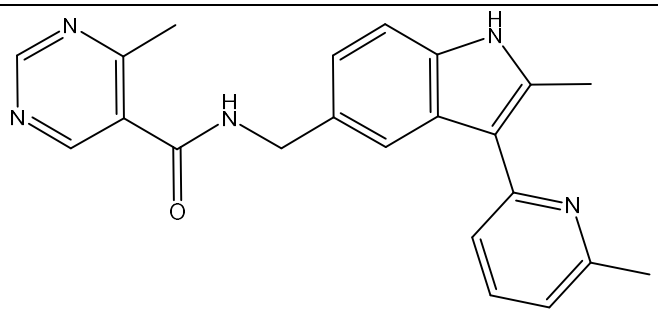
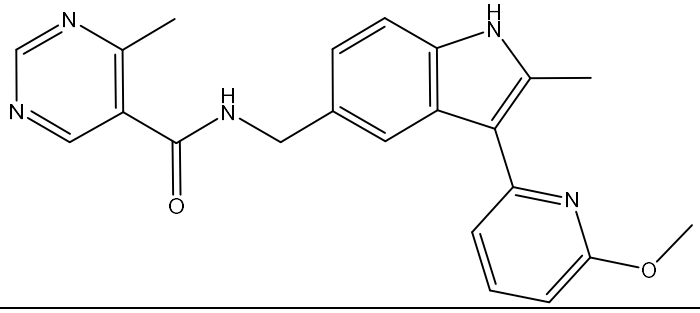
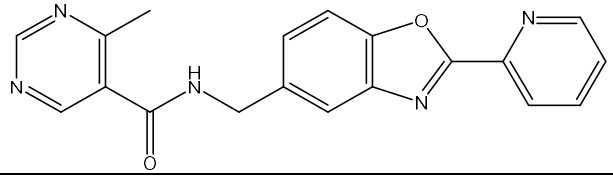
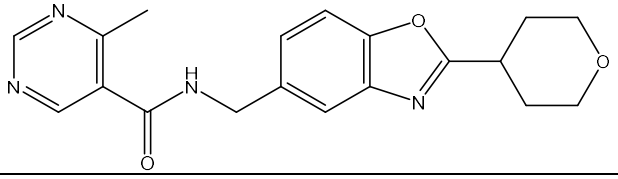
$\mathbf{X_6}$, $\mathbf{X_7}$ and $\mathbf{X_8}$ are each independently C or N;

$\mathbf{X_{14}}$ and $\mathbf{X_{15}}$ are each independently C or N;

or its pharmaceutically acceptable salt, optical isomer, tautomer, hydrate, *N*-oxide, isotopic variant, pharmaceutical product or any combination thereof;

wherein $\mathbf{R_5}$ can only be attached to $\mathbf{X_6}$, $\mathbf{X_7}$ and/or $\mathbf{X_8}$ that are C.

[0013c] In one aspect, the present disclosure refers to a compound represented by the structure of the following compounds:

Compound Number	Compound Structure
138	
153	
199	
200	

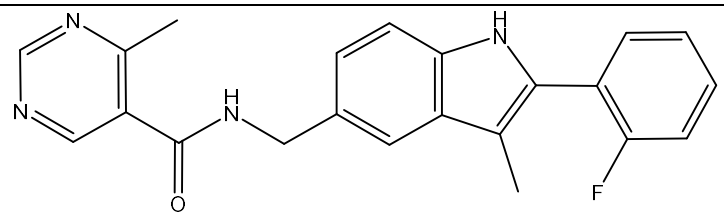
[0014] This disclosure further provides a pharmaceutical composition comprising a compound or its pharmaceutically acceptable salt, optical isomer, tautomer, hydrate, *N*-oxide, prodrug, isotopic variants (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof, represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, and a pharmaceutically acceptable carrier.

[0014a] In one aspect, the present disclosure refers to a pharmaceutical composition comprising a compound disclosed herein and a pharmaceutically acceptable carrier.

[0015] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting fibrosis in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from fibrosis under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit fibrosis in said subject. In some examples, the fibrosis is a systemic fibrotic disease. In some examples, the systemic fibrotic disease is systemic sclerosis, multifocal fibrosclerosis (IgG4-associated fibrosis), nephrogenic systemic

fibrosis, sclerodermatous graft vs. host disease, or any combination thereof. In some examples, the fibrosis is an organ-specific fibrotic disease. In some examples, the 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, scaring, or any combination thereof. In some examples, the lung fibrosis is Idiopathic pulmonary fibrosis (IPF). In some examples, the cardiac fibrosis is hypertension-associated cardiac fibrosis, Post-myocardial infarction, Chagas disease-induced myocardial fibrosis or any combination thereof. In some examples, the 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. In some examples, the pulmonary fibrosis is idiopathic pulmonary fibrosis, silica-induced pneumoconiosis (silicosis), asbestos-induced pulmonary fibrosis (asbestosis), chemotherapeutic agent-induced pulmonary fibrosis, or any combination thereof. In some examples, the 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. In some examples, the diffuse fasciitis is localized scleroderma, keloids, dupuytren's disease, peyronie's disease, myelofibrosis, oral submucous fibrosis, or any combination thereof. In some examples, the fibrosis is primary or secondary fibrosis. In some examples, the 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. In some examples, the fibrosis is hepatic fibrosis, lung fibrosis or dermal fibrosis. In some examples, the subject has a liver cirrhosis. In some examples, the dermal fibrosis is scleroderma. In some examples, 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. In some examples, the hepatic fibrosis is a result of hepatic scarring or chronic liver injury. In some examples, the chronic liver injury results from alcoholism, malnutrition, hemochromatosis, exposure to poisons, toxins or drugs.

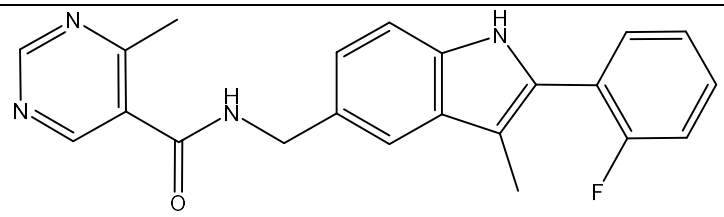
[0015a] In one aspect, the present disclosure refers to use of a compound disclosed herein, or a compound represented by the following structure:

101	

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

[0016] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting lung fibrosis in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from lung fibrosis under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit lung fibrosis in said subject. In some examples, the lung fibrosis is Idiopathic pulmonary fibrosis (IPF).

[0016a] In one aspect, the present disclosure refers to use of a compound disclosed herein, or a compound represented by the following structure:

101	

in the manufacture of a medicament for treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting a disease or condition selected from: lung fibrosis, Idiopathic pulmonary fibrosis (IPF), hepato-fibrotic disorder, cirrhosis, alcoholic steatohepatitis (ASH), non-alcoholic steatohepatitis (NASH), alcoholic fatty liver disease (AFLD), non alcoholic fatty liver disease (NAFLD), or an autoimmune disease or disorder in a subject.

[0017] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting Idiopathic pulmonary fibrosis (IPF) in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from Idiopathic pulmonary

fibrosis (IPF) under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit Idiopathic pulmonary fibrosis (IPF) in said subject.

[0018] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting hepato-fibrotic disorder in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from hepato-fibrotic disorder under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit hepato-fibrotic disorder in said subject. In some examples, the hepato-fibrotic disorder is a portal hypertension, cirrhosis, congenital hepatic fibrosis or any combination thereof.

[0019] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting cirrhosis in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from cirrhosis under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit cirrhosis in said subject. In some examples, the cirrhosis is a result of hepatitis or alcoholism.

[0020] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting a alcoholic steatohepatitis (ASH) in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from alcoholic steatohepatitis (ASH) under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit the alcoholic steatohepatitis (ASH) in said subject.

[0021] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting a non-alcoholic steatohepatitis (NASH) in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from non-alcoholic steatohepatitis (NASH) under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit the non-alcoholic steatohepatitis (NASH) in said subject.

[0022] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting a alcoholic fatty liver disease (AFLD) in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from alcoholic fatty liver disease (AFLD) under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit the alcoholic fatty liver disease (AFLD) in said subject.

[0023] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting a non alcoholic fatty liver disease (NAFLD) in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from non alcoholic fatty

liver disease (NAFLD) under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit the non alcoholic fatty liver disease (NAFLD) in said subject.

[0024] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting an autoimmune disease or disorder in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from an autoimmune disease or disorder under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit the autoimmune disease or disorder in said subject.

[0025] This disclosure further provides amethod of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting an autoimmune disease or disorder in a subject, comprising administering a compound represented by the structure of formula **I, II** and **I(a)-I(f)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from an autoimmune disease or disorder under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit the autoimmune disease or disorder in said subject.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] The patent of application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the office upon request and payment of the necessary fee.

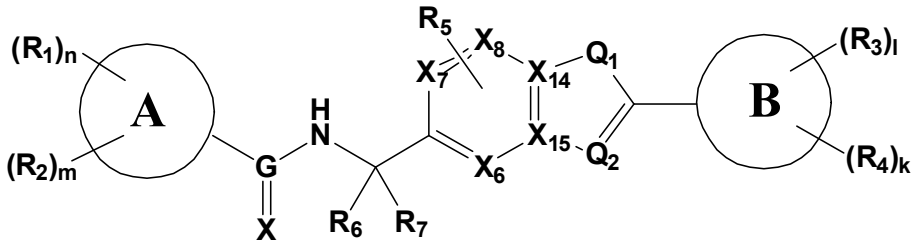
[0027] The subject matter regarded as the invention is particularly pointed out and distinctly claimed in the concluding portion of the specification. The invention, however, both as to organization and method of operation, together with objects, features, and advantages thereof, may best be understood by reference to the following detailed description when read with the accompanying drawings in which:

[0028] **Figure 1** demonstrates how Protein synthesis monitoring (PSM) specifically monitors collagen 1 synthesis. The assay system comprises human lung fibroblast cell line, WI-38 cells, which are activated to produce higher levels of collagen. Two tRNAs (di-tRNA) which decode one specific glycine codon and one specific proline codon were transfected with control RNAi or an RNAi directed to Collagen 1. The FRET signal specifically monitors collagen 1 translation, as the FRET signal in collagen 1-targeted siRNA treated cells is inhibited by 90%. In blue, cell nuclei stained with DAPI; In Cyan, FRET signals from tRNA pair which decodes glycine-proline di-codons.

[0029] **Figure 2** depicts that hits selectively regulate collagen translation. In the upper panel, the Y-axis depicts normalized values of metabolic labeling in control cells. Only compounds which showed minimal effects on global protein synthesis (±20% of control) and minimal effects on collagen 1 protein accumulation in WI38 cells by di-tRNA Collagen FRET and by Collagen 1 specific immunofluorescence were selected as compounds which selectively regulate collagen synthesis; In the lower panel, Y axis shows the FRET score for the collagen specific di-tRNA (PSM score) and the X-axis shows the normalized immunofluorescence values (relative to control). Compounds that show high

WHAT IS CLAIMED:

1. A compound represented by the structure of formula (I):



(**I**)

wherein

A and **B** rings are each independently a single or fused aromatic or heteroaromatic ring system, or a single or fused C_3-C_{10} cycloalkyl or a single or fused C_3-C_{10} heterocyclic ring;

$\mathbf{R_1}$ and $\mathbf{R_2}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_2}$ and $\mathbf{R_1}$ are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{R_3}$ and $\mathbf{R_4}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, -O-R_8-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, substituted or unsubstituted C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or **R_3** and **R_4** are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

R_5 is absent or is H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

R_6 and **R_7** are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or **R_6** and **R_7** are joint together to form a 3 to 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

Q_1 is NH, N(R), N-OH or N-OMe;

Q_2 is N, or C-CH_3;

R is H, F, Cl, Br, I, OH, SH, OH, N($R)_2$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl, R_8-aryl, -R_8-O-R_8-O-R_{10}, -R_8-O-R_{10}, -R_8-R_{10}, substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

G=X is C=O, C=S, S=O, SO_2, CH_2, CHR, or C($R)_2$;

each **R_8** is independently [**CH_2**]$_p$

wherein **p** is between 1 and 10;

R_9 is $[CH]_q$, $[C]_q$

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

R_{10} and **R_{11}** are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl, C_1-C_5 linear or branched alkoxy, C(O)R, or $S(O)_2R$; or **R_{10}** and **R_{11}** are joint to form a substituted or unsubstituted C_3-C_8 heterocyclic ring,

m, **n, l** and **k** are each independently an integer between 0 and 4 ;

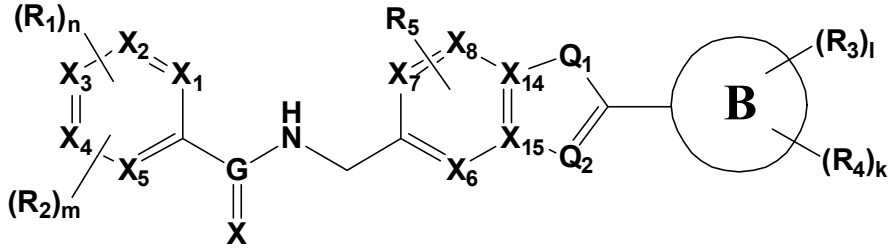
X_6, **X_7** and **X_8** are each independently C or N;

X_{14} and **X_{15}** are each independently C or N;

or its pharmaceutically acceptable salt, optical isomer, tautomer, hydrate, *N*-oxide, isotopic variant, pharmaceutical product or any combination thereof;

wherein **R_5** can only be attached to **X_6**, **X_7** and/or **X_8** that are C.

2. The compound of claim 1, represented by the structure of formula **I(a)**:

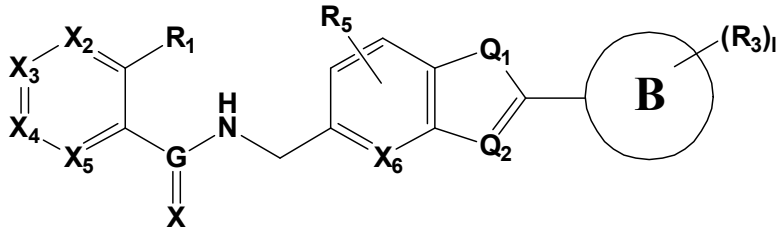


I(a)

wherein

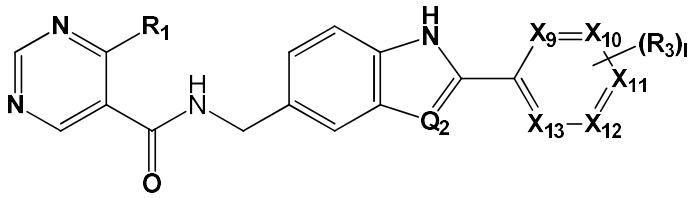
X_1, X_2, X_3, X_4, and X_5, are each independently C or N;

by the structure of formula **I(b)**:



I(b);

by the structure of formula **I(c):**

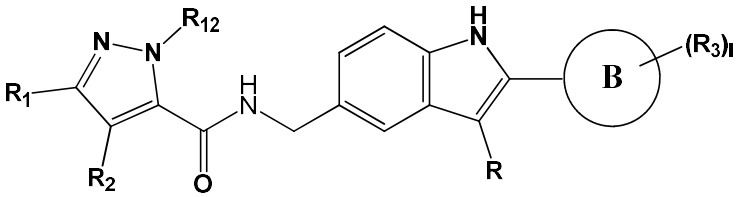


I(c)

wherein

X_9, X_{10}, X_{11}, X_{12}, and X_{13} are each independently C or N;

by the structure of formula **I(d)**:

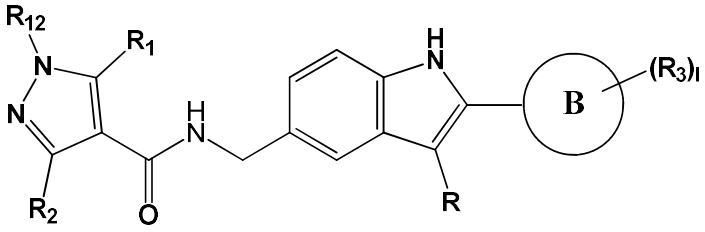


I(d)

wherein

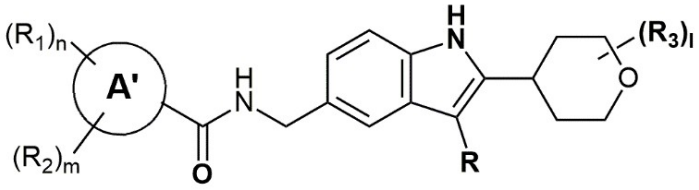
R_{12} is H, a C_1-C_5 linear or branched, substituted or unsubstituted alkyl, F, Cl, Br, I, OH, SH, OH, $N(R)_2$, CF_3, CN, NO_2, C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl or C_3-C_8 cycloalkyl;

by the structure of formula **I(e)**:



I(e)

by the structure of formula **I(f)**:

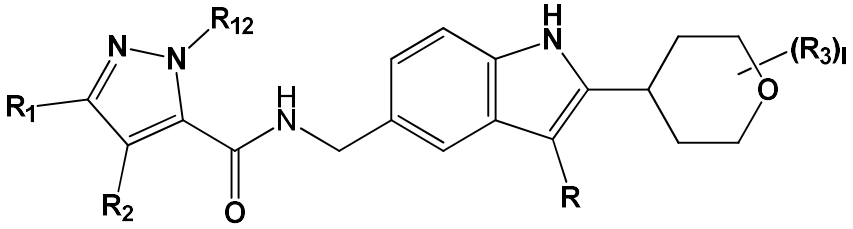


I(f)

wherein

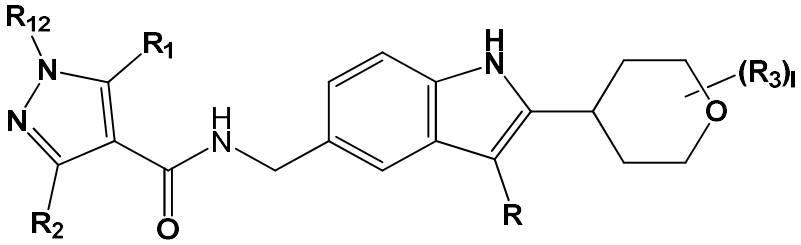
A' ring is a 5 (five) membered heteroaromatic, or a heterocyclic ring;

by the structure of formula **I(d(i))**:



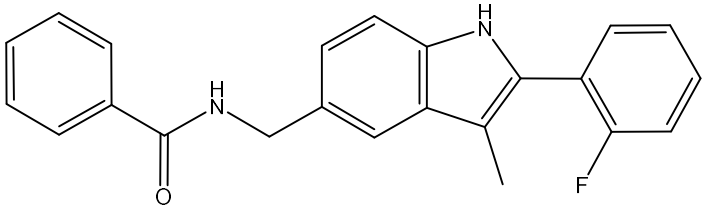
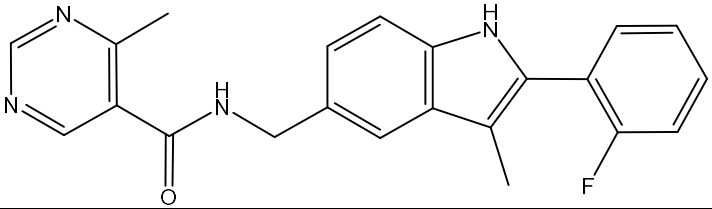
I(d(i));

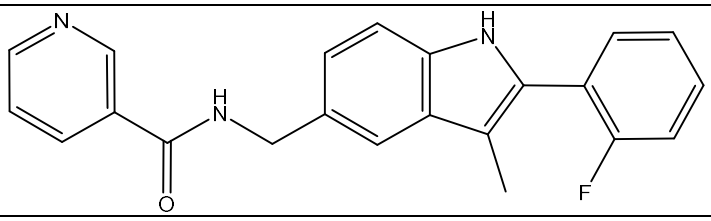
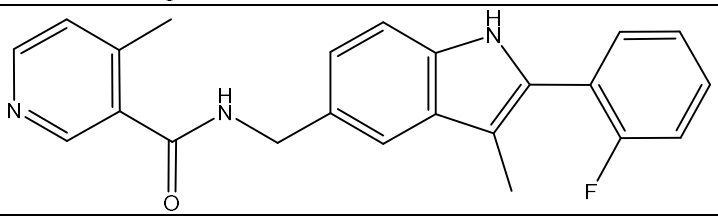
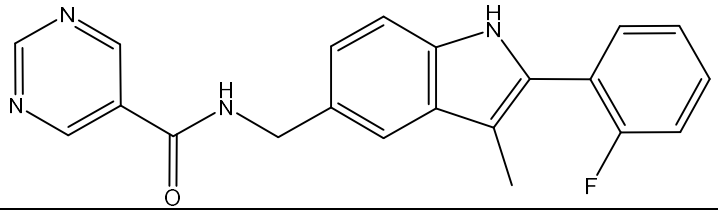
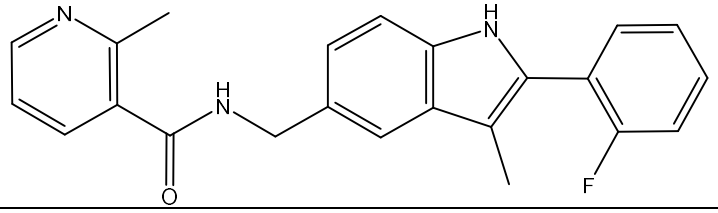
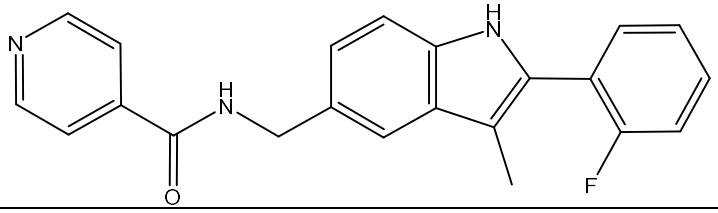
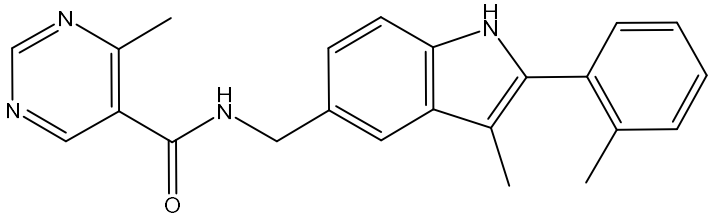
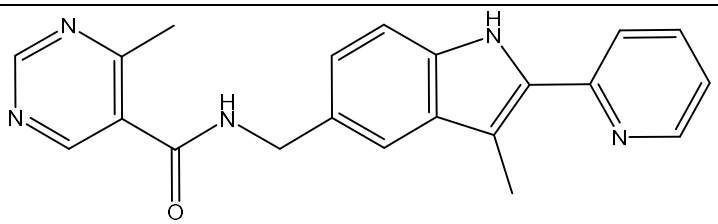
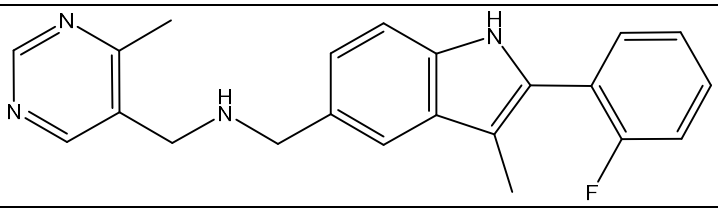
or by the structure of formula **I(e(i))**:

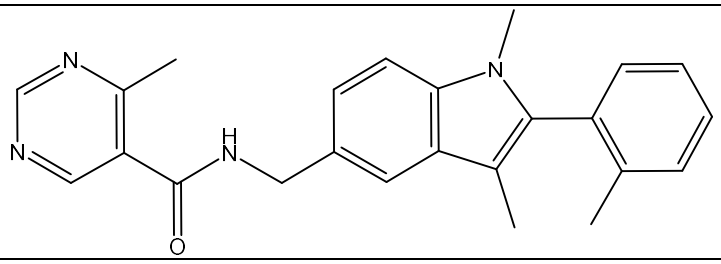
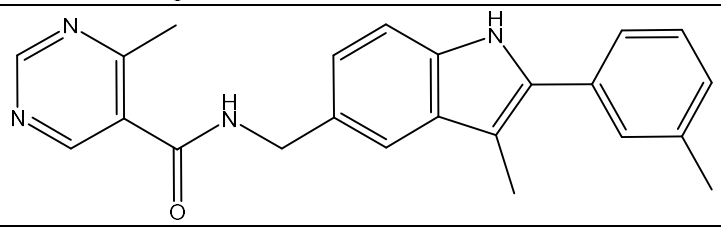
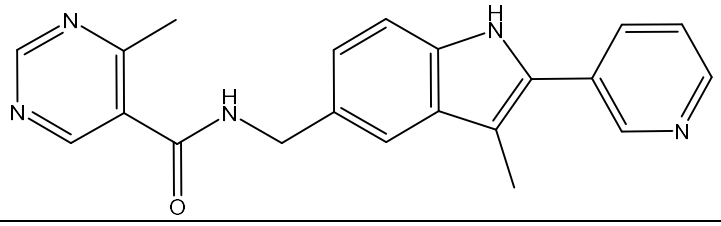
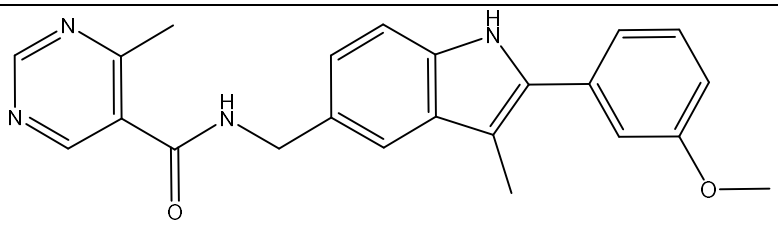
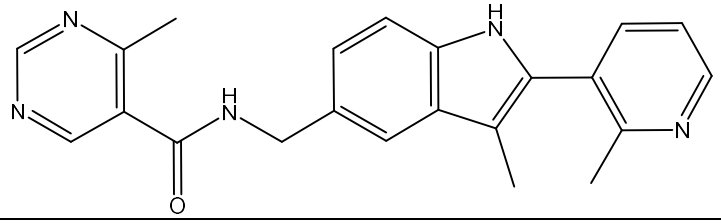
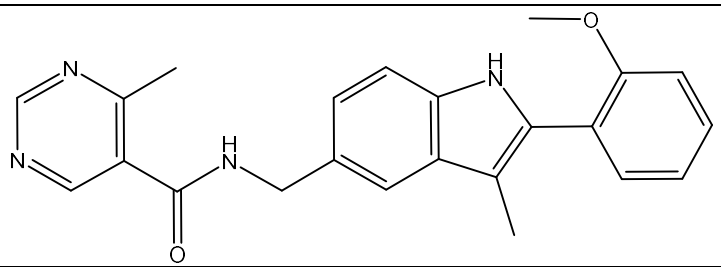
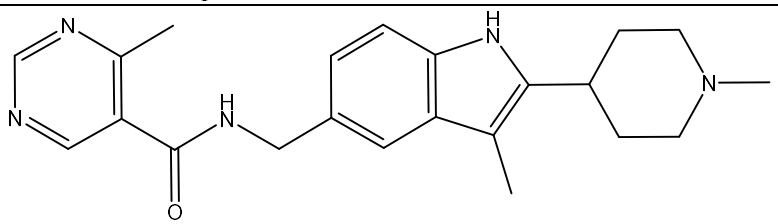


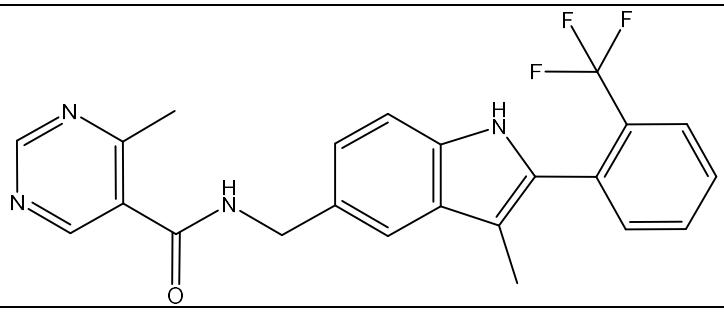
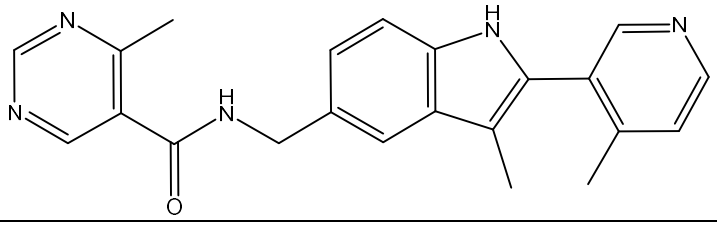
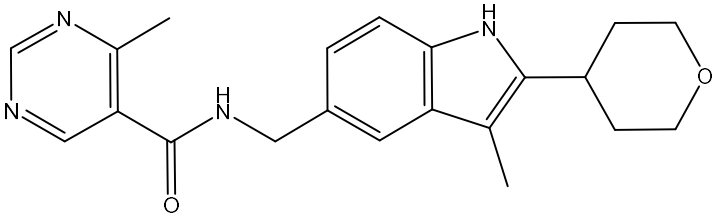
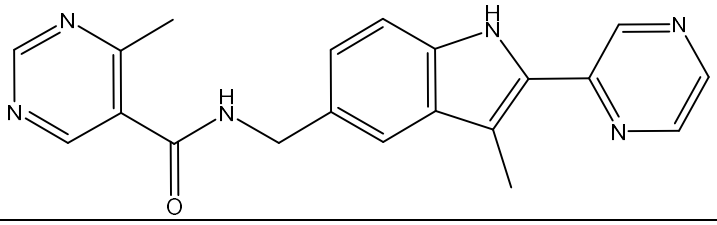
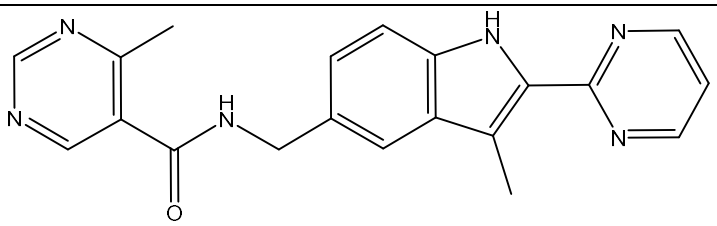
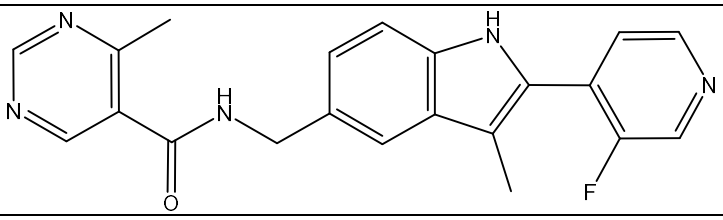
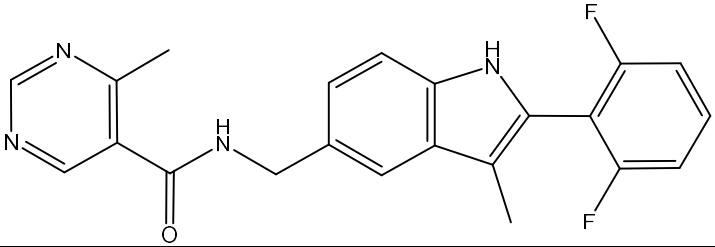
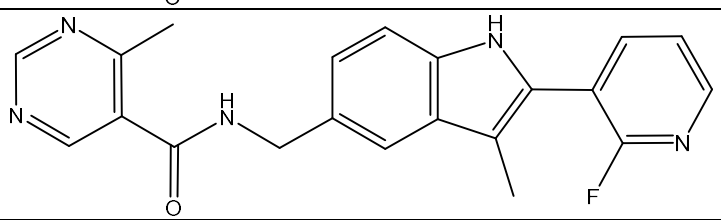
I(e(i));

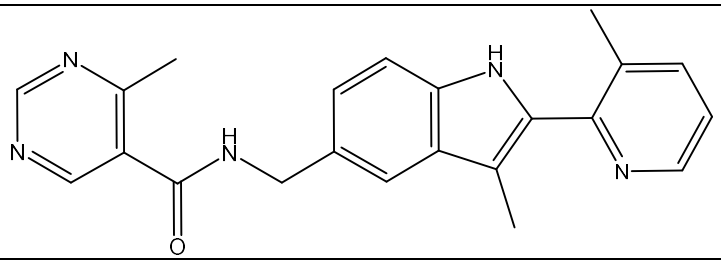
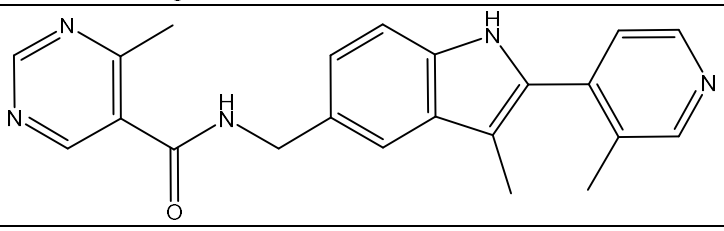
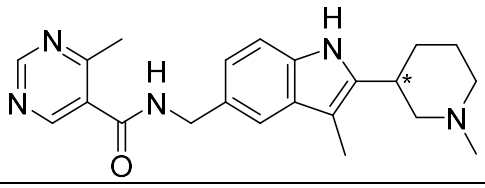
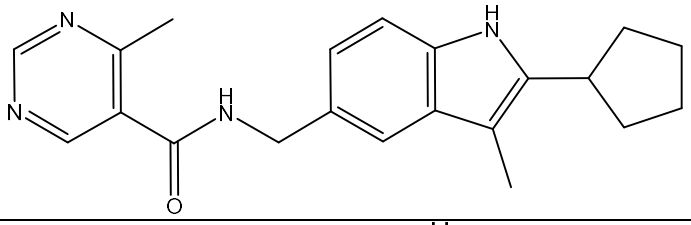
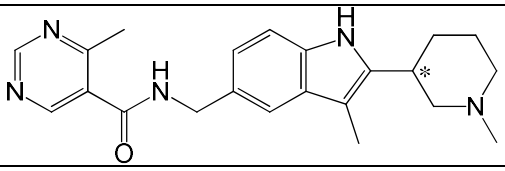
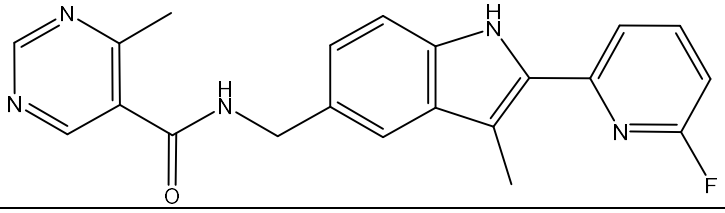
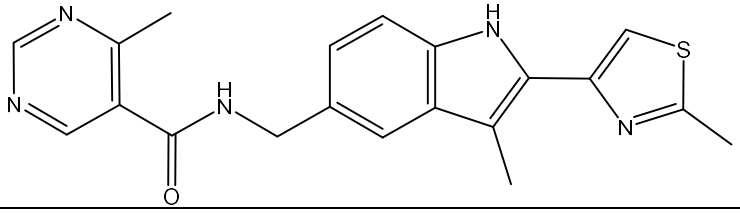
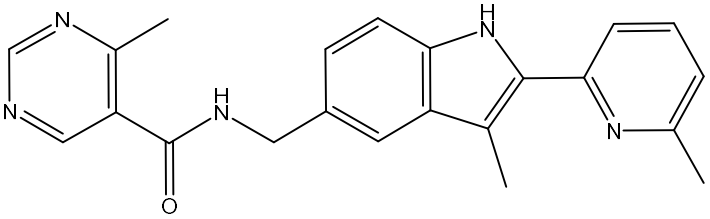
or by the structure of any one of the following:

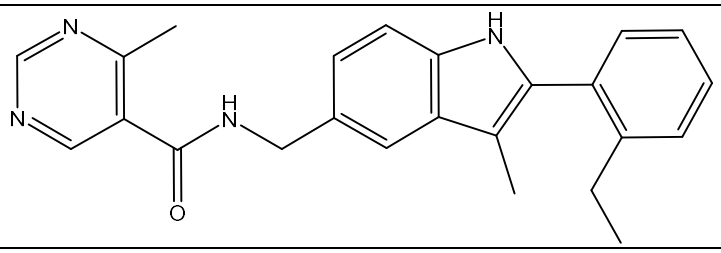
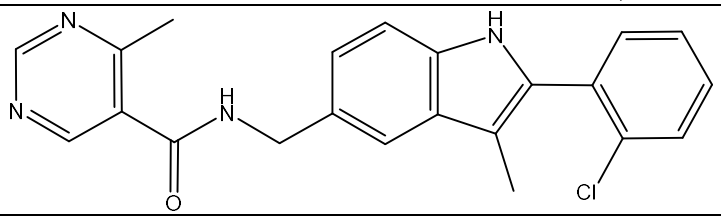
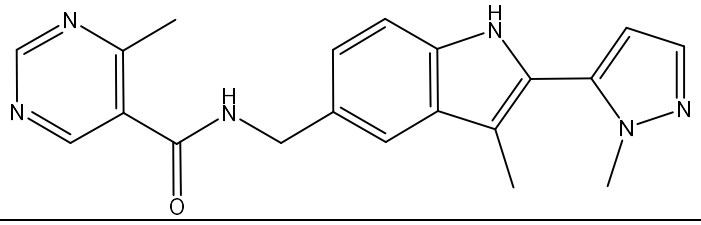
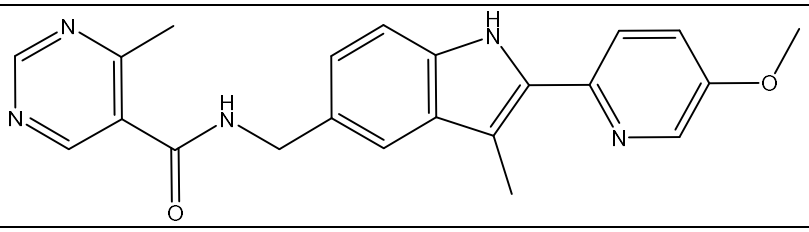
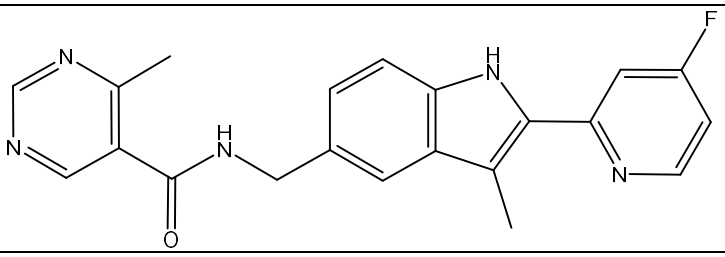
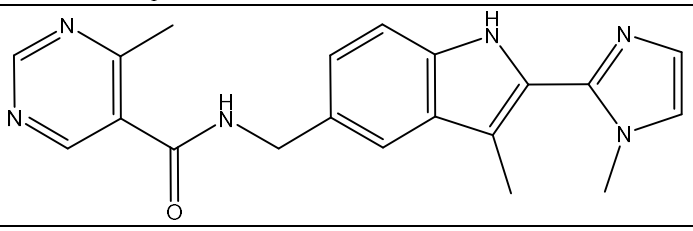
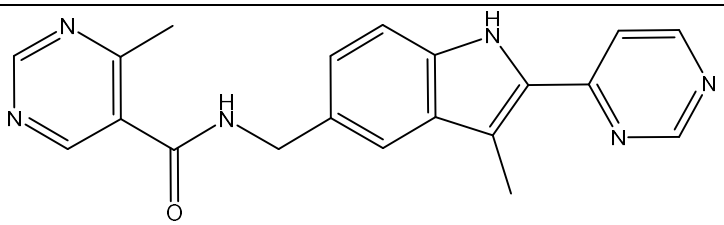
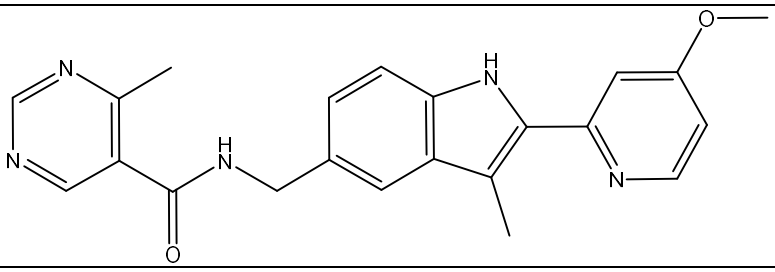
Compound Number	Compound Structure
100	
101	

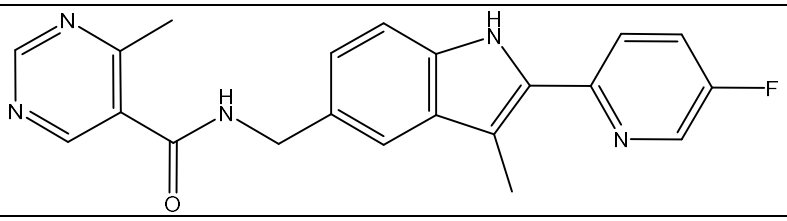
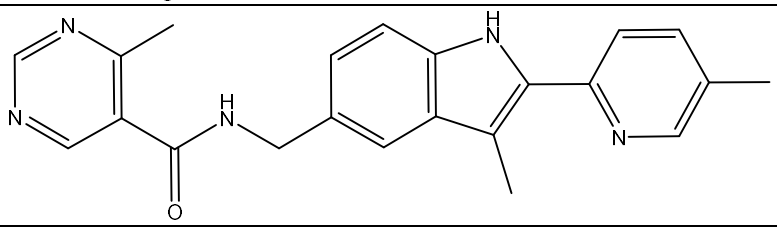
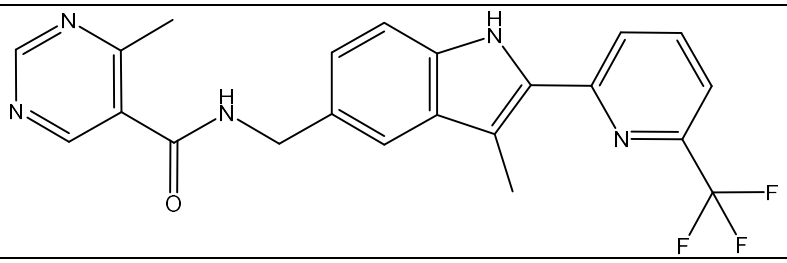
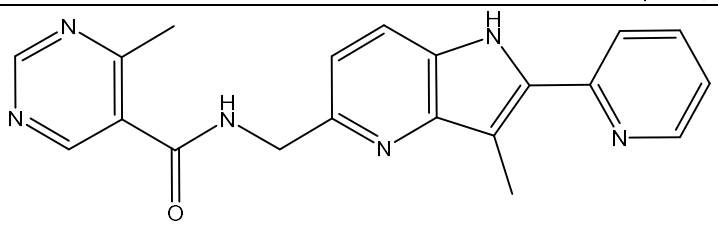
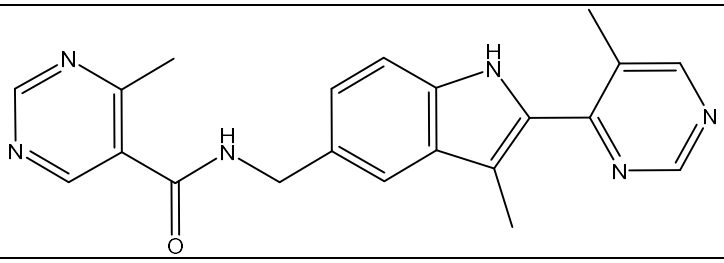
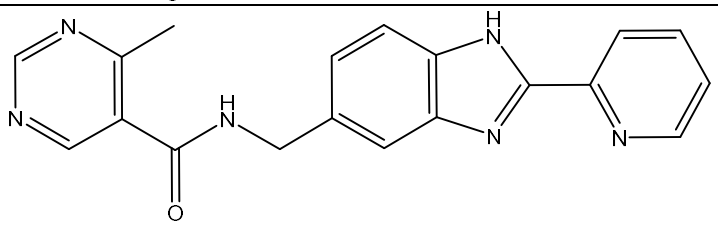
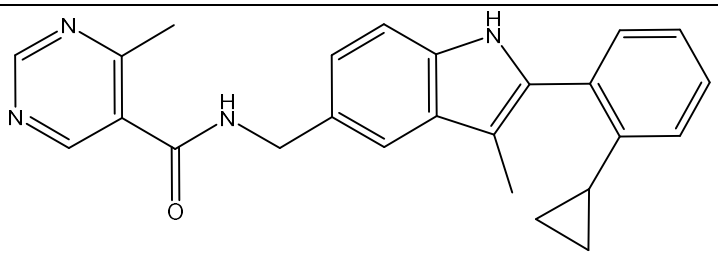
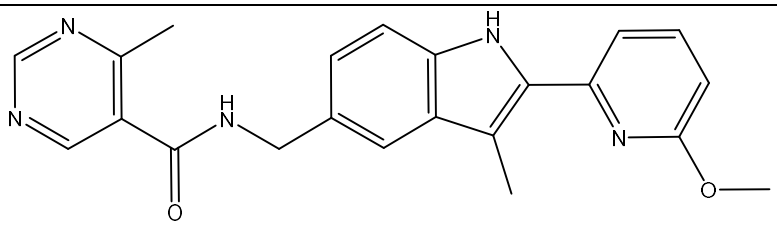
102	
103	
104	
105	
106	
109	
110	
111	

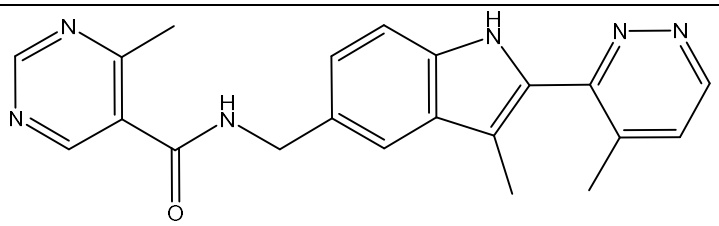
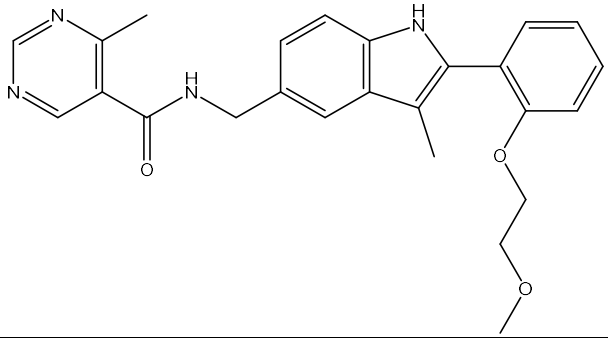
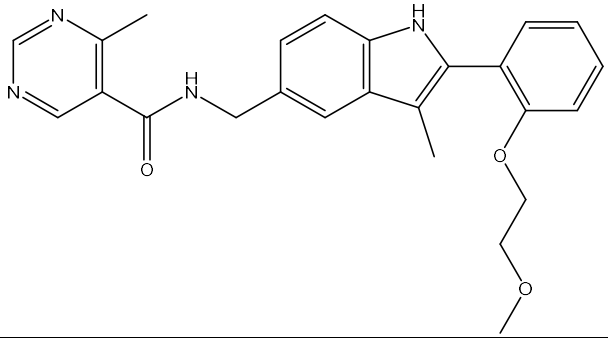
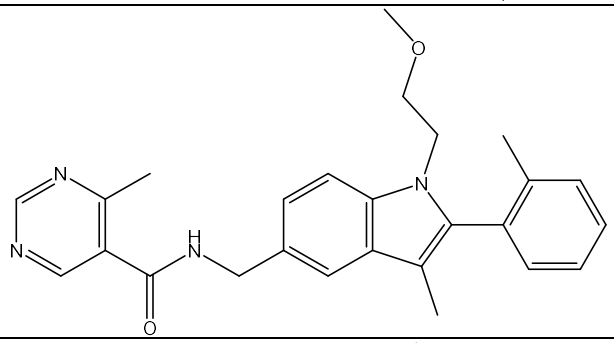
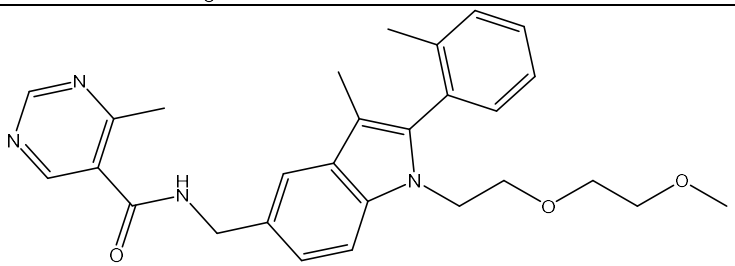
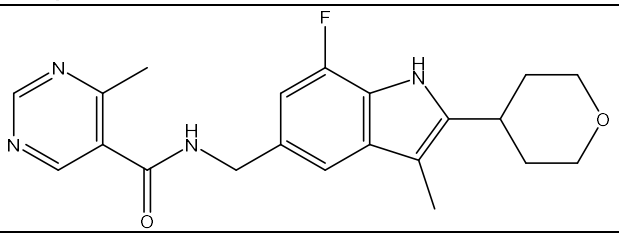
112	
113	
115	
116	
119	
120	
121	

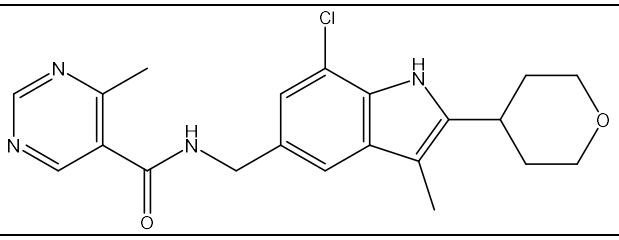
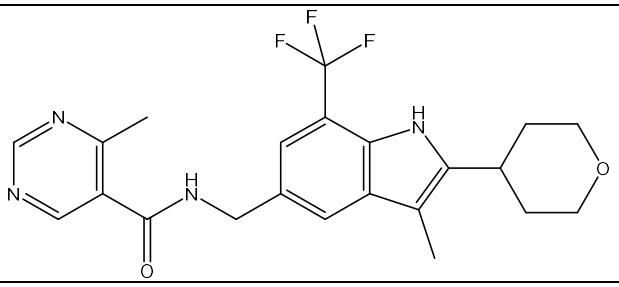
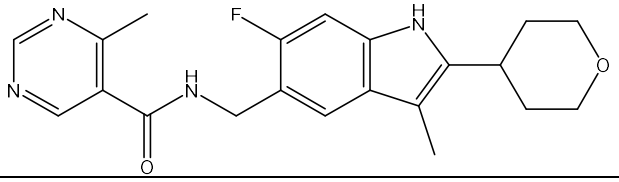
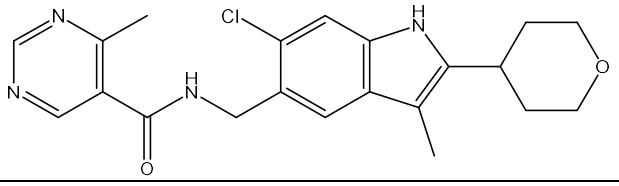
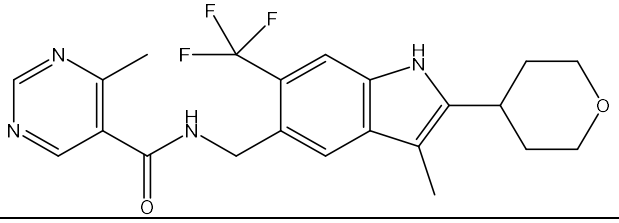
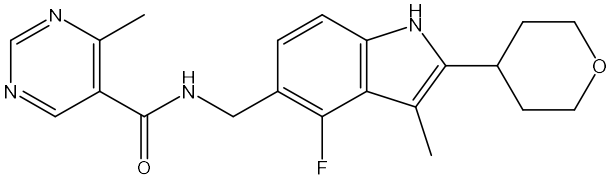
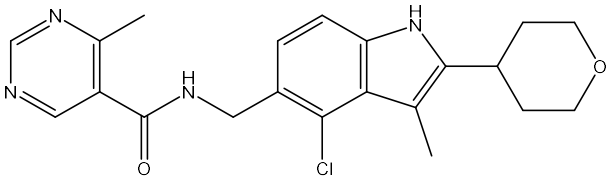
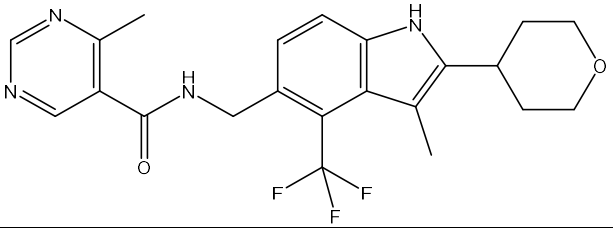
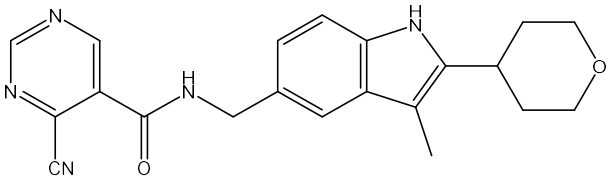
122	
123	
124	
125	
126	
127	
128	
129	

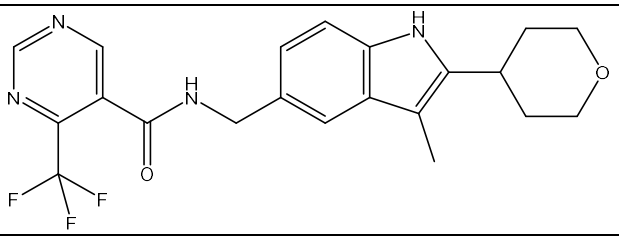
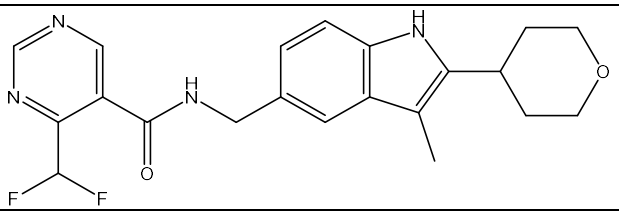
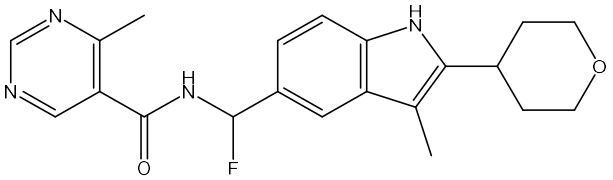
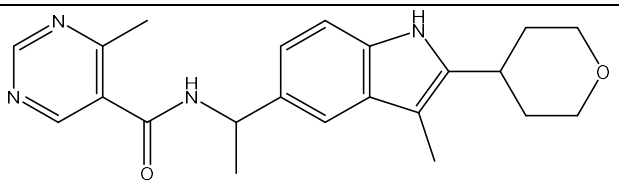
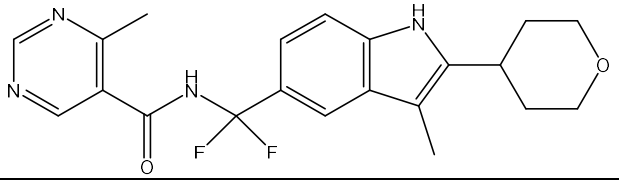
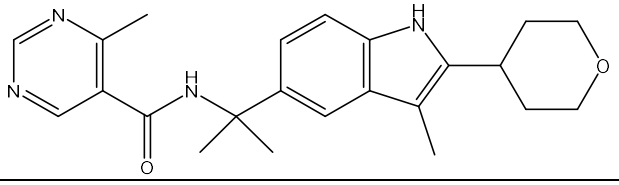
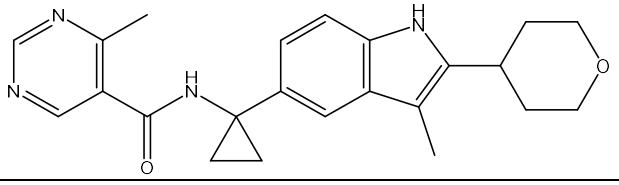
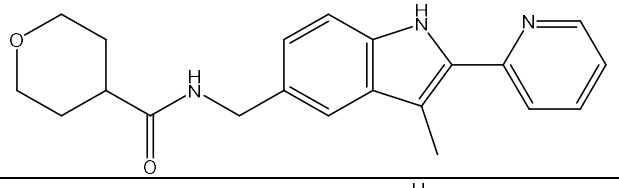
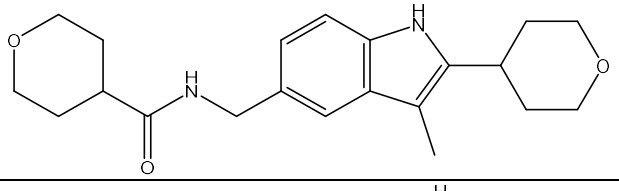
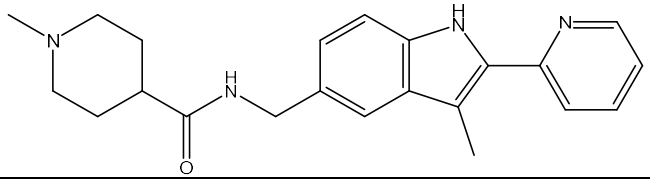
130	
131	
132 (Isomer 2)	
133	
134 (Isomer 1)	
135	
136	
137	

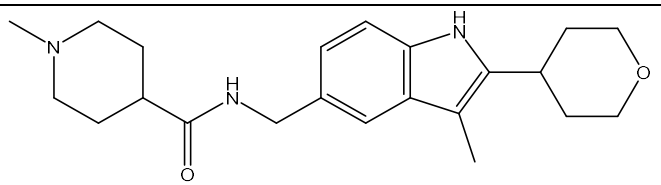
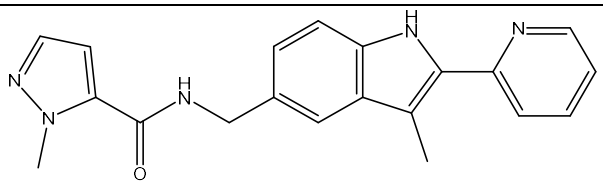
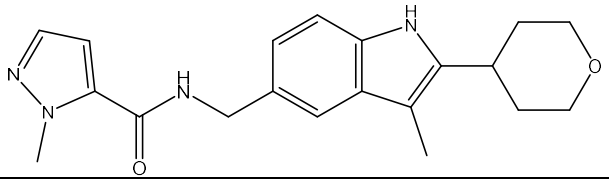
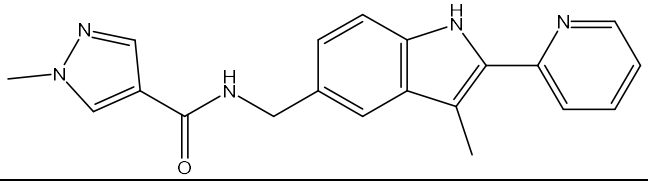
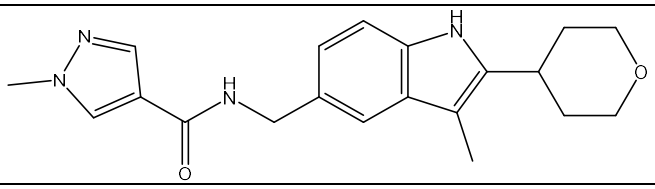
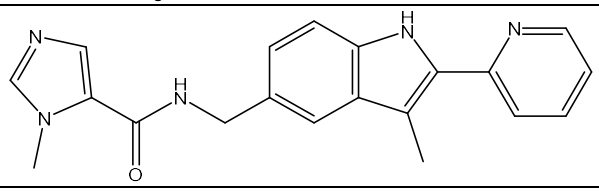
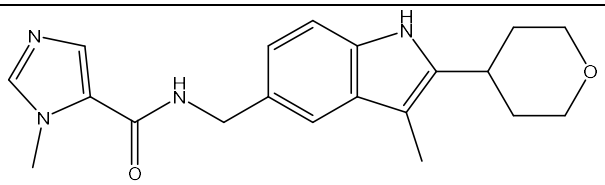
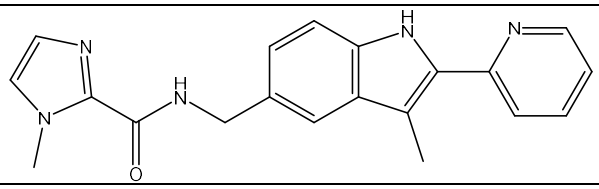
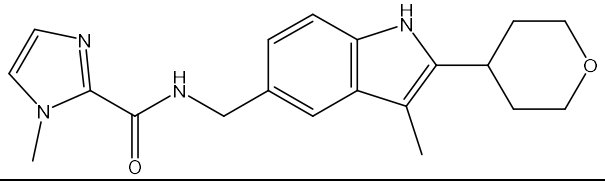
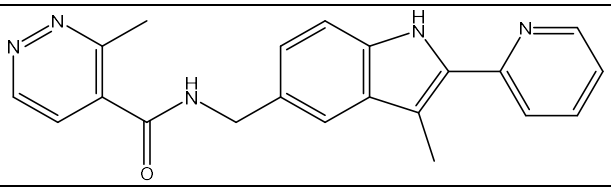
139	
140	
141	
142	
143	
144	
145	
146	

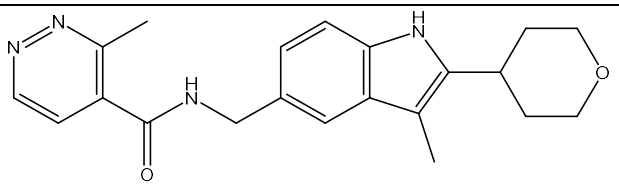
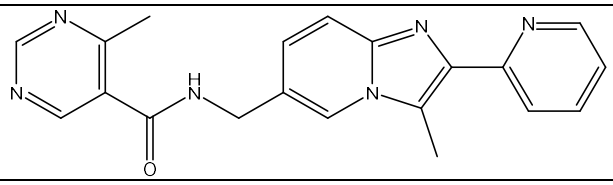
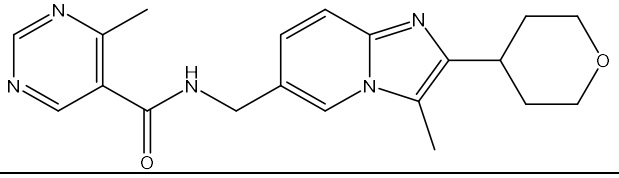
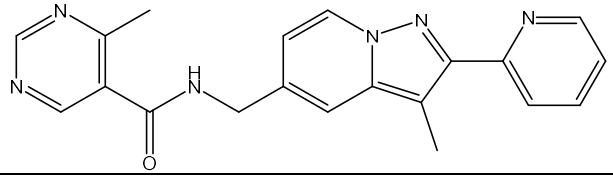
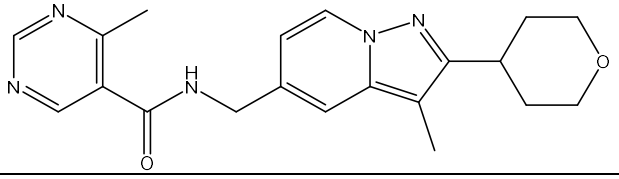
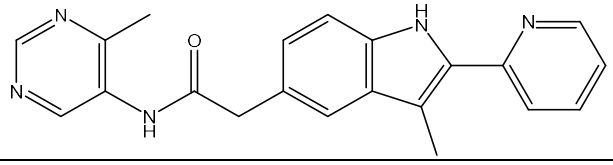
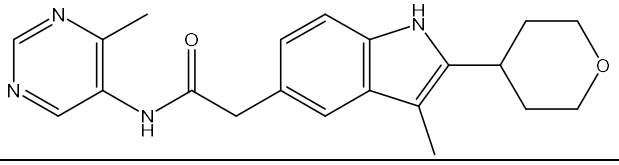
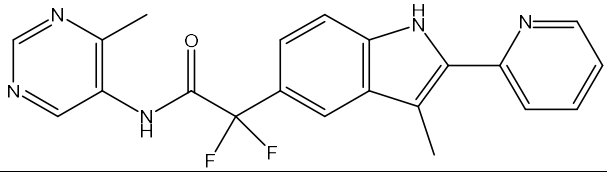
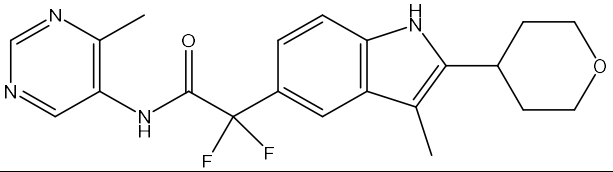
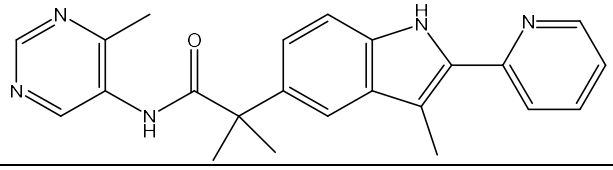
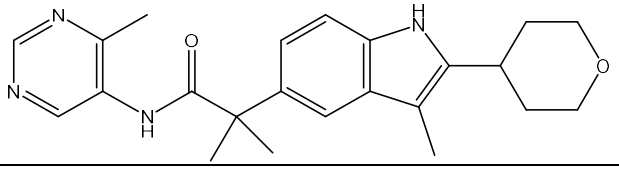
147	
148	
149	
150	
151	
152	
154	
155	

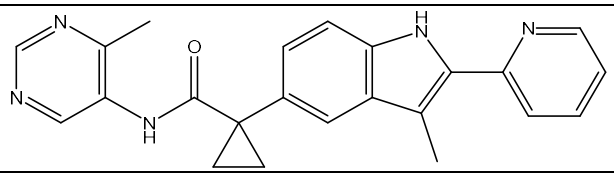
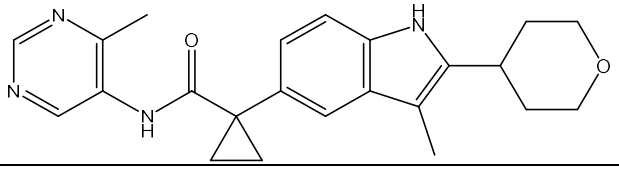
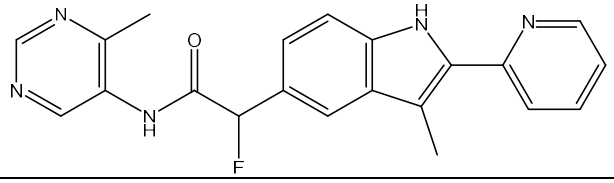
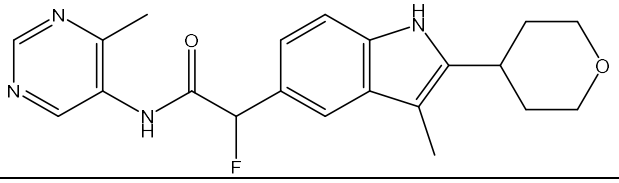
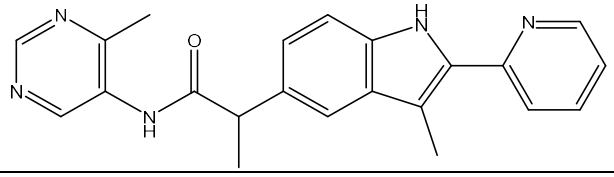
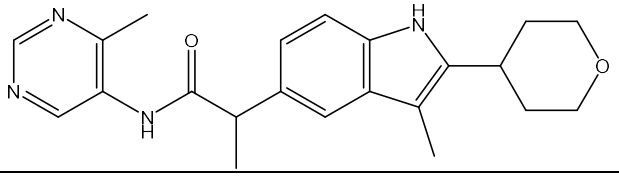
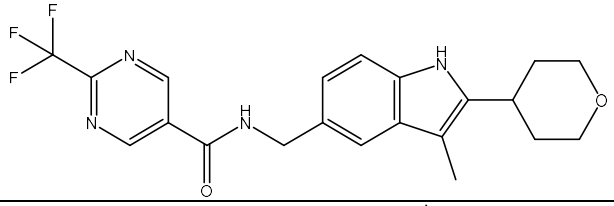
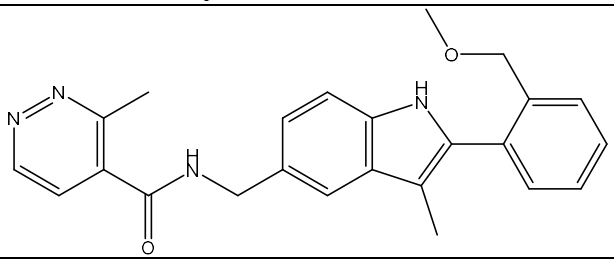
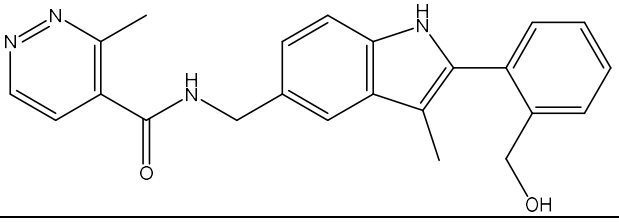
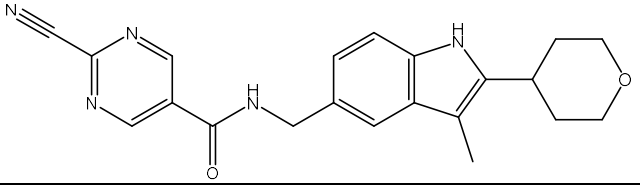
157	
158	
159	
161	
162	
163	

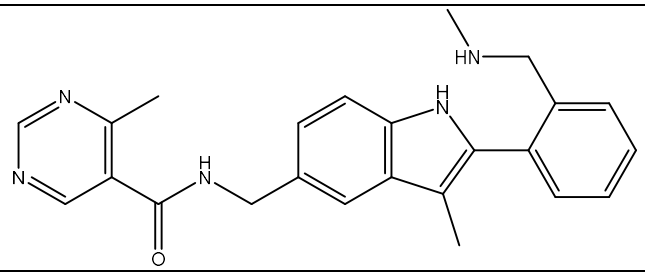
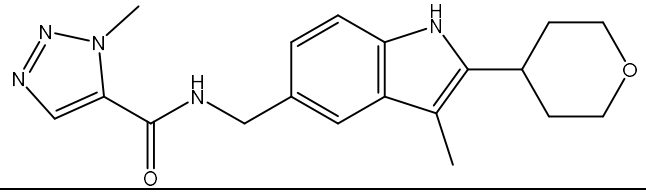
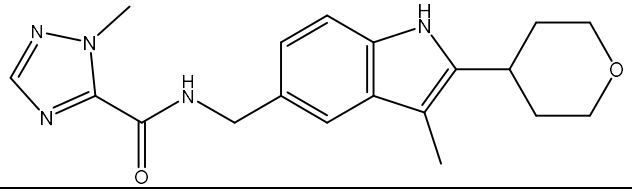
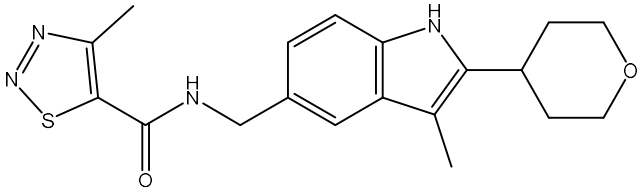
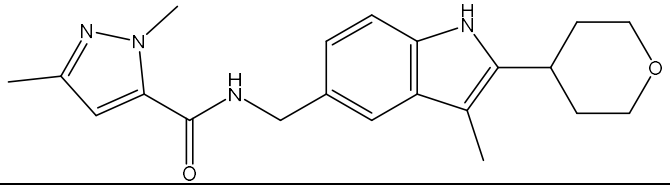
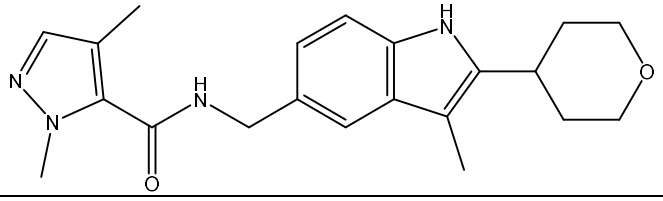
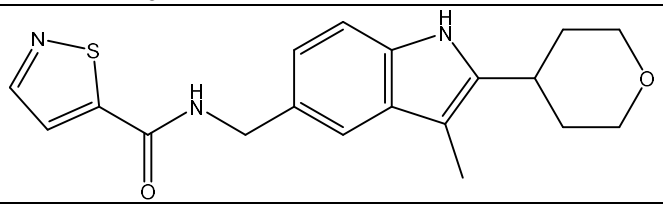
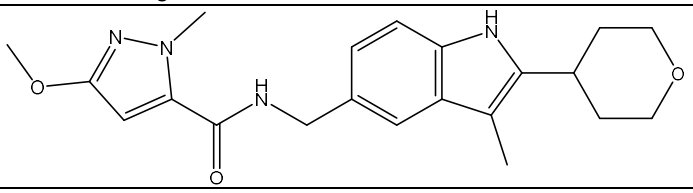
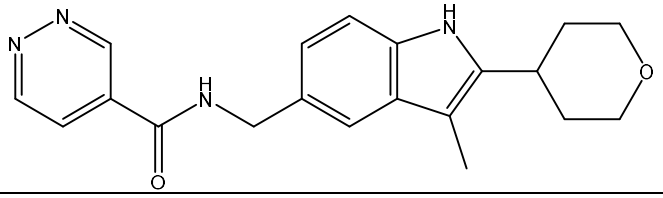
164	
165	
166	
167	
168	
169	
170	
171	
173	

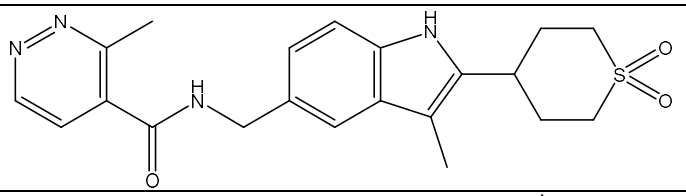
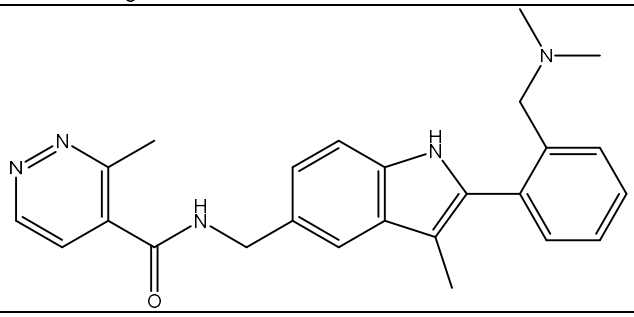
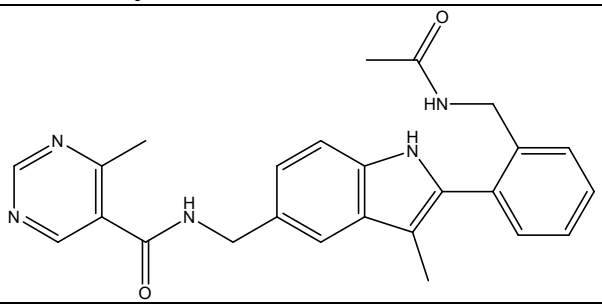
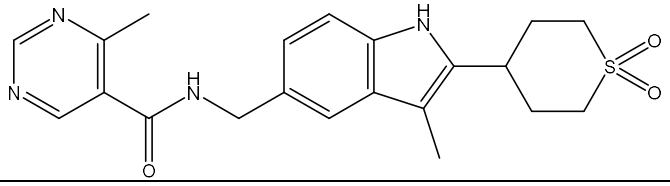
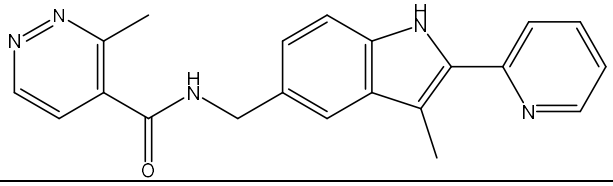
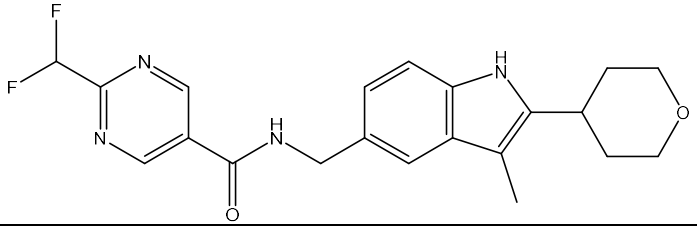
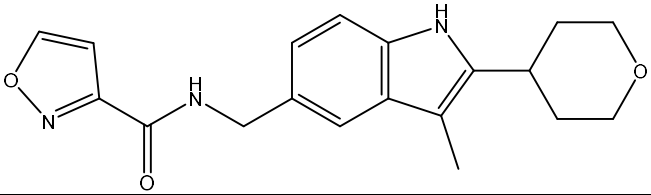
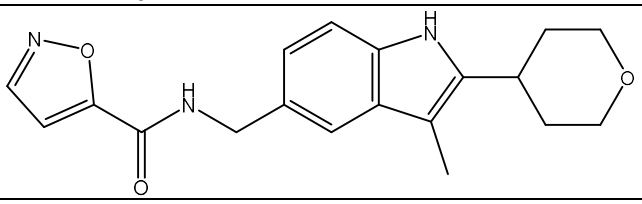
174	
175	
176	
177	
178	
179	
180	
181	
182	
183	

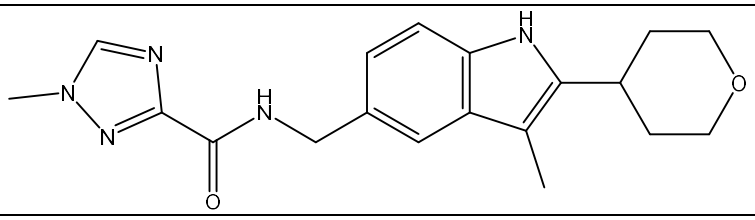
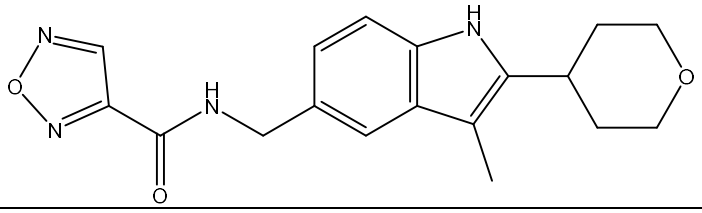
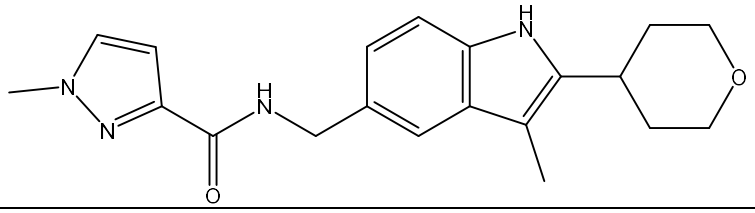
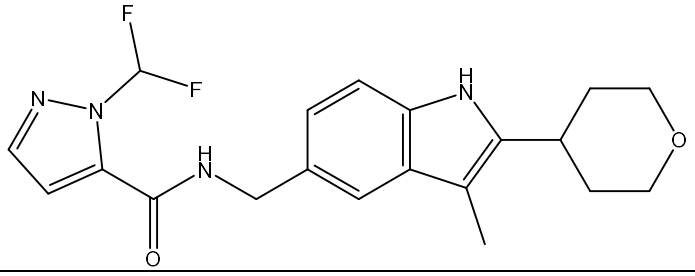
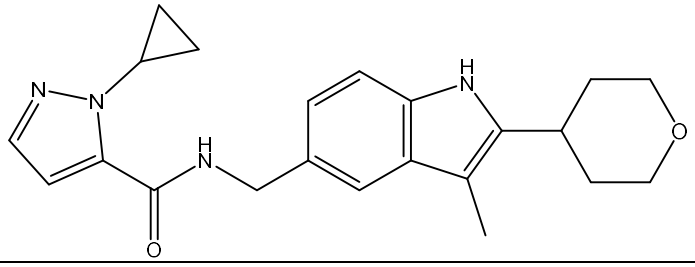
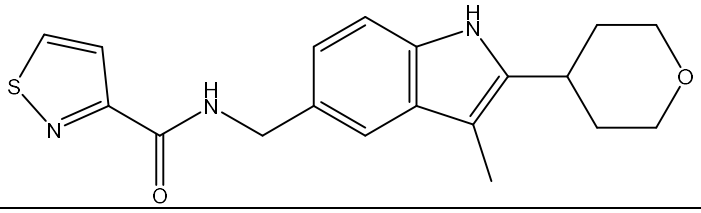
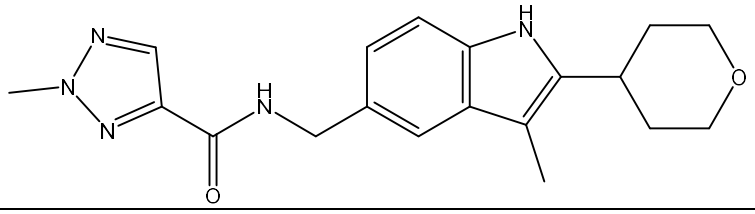
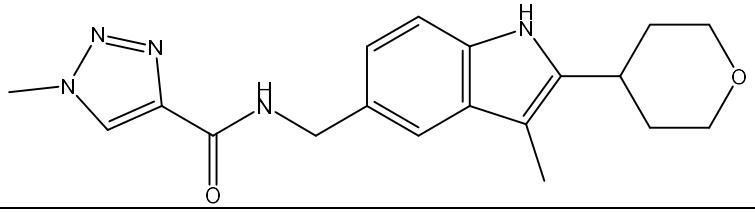
184	
185	
186	
187	
188	
189	
190	
191	
192	
193	

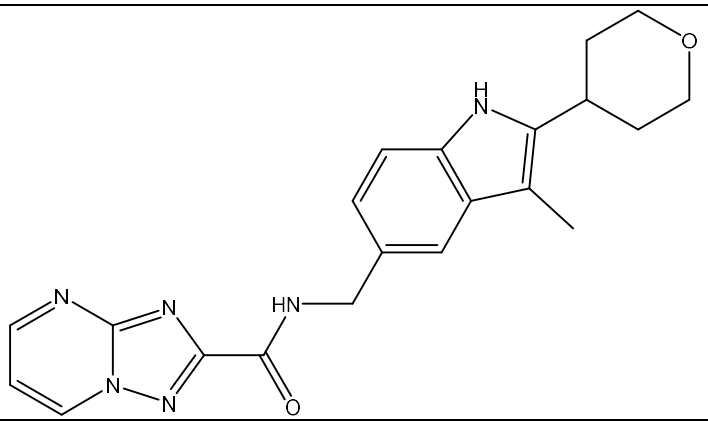
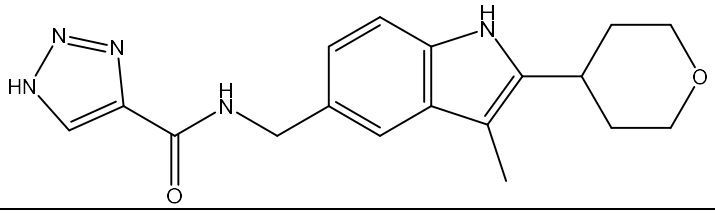
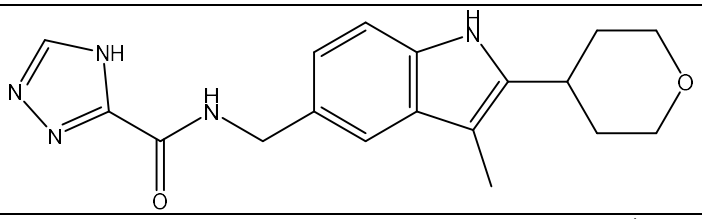
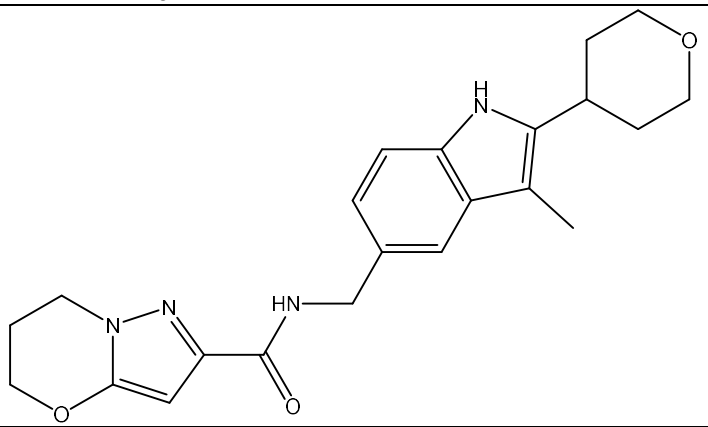
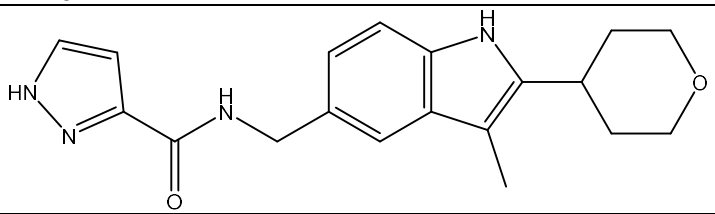
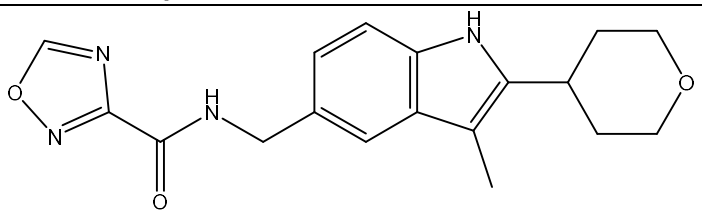
194	
195	
196	
197	
198	
201	
202	
203	
204	
205	
206	

207	
208	
209	
210	
211	
212	
213	
214	
215	
216	

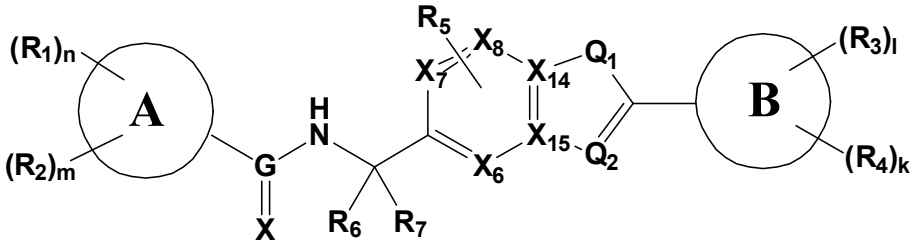
217	
218	
219	
220	
221	
222	
223	
224	
225	

227	
229	
230	
231	
232	
233	
234	
235	

236	
237	
238	
239	
240	
241	
242	
243	

244	
245	
246	
247	
248	
249	

3. A compound represented by the structure of formula (I):



(**I**)

wherein

A is a single or fused aromatic or heteroaromatic ring system, or a single or fused C_3-C_{10} cycloalkyl or a single or fused C_3-C_{10} heterocyclic ring;

B ring is a single or fused aromatic ring system, or a single or fused C_3-C_{10} cycloalkyl or a single or fused C_3-C_{10} non-aromatic heterocyclic ring;

$\mathbf{R_1}$ and $\mathbf{R_2}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_2}$ and $\mathbf{R_1}$ are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{R_3}$ and $\mathbf{R_4}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, -O-R_8-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, substituted or unsubstituted C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_3}$ and $\mathbf{R_4}$ are joint together to form a 5 or 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{R_5}$ is absent or is H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

$\mathbf{R_6}$ and $\mathbf{R_7}$ are each independently H, F, Cl, Br, I, OH, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, , R_8-(C_3-C_8 cycloalkyl), R_8-(C_3-C_8 heterocyclic ring), 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, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, 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, substituted or unsubstituted C_3-C_8 heterocyclic ring, substituted or unsubstituted aryl, or substituted or unsubstituted benzyl;

or $\mathbf{R_6}$ and $\mathbf{R_7}$ are joint together to form a 3 to 6 membered substituted or unsubstituted, aliphatic or aromatic, carbocyclic or heterocyclic ring;

$\mathbf{Q_1}$ is NH, N(R), N-OH or N-OMe;

$\mathbf{Q_2}$ is C(R);

R is H, F, Cl, Br, I, OH, SH, OH, $N(R)_2$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl, R_8-aryl, -R_8-O-R_8-O-R_{10}, -R_8-O-R_{10}, -R_8-R_{10}, substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl;

G=X is C=O, C=S, S=O, SO_2, CH_2, CHR, or $C(R)_2$;

each $\mathbf{R_8}$ is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

$\mathbf{R_9}$ is $[CH]_q$, $[C]_q$

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

$\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl, C_1-C_5 linear or branched alkoxy, C(O)R, or $S(O)_2R$; or $\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are joint to form a substituted or unsubstituted C_3-C_8 heterocyclic ring,

m, **n, l** and **k** are each independently an integer between 0 and 4;

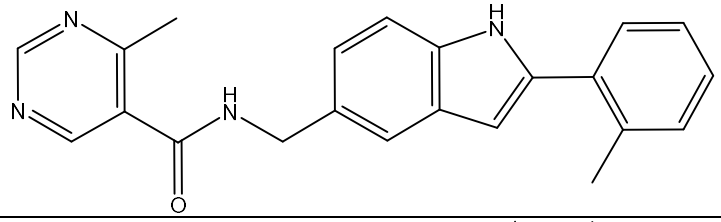
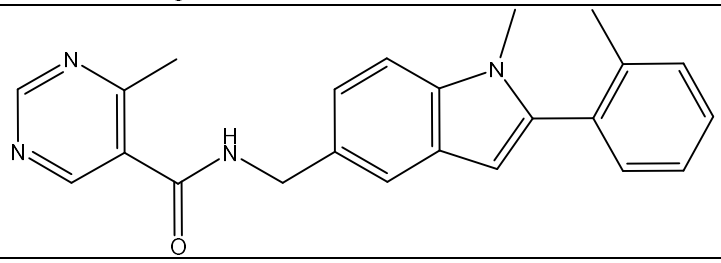
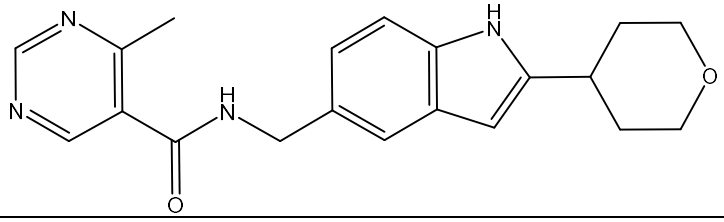
$\mathbf{X_6}$, $\mathbf{X_7}$ and $\mathbf{X_8}$ are each independently C or N;

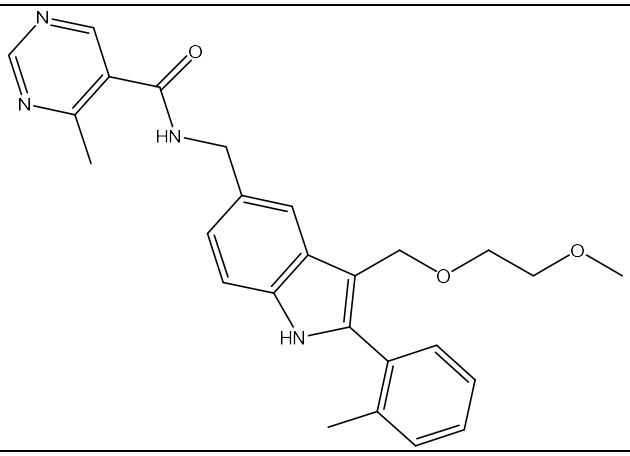
$\mathbf{X_{14}}$ and $\mathbf{X_{15}}$ are each independently C or N;

or its pharmaceutically acceptable salt, optical isomer, tautomer, hydrate, *N*-oxide, isotopic variant, pharmaceutical product or any combination thereof;

wherein $\mathbf{R_5}$ can only be attached to $\mathbf{X_6}$, $\mathbf{X_7}$ and/or $\mathbf{X_8}$ that are C.

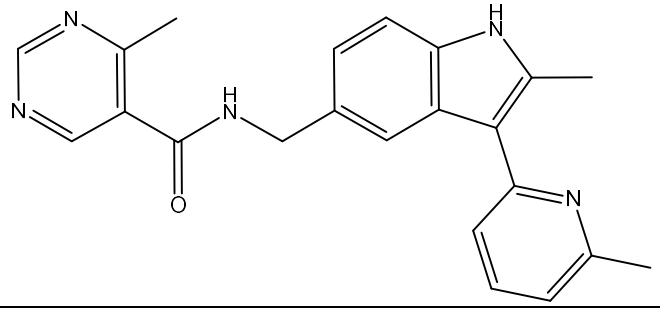
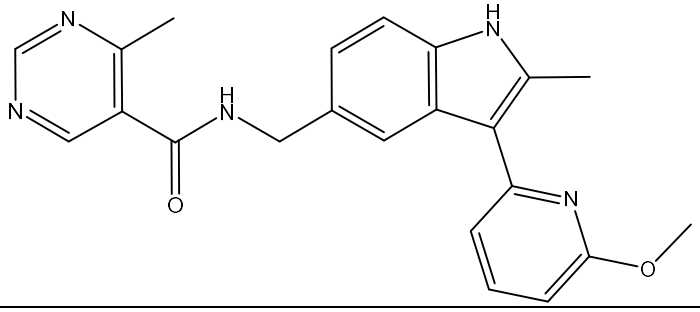
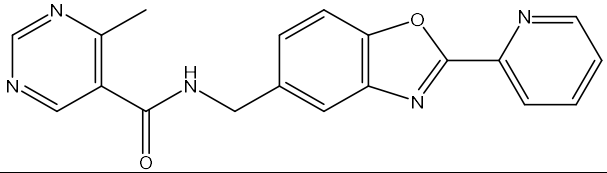
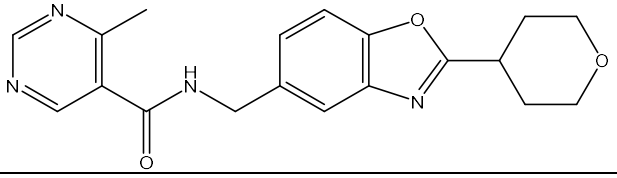
4. The compound of claim 3, represented by the structure of the following compounds:

Compound Number	Compound Structure
114	
117	
156	

160	

5. The compound according to any one of claims 1-3, wherein **B** is tetrahydropyrane, or phenyl; **l** is 1 and **k** is 0; $\mathbf{R_3}$ is H, CH_3 or CF_3; **A** is pyrimidine or pyrazolyl; **n** is 1 and **m** is 0; $\mathbf{R_1}$ is CH_3; $\mathbf{Q_1}$ is NH or N(R); **G=X** is C=O; or any combination thereof.

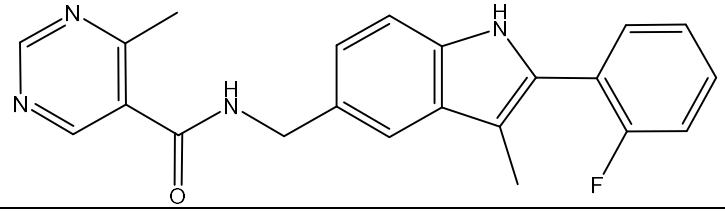
6. A compound represented by the structure of the following compounds:

Compound Number	Compound Structure
138	
153	
199	
200	

7. The compound according to any one of claims 1-6, wherein the compound is a collagen translation inhibitor.

8. A pharmaceutical composition comprising a compound according to any one of claims 1 to 7 and a pharmaceutically acceptable carrier.

9. Use of a compound according to any one of claims 1 to 7, or a compound represented by the following structure:

101	

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

10. The use of claim 9,

wherein said fibrosis is a systemic fibrotic disease;

wherein said fibrosis is primary or secondary fibrosis;

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;

wherein the fibrosis is hepatic fibrosis, lung fibrosis or dermal fibrosis;

or any combination thereof.

11. The use of claim 10,

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;

wherein said fibrosis is an organ-specific fibrotic disease;

wherein the dermal fibrosis is scleroderma;

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;

wherein the hepatic fibrosis is a result of hepatic scarring or chronic liver injury

or any combination thereof.

12. The use of claim 11, 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, scaring, or any combination thereof.

13. The use of claim 12,

wherein said lung fibrosis is Idiopathic pulmonary fibrosis (IPF);

wherein said cardiac fibrosis is hypertension-associated cardiac fibrosis, Post-myocardial infarction, Chagas disease-induced myocardial fibrosis or any combination thereof;

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;

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;

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;

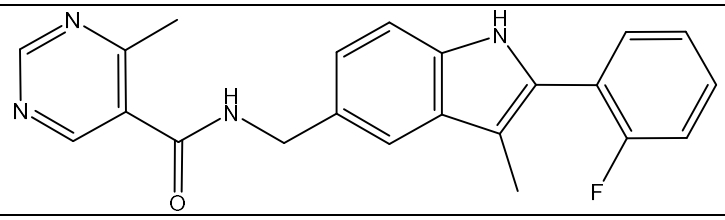
wherein said diffuse fasciitis is localized scleroderma, keloids, dupuytren's disease, peyronie's disease, myelofibrosis, oral submucous fibrosis, or any combination thereof;

or any combination thereof.

14. The use of any one of claims 9-13, wherein said subject has a liver cirrhosis.

15. The use of claim 11, wherein the chronic liver injury results from alcoholism, malnutrition, hemochromatosis, exposure to poisons, toxins or drugs.

16. Use of a compound according to any one of claims 1 to 7, or a compound represented by the following structure:

101	

in the manufacture of a medicament for treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting a disease or condition selected from: lung fibrosis, Idiopathic pulmonary fibrosis (IPF), hepato-fibrotic disorder, cirrhosis, alcoholic steatohepatitis (ASH), non-alcoholic steatohepatitis (NASH), alcoholic fatty liver disease (AFLD), non alcoholic fatty liver disease (NAFLD), or an autoimmune disease or disorder in a subject.

17. The use of claim 16,

wherein the lung fibrosis is Idiopathic pulmonary fibrosis (IPF);

wherein the hepato-fibrotic disorder is a portal hypertension, cirrhosis, congenital hepatic fibrosis or any combination thereof; or

wherein the cirrhosis is a result of hepatitis or alcoholism.