【DESCRIPTION】

【Invention Title】

HETEROARYL DERIVATIVE COMPOUNDS, AND USES THEREOF

【Technical Field】

The present invention relates to a heteroaryl derivative compound and medicinal uses thereof. Specifically, the present invention relates to a heteroaryl derivative compound having PKMYT1 and/or CCNE1 inhibitory activity.

【Background Art】

Protein kinases act as molecular switches to participate in signal transduction pathways, and the transition between active and inactive states of target proteins by kinases in cells should be smoothly controlled. If the transition is abnormally controlled, intracellular signal transduction is excessively activated or deactivated to induce uncontrollable cell division and proliferation. In particular, abnormal activation by mutation, amplification and/or overexpression of protein kinase genes causes the development and progression of various tumors or plays a crucial role in the development of various diseases such as inflammatory diseases, degenerative brain diseases, and autoimmune diseases.

In particular, PKMYT1 (MYT1; membrane-associated tyrosine and threonine specific cdc2 inhibitory kinase) belongs to the WEE1 kinase family and acts as a key regulator

of the gate that enters the mitotic phase at the G2 checkpoint in the cell cycle together with WEE1. When DNA damage occurs in cancer cells, PKMYT1 plays a role in repairing damaged DNA (DDR; DNA Damage Repair) at the G2 checkpoint (Molecules, 2017, 22(12), 2045). Therefore, inhibition of PKMYT1 can reduce the activity of cancer cells by suppressing the G2/M checkpoint function of cancer cells and inducing mitotic catastrophe (Journal of Hematology & Oncology, 2020, 13, 126).

Many solid tumor patients do not respond to chemotherapy, which is attributed to cell cycle regulation and DDR in cancer cells. In addition, PKMYT1 is overexpressed in solid tumors such as non-small cell lung cancer (NSCLC), colorectal cancer (CRC), gastric cancer, hepatocellular carcinoma, glioblastoma, and breast cancer (Cell Proliferation, 2020, 53, e12741), and it is known that overexpression of PKMYT1 in NSCLC patients promotes cancer progression and metastasis, resulting in poor prognosis (Eur Rev Med Pharmacol Sci., 2019, 23(10), 4210-4219).

Synthetic lethality is a phenomenon in which cell death does not occur by one gene abnormality, but cell death is induced as a result of the combined effects of mutation, suppression, or overexpression of two or more genes. Synthetic lethality is gaining attention as a technology for developing new anticancer drugs that induce cell death

specifically in cancer cells since it can target various cellular defects, including changes in DNA repair, cell cycle regulation, and metabolism.

Overexpression of CCNE1, a cell cycle regulator, induces DNA damage during DNA replication. Here, cells are arrested in the G2 phase to repair the damaged DNA and undergo a DNA repair process. PKMYT1, a G2 gate regulator, is increased in expression and activation by hyperactivation, amplification, or overexpression of CCNE1. Inhibition of PKMYT1 alone does not induce cell death (apoptosis), but in cancer cells with increased DNA damage due to hyperactivation, amplification, or overexpression of CCNE1, inhibition of PKMYT1 may induce synthetic lethality, leading to cell death.

As described above, PKMYT1 exhibits CCNE1-dependent activity, which can be divided into CCNE1 intrinsic dependent activity caused by hyperactivation, amplification, or overexpression of the CCNE1 gene and CCNE1-induced dependent activity in which externally induced hyperactivation, amplification, and overexpression occurs by chemotherapy, etc.

Therefore, there is an increasing demand for novel compounds capable of being usefully employed in the treatment of diseases related to PKMYT1 and diseases caused by CCNE1 hyperactivation, amplification, and overexpression.

【Disclosure】

【Technical Problem】

An object of the present invention is to provide a heteroaryl derivative having a novel structure, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof.

Another object of the present invention is to provide a method for preparing the heteroaryl derivative compound.

Another object of the present invention is to provide a pharmaceutical use of the heteroaryl derivative compound, and specifically, a pharmaceutical composition for treating or preventing diseases related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression, comprising the heteroaryl derivative compound as an effective ingredient, the use of the compound for treating or preventing diseases related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression using the compound, or a method for treating or preventing diseases related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression, comprising administering the compound.

【Technical Solution】

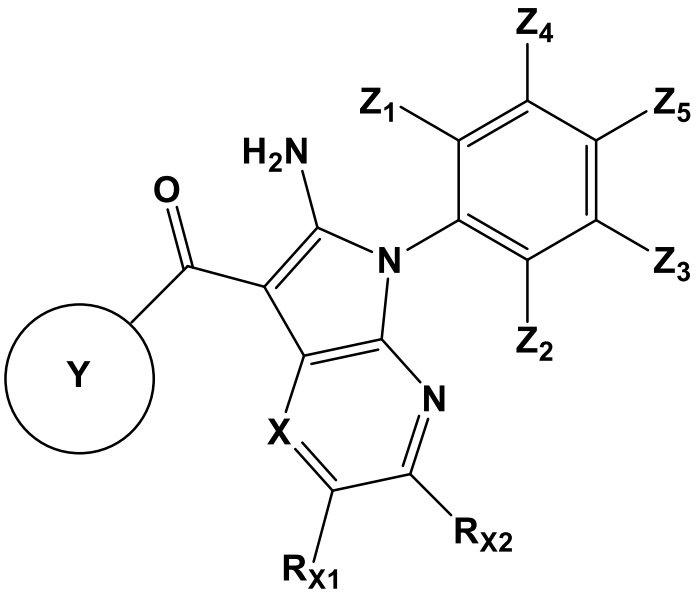
In order to achieve the above purpose, the present inventors conducted extensive research with considerable efforts and completed the present invention by confirming that heteroaryl derivative compounds represented by Chemical

Formula 1 described below inhibited the proliferation of cells in which PKMYT1 and/or CCNE1 are hyperactivated, amplified, or overexpressed.

Heteroaryl Derivative Compound

The present invention provides a compound represented by the following Chemical Formula 1, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof:

[Chemical Formula 1]



in Chemical Formula 1 above,

X is CH or N;

R_{X1} and R_{X2} are each independently -H, -C_{1-6}alkyl, -C_{2-6}alkenyl, -C_{2-6}alkynyl, -C_{1-6}aminoalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}haloalkyl, -CN, -NH(C_{1-6}alkyl), -N(C_{1-6}alkyl)(C_{1-6}alkyl), -O-(C_{1-6}alkyl), -(3-6 membered cycloalkyl), -(4-6 membered heterocycloalkyl), -phenyl, or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered

cycloalkyl), -(4-6 membered heterocycloalkyl), -phenyl, or -(5-6 membered heteroaryl) may be substituted with -C_{1-6}alkyl; or R_{X1} and R_{X2} are linked to each other to form a 12-13 membered aromatic fused ring;

Ring Y is -(5-10 membered heteroaryl), wherein the -(5-10 membered heteroaryl) ring may contain at least one N, O, or S atom on the ring, and at least one H on the ring of the -(5-10 membered heteroaryl) ring may be substituted with -C_{1-6}alkyl, -C_{1-6}aminoalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}haloalkyl, -CN, -(CH_2)m-R_a, -NH-R_b, -O-R_c, -halo, -(3-6 membered cycloalkyl), -C(=O)-(3-6 membered cycloalkyl), -$S(=O)_2$-C_{1-6}alkyl, or -P(=O)-(C_{1-6}alkyl)(C_{1-6}alkyl);

m is 0, 1, 2, 3, or 4;

R_a is -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl) may be substituted with -C_{1-6}alkyl, -C_{1-6}alkyl-O-C_{1-6}alkyl, -O-C_{1-6}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered heterocycloalkyl);

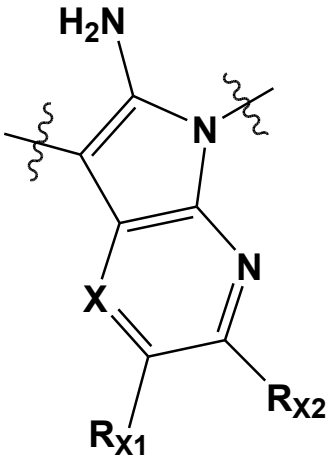
R_b and R_c are each independently -C_{1-6}alkyl, -C_{1-6}haloalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}alkyl-O-C_{1-6}alkyl, -$S(=O)_2$-C_{1-6}alkyl, -$S(=O)_2$-(3-6 membered cycloalkyl), -(CH_2)n-(3-6

membered cycloalkyl), -(CH_2)n-(3-6 membered heterocycloalkyl), or -(CH_2)n-(5-6 membered heteroaryl), wherein at least one H on the ring of the -(CH_2)n-(3-6 membered cycloalkyl), -(CH_2)n-(3-6 membered heterocycloalkyl), or -(CH_2)n-(5-6 membered heteroaryl) may be substituted with -C_{1-6}alkyl, -O-C_{1-6}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered cycloalkyl);

n is 0, 1, 2, 3, or 4; and

Z_1 to Z_5 are each independently -H, -C_{1-6}alkyl, -OH, or -halo.

According to an embodiment of the present invention,



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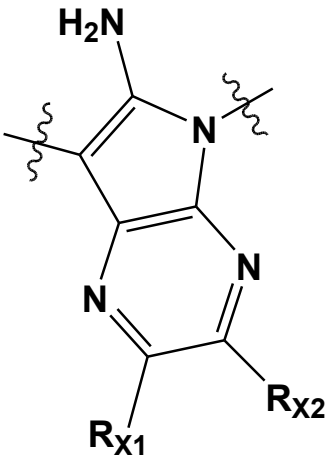

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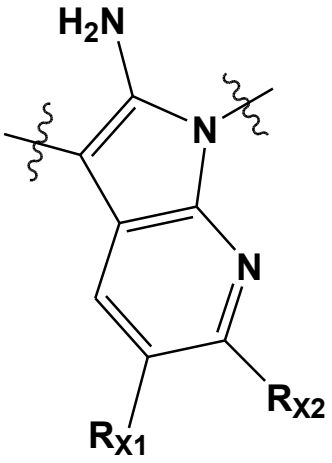

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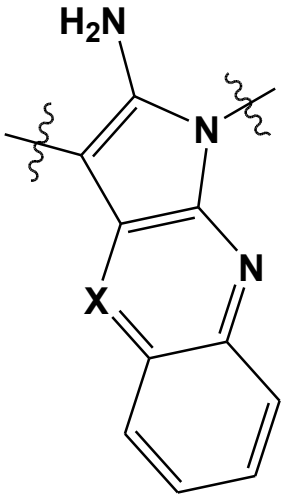
or  ; and

R_{X1} and R_{X2} are each independently -H, -C_{1-6}alkyl, -(3-6 membered cycloalkyl), or -(4-6 membered heterocycloalkyl), wherein at least one H on the ring of the -(3-6 membered cycloalkyl) or -(4-6 membered heterocycloalkyl) may be substituted with -C_{1-3}alkyl.

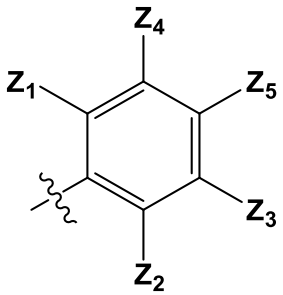
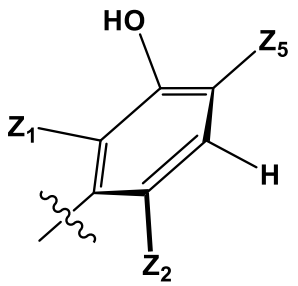
According to an embodiment of the present invention,

the Ring Y is -(8-9 membered heteroaryl);

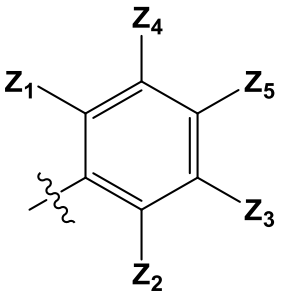
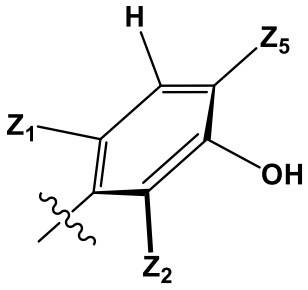
Z_1 and Z_2 are each independently -C_{1-6}alkyl, preferably -C_{1-3}alkyl, more preferably methyl;

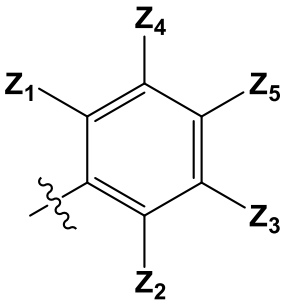
either Z_3 or Z_4 is -OH and the other is -H; and

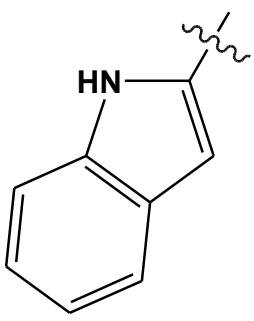
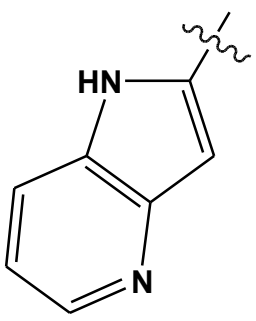
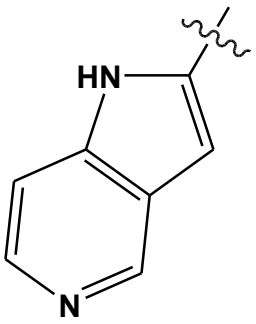
Z_5 is -H or -halo.

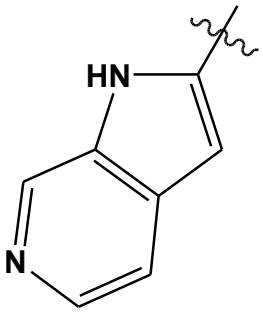
According to an embodiment of the present invention,  is  , Z_1, Z_2 and Z_5 are as

defined above, and may be a compound of S form in the present specification.

According to another embodiment of the present invention,  is , Z_1, Z_2 and Z_5 are as defined above, and may be a compound of R form in the present specification.

Further, according to an embodiment of the present invention,  may be a racemic mixture.

According to an embodiment of the present inivention, the Ring Y is , , ,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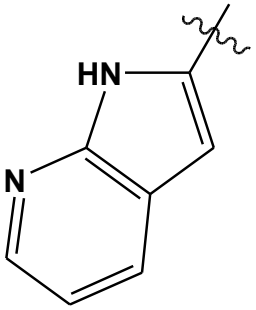
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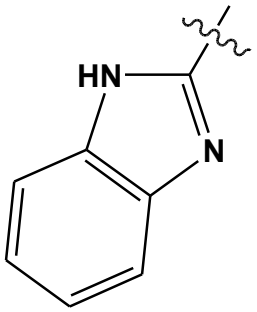
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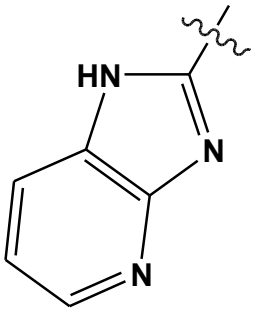
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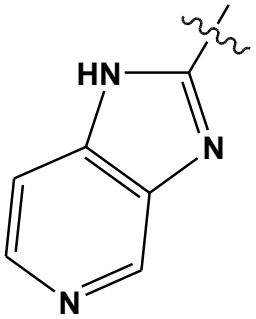
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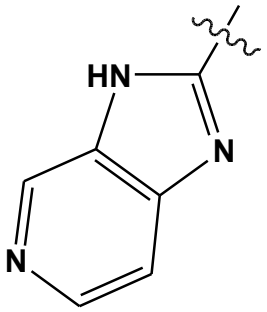
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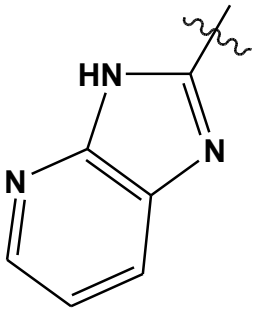
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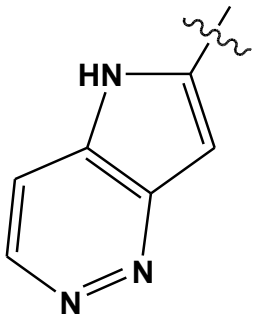
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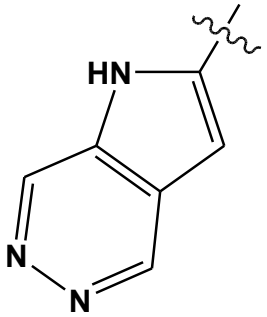
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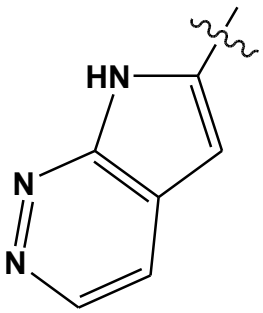
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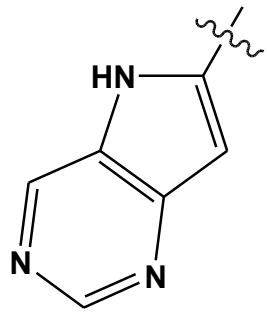
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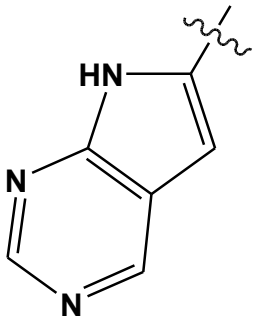
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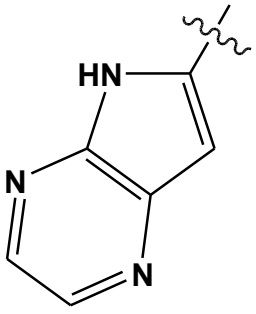
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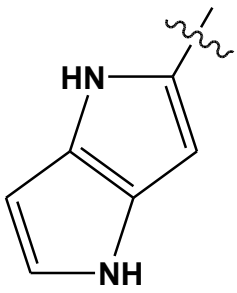
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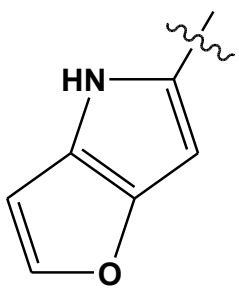
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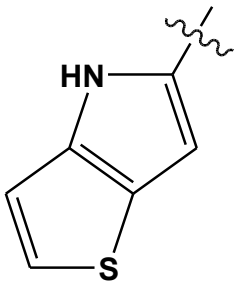


, wherein at least one H on the ring of the ring Y may be substituted with -C_{1-3}alkyl, -C_{1-3}aminoalkyl, -C_{1-3}hydroxyalkyl, -C_{1-3}haloalkyl, -CN, -(CH_2)m-R_a, -NH-R_b, -O-R_c, -halo, -(3-6 membered cycloalkyl), -C(=O)-(3-6 membered cycloalkyl), -$S(=O)_2$-C_{1-3}alkyl, or -P(=O)-(C_{1-3}alkyl)(C_{1-3}alkyl);

m is 0 or 1;

R_a is -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl) may be substituted with -C_{1-3}alkyl, -C_{1-3}alkyl-O-C_{1-3}alkyl, -O-C_{1-3}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered heterocycloalkyl);

R_b and R_c are each independently -C_{1-3}alkyl, -C_{1-3}haloalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}alkyl-O-C_{1-3}alkyl, -$S(=O)_2$-(3-6 membered cycloalkyl), -(CH_2)n-(3-6 membered cycloalkyl), or -(CH_2)n-(3-6 membered heterocycloalkyl), wherein at least one H on the ring of the -(CH_2)n-(3-6 membered cycloalkyl),

or -(CH_2)n-(3-6 membered heterocycloalkyl) may be substituted with -C_{1-3}alkyl, -O-C_{1-3}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered cycloalkyl); and

n is 0, 1, or 2.

According to an embodiment of the present invention, the compound represented by Chemical Formula 1 may be selected from the group consisting of the compounds listed in Table 1 described below.

In the present invention, unless otherwise specified, "alkyl" may refer to a straight or branched chain acyclic, cyclic, or saturated hydrocarbon to which they are bonded. For example, "C_{1-6}alkyl" may refer to an alkyl containing 1 to 6 carbon atoms. As an example of acyclic alkyl may include, but is not limited to, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, *sec*-butyl, isobutyl, *tert*-butyl, isopentyl, 2-methylpentyl, or the like. In the present specification, a moiety obtained by removing one hydrogen atom from the above "alkyl" is referred to as "alkylene". In the present specification, cyclic alkyl may be used interchangeably with "cycloalkyl" herein, as an example of cyclic alkyl may include, but is not limited to, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, or cyclooctyl.

In the present invention, "alkenyl" and "alkynyl" may refer to a straight or branched chain acyclic, cyclic, or unsaturated hydrocarbon to which they are bonded. For example,

"C_{2-6}alkenyl" may refer to an unsaturated hydrocarbon of 2 to 6 carbon atoms with at least one double bond, and "C_{2-6}alkynyl" may refer to an unsaturated hydrocarbon of 2 to 6 carbon atoms with at least one triple bond.

In the present invention, "alkoxy" may refer to -(R′-O-R″) as an alkyl ether group, wherein R′ may be selected from the group consisting of a single bond and C_{1-6}alkyl, and R″ may be C_{1-6}alkyl. Herein, alkyl is the same as defined above. For example, "C_{1-6}alkoxy" may mean alkoxy containing C_{1-6}alkyl, that is, -(O-C_{1-6}alkyl) or -(C_{1-6}alkyl-O-C_{1-6}alkyl), and as an example of alkoxy may include, but is not limited to, methoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy, *sec*-butoxy, *tert*-butoxy, or the like.

In the present invention, "halo" may be F, Cl, Br, or I.

In the present invention, "haloalkyl" may mean a straight or branched chain alkyl (hydrocarbon) having one or more halo-substituted carbon atoms as defined herein. Examples of the haloalkyl may include, but are not limited to, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, *sec*-butyl, isobutyl, or *tert*-butyl independently substituted with one or more halogens, such as F, Cl, Br, or I.

In the present invention, "hydroxyalkyl" may refer to a straight or branched chain alkyl (hydrocarbon) having a carbon atom substituted with hydroxy (-OH). Examples of the

hydroxyalkyl may include, but are not limited to, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, *sec*-butyl, isobutyl, or *tert*-butyl independently substituted with -OH.

In the present invention, "alkylamino" or "aminoalkyl" refers to -(NR′R″), wherein R′ and R″ may each be independently selected from the group consisting of hydrogen, C_{1-6}alkyl and N-protecting group(for example, Boc), and the selected R′ and R″ may each be independently substituted or unsubstituted. In addition, "C_{0-6}alkylamino" refers to an amino containing no alkyl ($-NH_2$) or an amino containing C_{1-6}alkyl, i.e., $-NH(C_{1-6}alkyl)$ or $-N(C_{1-6}alkyl)_2$, and may include, but is not limited to, dimethylamino, diethylamino, methylethylamino, methylpropylamino, and ethylpropylamino.

In the present invention, "cyanoalkyl" refers to a straight or branched chain alkyl (hydrocarbon) having a carbon atom substituted with cyano (-CN).

In the present invention, "alkylsulfonyl" refers to -(R′-$S(=O)_2$-R″), wherein R′ may be selected from the group consisting of a single bond and C_{1-6}alkyl, and R″ may be selected from the group consisting of hydroxyl and C_{1-6}alkyl. Each of the above selected R′ and R″ may be independently substituted or unsubstituted. In addition, "C_{0-6}alkylsulfonyl" refers to a sulfonic acid group ($-S(=O)_2OH$) that does not contain alkyl, or a sulfonyl group containing C_{1-6}alkyl, i.e., $-S(=O)_2-(C_{1-6}alkyl)$ or $-(C_{1-6}alkyl)-S(=O)_2-(C_{1-}$

$_6$alkyl), and may include, but is not limited to, methylsulfonyl, (methylsulfonyl)methyl, (methylsulfonyl)ethyl, ethylsulfonyl, (ethylsulfonyl)methyl, and (ethylsulfonyl)ethyl.

In the present invention, "alkylcarbonyl" refers to -(R′-C(=O)-R″), wherein R′ may be selected from the group consisting of a single bond and C_{1-6}alkyl, and R″ may be selected from the group consisting of hydrogen and C_{1-6}alkyl. Each of the above selected R′ and R″ may be independently substituted or unsubstituted. Further, "C_{0-6}alkylcarbonyl" refers to an aldehyde group (-C(=O)H) that does not contain alkyl, or a ketone group containing C_{1-6}alkyl, i.e., -C(=O)-(C_{1-6}alkyl) or -(C_{1-6}alkyl)-C(=O)-(C_{1-6}alkyl).

In the present invention, "cycloalkyl" may refer to a hydrocarbon ring that does not include a heteroatom (N, O, P, P(=O), or S, and the like) in the ring, and may be saturated or partially unsaturated. Here, when unsaturated, the cycloalkyl may be referred to as a cycloalkene. Unless otherwise stated, cycloalkyl may be a single ring or multiple rings such as spiro rings, bridged rings, or fused rings.

In the present invention, "heterocycloalkyl" may refer to a ring containing one or more selected from N, O, P, P(=O), and S in the ring, and may be saturated or partially unsaturated. Here, when unsaturated, the heterocycloalkyl may be referred to as a heterocycloalkene. Unless otherwise

stated, the heterocycloalkyl may be a single ring or multiple rings such as spiro rings, bridged rings, or fused rings. In addition, "heterocycloalkyl having 3 to 12 atoms" may refer to a heterocycloalkyl having 3 to 12 ring-forming atoms. For example, heterocycloalkyl may include pyrrolidine, piperidine, imidazolidine, pyrazolidine, butyrolactam, valerolactam, imidazolidinone, hydantoin, dioxolane, pyrimidine-2,4(1H,3H)-dione, 1,4-dioxane, morpholine, thiomorpholine, thiomorpholine-S-oxide, thiomorpholine-S,S-oxide, piperazine, pyran, pyridone, 3-pyrroline, thiopyran, tetrahydrofuran, tetrahydrothiophene, quinuclidine, tropane, 2-azaspiro[3.3]heptane, (1r,5s)-3-azabicyclo[3.2.1]octane, (1s,4s)-2-azabicyclo[2.2.2]octane, (1r,4r)-2-oxa-5-azabicyclo[2.2.2]octane and the like, but is not limited to.

In the present invention, "heterobicycloalkyl" may refer to multiple rings, such as spiro rings, bridged rings, or fused rings, containing at least one selected from N, O, P, P(=O), and S in the ring, and may be saturated or partially unsaturated. Here, when unsaturated, the heterobicycloalkyl may be referred to as a heterobicycloalkene. Examples of heterobicycloalkyl may include quinuclidine, tropane, 2-azaspiro[3.3]heptane, (1r,5s)-3-azabicyclo[3.2.1]octane, (1s,4s)-2-azabicyclo[2.2.2]octane, (1r,4r)-2-oxa-5-azabicyclo[2.2.2]octane, and the like, but are not limited to.

In the present invention, "arene" may refer to an aromatic hydrocarbon ring. The arene may be monocyclic arene or polycyclic arene. The number of carbon atoms forming the arene ring may be 5 or more and 30 or less, 5 or more and 20 or less, or 5 or more and 15 or less. Examples of arene may include benzene, naphthalene, fluorene, anthracene, phenanthrene, bibenzene, terbenzene, quaterbenzene, quinquebenzene, sexibenzene, triphenylene, pyrene, benzofluoranthene, chrysene, and the like, but are not limited to. In the present specification, a moiety obtained by removing one hydrogen atom from the above "arene" is referred to as "aryl".

In the present invention, "heteroarene" may be a ring containing one or more of O, N, P, Si, and S as heterogeneous elements. The number of atoms forming the heteroarene ring may be 3 or more and 30 or less, 3 or more and 20 or less, or 3 or more and 15 or less. The heteroarene may be a monocyclic heteroarene or a polycyclic heteroarene. The polycyclic heteroarene may have, for example, a bicyclic or tricyclic structure. Examples of heteroarene may include thiophene, purine, pyrrole, pyrazole, imidazole, thiazole, oxazole, isothiazole, oxadiazole, triazole, pyridine, pyridin-2-one, pyridin-3-one, pyridin-4-one, bipyridine, triazine, acridyl, pyridazine, pyrazine, quinoline, quinazoline, quinoxaline, phenoxazine, phthalazine,

pyrimidine, pyridopyrimidine, pyridopyrazine, pyrazinopyrazine, isoquinoline, indole, carbazole, imidazopyridazine, imidazopyridine, imidazopyrimidine, pyrazolopyrimidine, imidazopyrazine or pyrazolopyridine, N-arylcarbazole, N-heteroarylcarbazole, N-alkylcarbazole, benzoxazole, benzoimidazole, benzocarbazole, benzothiophene, dibenzothiophene, thienothiophene, benzofuran, phenanthroline, isoxazole, thiadiazole, benzothiazole, tetrazole, phenothiazine, dibenzosilole, dibenzofuran, and the like, but are not limited to. In an embodiment of the present invention, the heteroarene may also include a bicyclic heterocycloarene including an arene ring fused to a heterocycloalkyl ring or a heteroarene fused to a cycloalkyl ring. In the present specification, a moiety obtained by removing one hydrogen atom from the above "heteroarene" is referred to as "heteroaryl".

In the present invention, "hydroarene" or "hydroaryl" is an aromatic hydrocarbon ring in which at least one double bond is saturated.

In the present invention, "heterohydroarene" refers to a polycyclic (bicyclic to tetracyclic) ring containing 1 to 5 heteroatoms selected from N, O, and S as ring-forming atoms, wherein at least one of the polycyclic rings may be a saturated or partially unsaturated ring, and at least the other ring may have an aromatic ring. As used herein, a

moiety obtained by removing one hydrogen atom from the above "heterohydroarene" is referred to as "heterohydroaryl".

In the present invention, "ring" may be a single ring or multiple rings. The multiple rings may be spiro rings, bridged rings, or fused rings.

In the present invention, “stereoisomer” refers to compounds that have the same chemical or molecular formula but are sterically different. Stereoisomer in the present specification include optical isomer, enantiomer, diastereomer, cis/trans isomer, rotamer, and atropisomer, and each of these isomers, racemates, and mixtures thereof are also included within the scope of the present invention. For example, since the stereochemical structure of Chemical Formula 1 of the present invention is not specified, the stereoisomers of Chemical Formula 1 may be included. Unless otherwise specified, a solid bond () connected to an asymmetric carbon atom may include a wedge solid bond () or wedge dashed bond () representing the absolute arrangement of stereocenters.

The compound represented by Chemical Formula 1 of the present invention may be present in the form of a "pharmaceutically acceptable salt". Thus, pharmaceutically acceptable salts of the compound represented by Chemical Formula 1 above are included in the scope of the compound of the present invention. The term "pharmaceutically acceptable

salt" of the present invention refers to any organic or inorganic acid addition salt of the compound represented by Chemical Formula 1 at a concentration having a relatively non-toxic and harmless effective effect on patients in which side effects caused by these salts do not reduce the beneficial efficacy of the compound.

In particular, the pharmaceutically acceptable salt may be an acid addition salt formed from a free acid. Here, the acid addition salts may be obtained from inorganic acids such as hydrochloric acid, nitric acid, phosphoric acid, sulfuric acid, hydrobromic acid, hydroiodic acid, nitrous acid, phosphorous acid, and the like, non-toxic organic acids such as aliphatic mono- and dicarboxylates, phenyl-substituted alkanoates, hydroxy alkanoates and alkanedioates, aromatic acids, aliphatic and aromatic sulfonic acids, and the like, organic acids such as trifluoroacetic acid, acetate, benzoic acid, citric acid, lactic acid, maleic acid, gluconic acid, methanesulfonic acid, 4-toluenesulfonic acid, tartaric acid, fumaric acid, and the like.

Examples of the pharmaceutically acceptable salt may include sulfate, sulfite, nitrate, phosphate, pyrophosphate, chloride, bromide, iodide, fluoride, acetate, propionate, decanoate, caprylate, acrylate, formate, isobutyrate, caprate, heptanoate, propiolate, oxalate, malonate, succinate, suberate, sebacate, fumarate, maleate, benzoate,

phthalate, benzenesulfonate, toluenesulfonate, phenylacetate, phenylpropionate, phenylbutyrate, citrate, lactate, glycolate, malate, tartrate, mandelate, and the like.

The acid addition salt may be prepared by a conventional method, for example, may be prepared by dissolving the derivative represented by Chemical Formula 1 in an organic solvent such as methanol, ethanol, acetone, methylene chloride, acetonitrile, or the like, and adding an organic acid or an inorganic acid to form a precipitate, followed by filtering and drying the resulting precipitate, or may be prepared by distillation using a solvent and excess acid under reduced pressure, followed by drying and crystallizing the reaction product in an organic solvent.

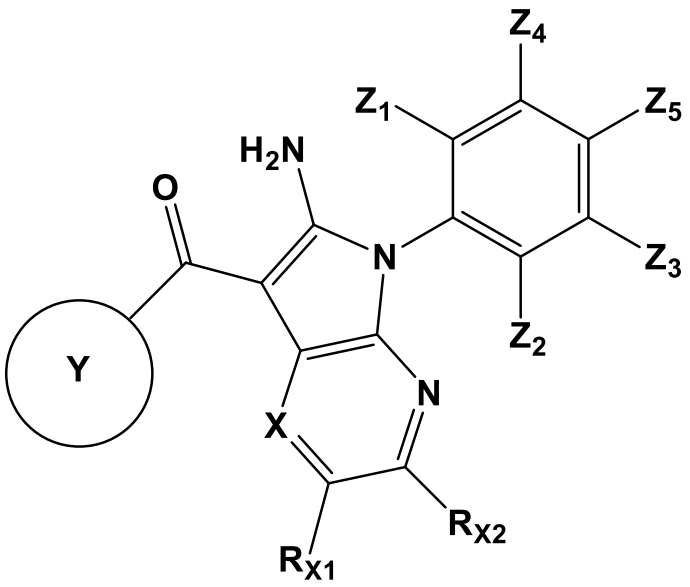
Further, the pharmaceutically acceptable salt may be a salt obtained using a base or a metal salt. As an example of a metal salt, an alkali metal salt or an alkaline earth metal salt may be obtained by dissolving the compound in an excess alkali metal hydroxide or alkaline earth metal hydroxide solution, and filtering an insoluble compound salt, followed by evaporating and drying the filtrate. Sodium, potassium or calcium salts may be pharmaceutically suitable as alkali metal salts. In addition, the corresponding silver salt may be obtained by reacting an alkali metal or alkaline earth metal salt with a suitable silver salt (for example, silver

nitrate) or may be prepared by salt production methods known in the art.

Method for preparing heteroaryl derivative compound

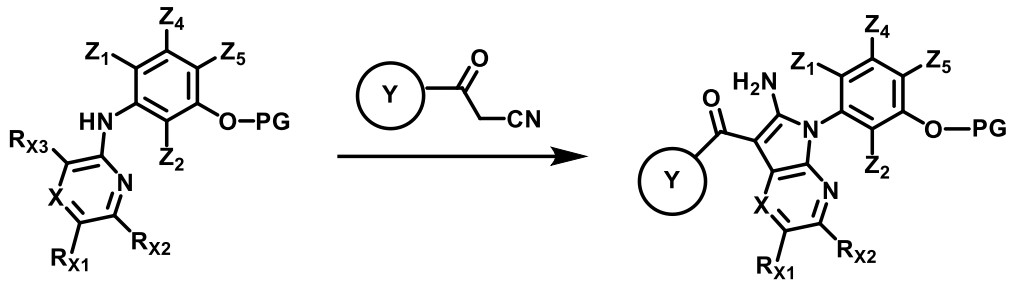
The present invention provides a method for preparing a compound represented by the following Chemical Formula 1, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof:

[Chemical Formula 1]



According to an embodiment of the present invention, the preparation method may comprise a step represented by the following Scheme I:

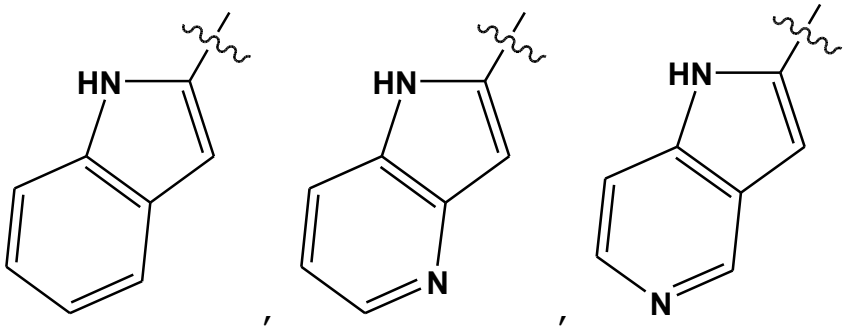
[Scheme I]



In Scheme I above,

R_{X1} and R_{X2} are each independently -H, -C_{1-6}alkyl, -(3-6 membered cycloalkyl), or -(4-6 membered heterocycloalkyl), wherein at least one H on the ring of the -(3-6 membered cycloalkyl) or -(4-6 membered heterocycloalkyl) may be substituted with -C_{1-3}alkyl;

R_{X3} is -halo;

Ring Y is 

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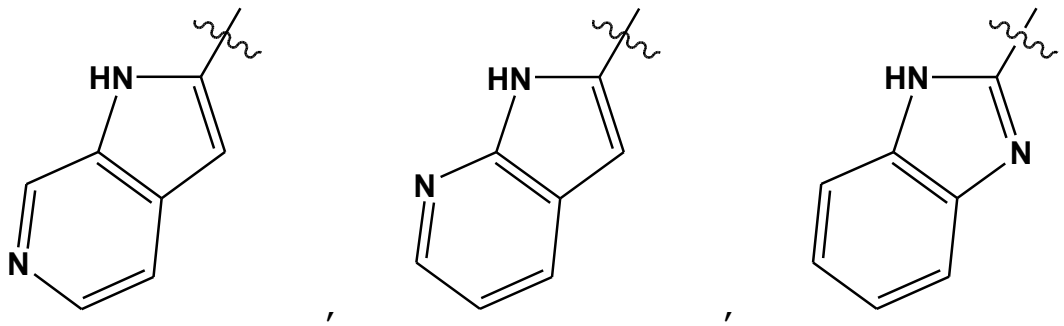

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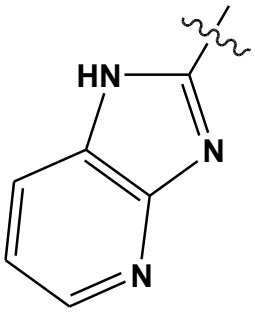

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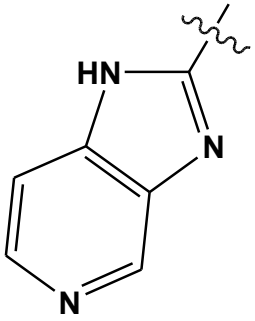

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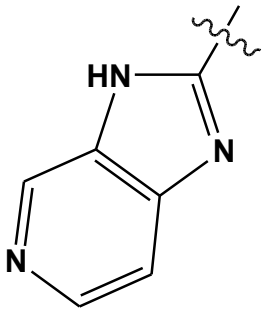

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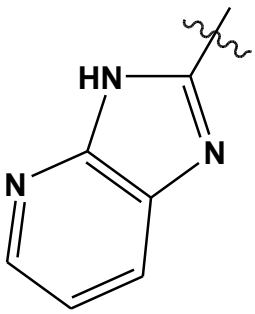

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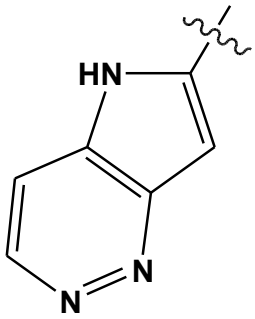

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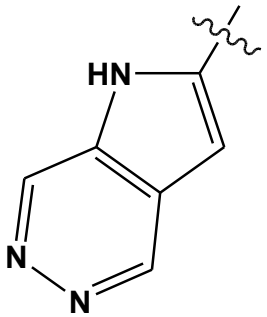

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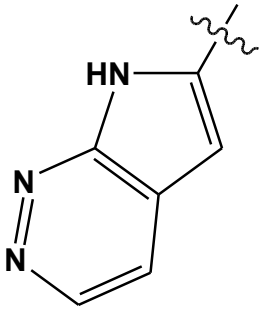

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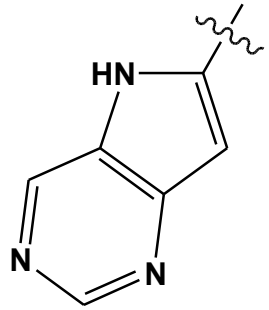

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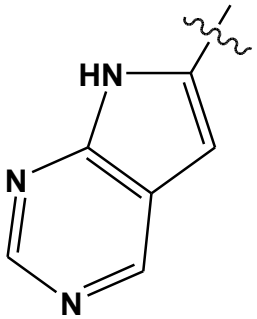

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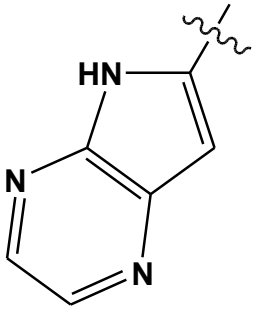

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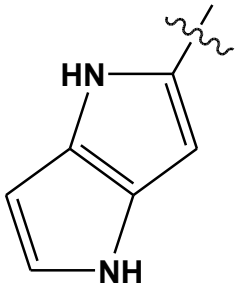

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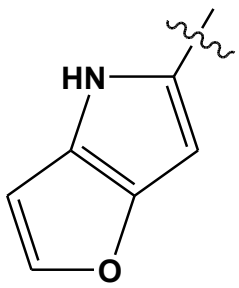

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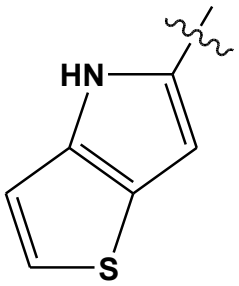


, wherein at least one H on the ring of the ring

Y may be substituted with -C_{1-3}alkyl, -C_{1-3}aminoalkyl, -C_{1-3}hydroxyalkyl, -C_{1-3}haloalkyl, -CN, -(CH_2)m-R_a, -NH-R_b, -O-R_c, -halo, -(3-6 membered cycloalkyl), -C(=O)-(3-6 membered cycloalkyl), -$S(=O)_2$-C_{1-3}alkyl, or -P(=O)-(C_{1-3}alkyl)(C_{1-3}alkyl);

m is 0 or 1;

R_a is -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl) may be substituted with -C_{1-3}alkyl, -C_{1-3}alkyl-O-C_{1-3}alkyl, -O-C_{1-3}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered heterocycloalkyl);

R_b and R_c are each independently -C_{1-3}alkyl, -C_{1-3}haloalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}alkyl-O-C_{1-3}alkyl, -$S(=O)_2$-(3-6 membered cycloalkyl), -(CH_2)n-(3-6 membered cycloalkyl), or -(CH_2)n-(3-6 membered heterocycloalkyl), wherein at least one H on the ring of the -(CH_2)n-(3-6 membered cycloalkyl), or -(CH_2)n-(3-6 membered heterocycloalkyl) may be substituted with -C_{1-3}alkyl, -O-C_{1-3}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered cycloalkyl);

n is 0, 1, or 2;

Z_1 and Z_2 are each independently -C_{1-3}alkyl;

Z_4 is -H;

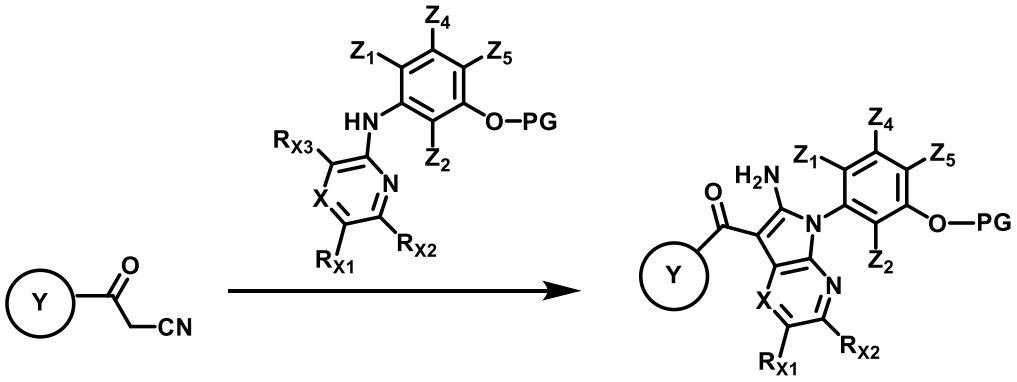
Z_5 is -H or -halo; and

PG is -OH protecting group.

In the present invention, the -OH protecting group may be methoxymethyl (MOM) or 2-(trimethylsilyl)ethoxymethyl (SEM). However, the present invention is not limited thereto.

According to another embodiment of the present invention, the preparation method may comprise a step represented by the following Scheme II:

[Scheme II]



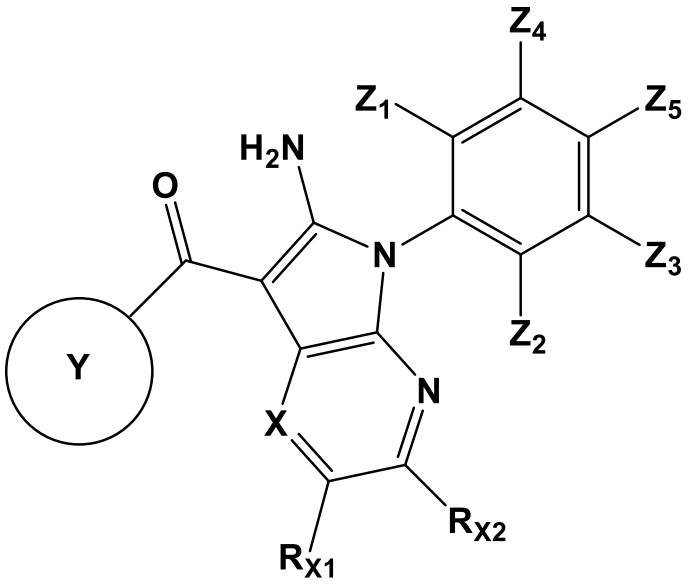
in Scheme II above,

R_{X1} to R_{X3}, and Ring Y, Z_1, Z_2, Z_4, Z_5 and PG are as summarized in the Scheme I above.

Use of heteroaryl derivative compound

The present invention provides use of a compound represented by the following Chemical Formula 1, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof.

[Chemical Formula 1]



The Chemical Formula 1 is as defined above.

The compound represented by Chemical Formula 1 of the present invention, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof exhibits inhibitory activity against various kinases.

According to an embodiment of the present invention, it is confirmed that the heteroaryl derivative represented by Chemical Formula 1 exhibits high inhibitory activity against PKMYT1 and inhibited the proliferation of PKMYT1-activated cells. Further, the heteroaryl derivative represented by Chemical Formula 1 of the present invention exhibits high inhibitory activity against cells in which CCNE1 is hyperactivated, amplified, or overexpressed. Therefore, the heteroaryl derivative represented by Chemical Formula 1 of the present invention may be effectively employed for the treatment or prevention of diseases related to PKMYT1 and/or

CCNE1 hyperactivation, amplification, or overexpression.

The disease related to the PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression may be, for example, cancer. The cancer may be a malignant tumor that includes an abnormality that activates PKMYT1, associated with disease or disorder related to PKMYT1, or may be a malignant tumor characterized by hyperactivation, amplification, or overexpression of CCNE1. The cancer may be a solid cancer or a blood cancer (or hematologic malignancy) and includes not only primary cancer but also metastatic cancer.

Specific examples of the solid cancer may include, but are not limited to, one or more from the group consisting of uterine cancer, cervical cancer, ovarian cancer, breast cancer, gastrointestinal tract cancer, biliary tract cancer, lung and thoracic cancer, thymic cancer, genitourinary cancer, head and neck cancer, brain and nervous system tumor, neuroendocrine tumor, bone and soft tissue tumor, and skin cancer.

The uterine cancer may include endometrial cancer, uterine papillary serous carcinoma (UPSC), uterine carcinosarcoma, uterine corpus cancer, and uterine corpus endometrial carcinoma.

The ovarian cancer may include serous ovarian cancer and high grade serous ovarian cancer (HGSOC).

The breast cancer may be triple negative breast cancer (TNBC).

The gastrointestinal tract cancer may include pancreatic cancer, such as pancreatic ductal adenocarcinoma (PDAC), colorectal cancer (CRC), rectal cancer, gastric cancer, esophageal cancer, and liver cancer, such as liver hepatocellular carcinoma (LIHC).

The lung cancer may include small cell lung cancer (SCLC), non-small cell lung cancer (NSCLC), and squamous cell carcinoma of the lung.

The thymic cancer may be thymoma.

The genitourinary cancer may include prostate cancer, bladder cancer, testicular cancer, and kidney cancer such as kidney renal papillary cell carcinoma (KIRP) or kidney renal clear cell carcinoma (KIRC).

The head and neck cancer may include head and neck squamous cell carcinoma (HNSCC) and adenoid cystic carcinoma (ACC).

The brain and central nervous system tumor may include brain cancer, glioblastoma, glioma, and brain lower grade glioma (LGG).

The bone and soft tissue tumor may include bone cancer and soft tissue cancer such as osteosarcoma, Ewing sarcoma, and chondrosarcoma.

The skin cancer may be melanoma.

Specific examples of the blood cancer may include leukemia, such as chronic myeloid leukemia (CML), chronic lymphocytic leukemia (CLL), acute myeloid leukemia (AML), and acute lymphoblastic leukemia (ALL), as well as multiple myeloma and lymphoma.

According to an embodiment of the present invention, the present invention provides a pharmaceutical composition for preventing or treating diseases related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression, comprising: the compound represented by Chemical Formula 1, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof, as an active ingredient. Specifically, the disease related to the PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression may be, for example, cancer. The types of cancer are as described above.

According to an embodiment of the present invention, the present invention provides a pharmaceutical composition for preventing or treating diseases related to PPP2R1A and/or FBXW7 inactivating mutations, comprising: the compound represented by Chemical Formula 1, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof, as an active ingredient. Specifically, the disease related to the PPP2R1A and/or FBXW7 inactivating mutation may be cancer. The types of cancer are as described above.

The pharmaceutical composition of the present invention

may further comprise at least one active ingredient exhibiting the same or similar efficacy in addition to the compound represented by Chemical Formula 1 above, a stereoisomer, or a pharmaceutically acceptable salt thereof.

The pharmaceutical composition of the present invention may be used for clinical administration and may be prepared for administration in various oral and parenteral dosage forms.

In addition, according to an embodiment of the present invention, the present invention provides use of the compound represented by Chemical Formula 1 above, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof, for the manufacture of a medicament for the treatment or prevention of diseases associated with PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression. Specifically, the disease associated with PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression may be cancer. The types of cancer are as described above.

Further, according to an embodiment of the present invention, the present invention provides use of the compound represented by Chemical Formula 1 above, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof, for use in the manufacture of a medicament for the treatment or prevention of cancer. The types of cancer are as described above.

Further, according to an embodiment of the present invention, the present invention provides a method for treating or preventing diseases associated with PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression, comprising administering to a subject in need thereof a therapeutically effective amount of the compound represented by Chemical Formula 1 above, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof. The subject may be a mammal including a human. Specifically, the disease associated with PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression may be cancer. The types of cancer are as described above.

Further, according to an embodiment of the present invention, the present invention provides a method for treating or preventing cancer, comprising administering to a subject in need thereof a therapeutically effective amount of the compound represented by Chemical Formula 1 above, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof. The types of cancer are as described above.

Further, according to an embodiment of the present invention, the present invention provides a method for inhibiting PKMYT1 and/or CCNE1, comprising administering to a subject in need thereof a therapeutically effective amount of the compound represented by Chemical Formula 1 above, a stereoisomer thereof, or a pharmaceutically acceptable salt

thereof.

As used herein, the term “therapeutically effective amount” refers to an amount of the compound represented by Chemical Formula 1 that is effective for the treatment or prevention of diseases associated with PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression. Specifically, the "pharmaceutically effective amount" means an amount sufficient to treat a disease at a reasonable benefit/risk ratio applicable to medical treatment, and the effective dose level may be determined depending on factors including the subject type and severity, age, sex, type of diseases, the activity of the drug, the sensitivity to the drug, the time of administration, the route of administration, the rate of excretion, the duration of treatment, drugs used concurrently, and other factors well known in the medical field. The pharmaceutical composition of the present invention may be administered as an individual therapeutic agent or in combination with other therapeutic agents, or may be administered sequentially or simultaneously with a commercially available therapeutic agent. In addition, the pharmaceutical composition of the present invention may be administered singly or in multiple doses. In consideration of all of the above factors, it is important to administer an amount capable of obtaining the maximum effect with the minimum amount without side effects, which may be easily

determined by those skilled in the art. The administration dose of the pharmaceutical composition of the present invention may be determined by specialists according to various factors such as the patient's condition, age, sex, complications, and the like. Since the active ingredient of the pharmaceutical composition of the present invention has excellent safety, the active ingredient may be used even above the predetermined dose.

As used herein, “prevention” refers to any action that suppresses or delays the occurrence, spread, and recurrence of the disease by administering the compound, and term “treatment” refers to any action in which the symptoms of the disease are improved or beneficially changed by administration of the compound.

Further, according to an embodiment of the present invention, the pharmaceutical composition may further comprise a pharmaceutically acceptable carrier, diluent, or excipient. In an embodiment, the present invention provides a pharmaceutical composition comprising the compound represented by Chemical Formula 1, or a pharmaceutically acceptable salt or a stereoisomer thereof, and a pharmaceutically acceptable additive.

Examples of additives used in the pharmaceutical composition may include sweeteners, binders, solvents, solubilizers, wetting agents, emulsifiers, isotonic agents,

absorbents, disintegrants, antioxidants, preservatives, lubricants, fillers, flavoring agents, and the like. For example, the additives may include lactose, dextrose, sucrose, mannitol, sorbitol, cellulose, glycine, silica, talc, stearic acid, stearin, magnesium stearate, magnesium aluminosilicate, starch, gelatin, gum tragacanth, alginic acid, sodium alginate, methylcellulose, sodium carboxymethylcellulose, agar, water, ethanol, polyethylene glycol, polyvinylpyrrolidone, sodium chloride, calcium chloride, orange essence, strawberry essence, vanilla flavor, and the like.

The pharmaceutical composition may be combined in various formulation forms for oral administration (for example, tablets, pills, powders, capsules, syrups or emulsions) or parenteral administration (for example, intramuscular, intravenous or subcutaneous injection).

For example, the pharmaceutical composition may be combined as a preparation for oral administration, and the additives used in this case may include cellulose, calcium silicate, corn starch, lactose, sucrose, dextrose, calcium phosphate, stearic acid, magnesium stearate, calcium stearate, gelatin, talc, surfactants, suspending agents, emulsifiers, diluents, and the like. In detail, solid preparations for oral administration include tablets, pills, powders, granules, capsules, and the like, and these solid

preparations may be formulated by mixing at least one excipient in the composition, such as starch, calcium carbonate, sucrose, lactose, gelatin, and the like. In addition, lubricants such as magnesium stearate and talc may be used in addition to simple excipients. Further, examples of liquid preparations for oral administration may include suspensions, emulsions, syrups, and the like. Various excipients such as wetting agents, sweeteners, aromatics, preservatives, and the like, in addition to water and liquid paraffin that are commonly used simple diluents.

Further, preparations for parenteral administration may include sterilized aqueous solutions, non-aqueous solutions, suspensions, emulsions, freeze-dried preparations, suppositories. As the non-aqueous solvents and the suspensions, propylene glycol, polyethylene glycol, vegetable oils such as olive oil, and injectable esters such as ethyl oleate, and the like, may be used. As the base of the suppository, Witepsol, macrogol, Tween 61, cacao butter, laurin butter, glycerogelatin and the like, may be used. Meanwhile, conventional additives such as solubilizers, isotonic agents, suspending agents, emulsifiers, stabilizers, preservatives, and the like, may be contained in the injection.

It may also be formulated in combination preparations with other active agents to achieve synergistic action of

the active ingredients.

Matters described in the use, composition, and treatment method of the present invention are equally applied unless they contradict each other.

【Advantageous Effects】

The heteroaryl derivative compound of the present invention, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof exhibits excellent inhibitory activity against kinases, particularly PKMYT1 and/or CCNE1, and therefore may be effectively employed for the treatment or prevention of diseases related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression, and may be particularly usefully employed as a therapeutic agent for cancer.

【Best Mode】

Hereinafter, the present invention will be described in detail by Examples and Experimental Examples. However, the following Examples and Experimental Examples are only provided to illustrate the present invention, and the scope of the present invention is not limited thereto.

<Analysis and Purification Conditions>

Compounds synthesized in Preparation Examples and Examples of the present invention were purified or subjected to structural analysis under the following conditions.

1. LC-MS, Prep-HPLC, MPLC

Liquid Chromatography-Mass Spectrometry (LC-MS) for Analysis

Waters UPLC system (ACQUITY UPLC PDA Detector) equipped with a mass QDa detector from Waters was used. Waters' ACQUITY UPLC® BEH C18 (1.7 μm, 2.1 × 50 mm) column was used, and the column temperature was set at 30℃.

Water containing 0.1 % formic acid was used as mobile phase A, and acetonitrile containing 0.1 % formic acid was used as mobile phase B.

Gradient condition (10-100% B for 3 minutes, flow rate = 0.6 mL/min)

Preparative High-Performance Liquid Chromatography (Prep-HPLC) with UV Spectrometry for Purification

The ACCQPrep HP150 equipment manufactured by Teledyne ISCO Inc., was used. Waters' XTERRA® Prep RP18 OBD™ (10 μm, 30 × 300 mm) column was used, and the column temperature was set to room temperature.

Medium Pressure Liquid Chromatography (MPLC) for Purification

Medium pressure liquid chromatography was performed using Teledyne ISCO's CombiFlash Rf +UV.

2. NMR Analysis

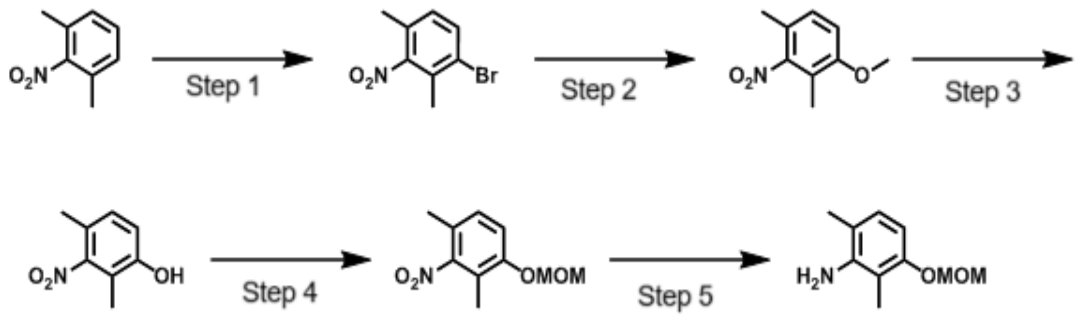
NMR analysis was performed using an NMR AVANCE NEO 400 MHz manufactured by Bruker, and data are expressed as ppm (parts per million, δ).

The commercial reagents used were used without further purification. In the present invention, ambient temperature or room temperature refers to a temperature of about 5℃ to 40℃, as an example, 10℃ to 30℃, and as another example, 20℃ to 27℃, and is not strictly limited to the above range. Concentration under reduced pressure or solvent distillation was performed using a rotary evaporator.

Preparation Example: Preparation of Intermediate Compounds of Present Invention

Preparation Example 1: Preparation of 3-(methoxymethoxy)-2,6-dimethylaniline

[Scheme 1]



[Step 1] Preparation of 1-bromo-2,4-dimethyl-3-nitrobenzene

1,3-Dimethyl-2-nitrobenzene (20 g, 132 mmol) was dissolved in dichloromethane (66 mL), and then iron (1.85 g, 33.1 mmol) and anhydrous iron (III) bromide (0.78 g, 2.65 mmol) were added. Bromide (23.26 g, 146 mmol, 7.5 mL) was slowly added dropwise to the reaction mixture, and stirred

for 3 hours. The reaction mixture was slowly diluted with ice water, and the organic layer was extracted with ethyl ether (50 mL × 3). The collected organic layer was washed with 20% aqueous sodium thiosulfate solution and saturated brine, dried over sodium sulfate, and concentrated under reduced pressure. The obtained target compound (30.31 g, crude) was used in the next reaction without further purification.

[Step 2] Preparation of 1-methoxy-2,4-dimethyl-3-nitrobenzene

The 1-bromo-2,4-dimethyl-3-nitrobenzene (30 g, 130 mmol) prepared in Step 1 above was dissolved in dimethylformamide (87 mL), and then copper bromide (1.87 g, 13.04 mmol) was added. To the reaction mixture, 25% sodium methoxide (89 mL, methanol solution, 391 mmol) was slowly added dropwise and stirred at 95℃ for 2 hours. Saturated aqueous ammonium chloride solution (500 mL) was added to the reaction mixture, and the organic layer was extracted with ethyl ether (200 mL × 3). The collected organic layer was washed with saturated brine, dried over sodium sulfate, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, hexane : ethyl acetate 0-50%), and the target compound (20.5 g, 87% yield) was obtained.

[Step 3] Preparation of 2,4-dimethyl-3-nitrophenol

The 1-methoxy-2,4-dimethyl-3-nitrobenzene (21.81 g, 120 mmol) prepared in Step 2 above was dissolved in dichloromethane (120 mL), and 1M boron tribromide (181 mL, 181 mmol) dissolved in dichloromethane at -78℃ was slowly added dropwise. The reaction mixture was stirred at room temperature for 16 hours, and slowly added to a saturated aqueous sodium bicarbonate solution at 0℃. The organic layer was extracted with dichloromethane (500 mL × 3). The collected organic layer was washed with saturated brine, dried over sodium sulfate, and concentrated under reduced pressure. The obtained target compound (19.52 g, 97% yield) was used in the next reaction without further purification.

[Step 4] Preparation of 1-(methoxymethoxy)-2,4-dimethyl-3-nitrobenzene

The 2,4-dimethyl-3-nitrophenol (20.38 g, 122 mmol) prepared in Step 3 above was dissolved in dichloromethane (406 mL), and then *N*,*N*-diisopropylethylamine (39.4 g, 305 mmol, 53.2 mL) was added. Chloromethyl methyl ether (9.81 g, 122 mmol, 9.26 mL) was slowly added to the reaction mixture, and stirred at room temperature for 2 hours. The completion of the reaction was confirmed using LC-MS, then dichloromethane (1 L) was additionally added to the reaction mixture, and the mixture was washed with water and 0.1 M aqueous hydrochloric acid solution. The organic layer was dried over sodium sulfate and concentrated under reduced

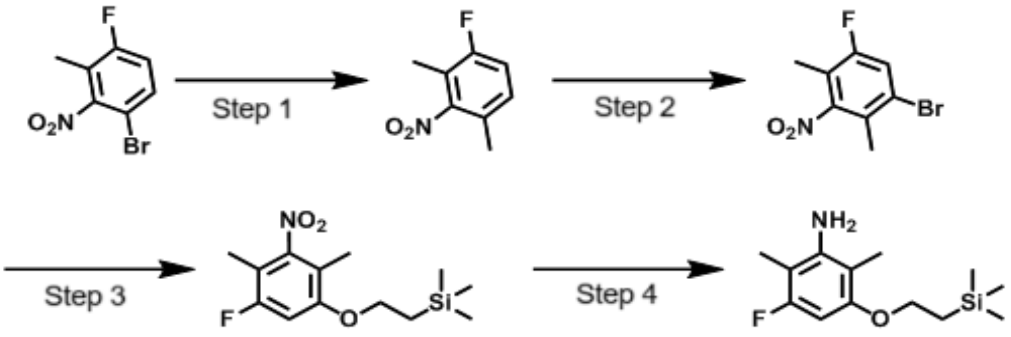
pressure. The concentrated mixture was purified by MPLC (SiO_2, hexane : ethyl acetate 0-40%), and the target compound (24.41 g, 95% yield) was obtained.

[Step 5] Preparation of 3-(methoxymethoxy)-2,6-dimethylaniline

The 1-(methoxymethoxy)-2,4-dimethyl-3-nitrobenzene (24.41 g, 116 mmol) prepared in Step 4 above was dissolved in methanol (385 mL), then Pd/C (2.46 g, 10% purity) was added, and the resulting mixture was stirred under hydrogen gas for 16 hours. After confirming the formation of the target compound using LC-MS, the reaction mixture was filtered through Celite and concentrated. The obtained target compound (18.93 g, 90% yield) was used in the next reaction without further purification. MS (ESI): m/z 182 $[M+H]^+$

Preparation Example 2: Preparation of 3-fluoro-2,6-dimethyl-5-(2-trimethylsilyl)ethoxy)aniline

[Scheme 2]



[Step 1] Preparation of 1-fluoro-2,4-dimethyl-3-

nitrobenzene

1-Bromo-4-fluoro-3-methyl-2-nitrobenzene (1 g, 4.27 mmol) was dissolved in 1,4-dioxane (20 mL), and then water (4 mL), 2,4,6-trimethyl-1,3,5,2,4,6-trioxatriborinane (0.54 g, 4.27 mmol), potassium carbonate (1.18 g, 8.55 mmol), and Pd(dppf)Cl_2·dichloromethane (0.35 g, 0.43 mmol) were added. The reaction mixture was stirred at 110℃ for 1 hour, then cooled to room temperature, water (100 mL) was added, and the reaction mixture was extracted with ethyl acetate (60 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-5%) to obtain the target compound (400 mg, 50% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 7.43 - 7.32 (m, 2H), 2.23 (s, 3H), 2.15 (d, J = 2.0 Hz, 3H).

[Step 2] Preparation of 1-bromo-5-fluoro-2,4-dimethyl-3-nitrobenzene

The 1-fluoro-2,4-dimethyl-3-nitrobenzene (350 mg, 2.07 mmol) prepared in Step 1 above was dissolved in sulfuric acid (3.5 mL), and then trifluoroacetic acid (1 mL) and N-bromosuccinimide (368 mg, 2.07 mmol) were added. Then, the mixture was stirred at room temperature for 12 hours, and the reaction mixture was slowly added dropwise to ice water (20 mL). Then, the resulting mixture was extracted using

ethyl acetate (10 mL × 3), dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-5%) to obtain the target compound (360 mg, 70% yield).

^1H NMR (400 MHz, $CDCl_3$): δ 7.42 (d, J = 8.4 Hz, 1H), 2.31 (s, 3H), 2.17 (d, J = 2.0 Hz, 3H).

[Step 3] Preparation of (2-(5-fluoro-2,4-dimethyl-3-nitrophenoxy)ethyl)trimethylsilane

The 1-bromo-5-fluoro-2,4-dimethyl-3-nitrobenzene (100 mg, 0.40 mmol) prepared in Step 2 above and 2-trimethylsilylethanol (234 mg, 1.98 mmol) were dissolved in 1,4-dioxane (5 mL), and cesium carbonate (193 mg, 0.59 mmol) and t-BuBrettPhos Pd G3 (17 mg) were added. The reaction mixture was stirred at 80℃ for 16 hours, filtered through Celite, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-5%) to obtain the target compound (50 mg, 40% yield).

^1H NMR (400 MHz, DMSO-d_6): δ 7.19 (d, J = 11.6 Hz, 1H), 4.13 (t, J = 8.0 Hz, 2H), 2.09 - 1.97 (m, 6H), 1.10 (t, J = 8.0 Hz, 2H), 0.06 (s, 9H).

[Step 4] Preparation of 3-fluoro-2,6-dimethyl-5-(2-(trimethylsilyl)ethoxy)aniline

The (2-(5-fluoro-2,4-dimethyl-3-

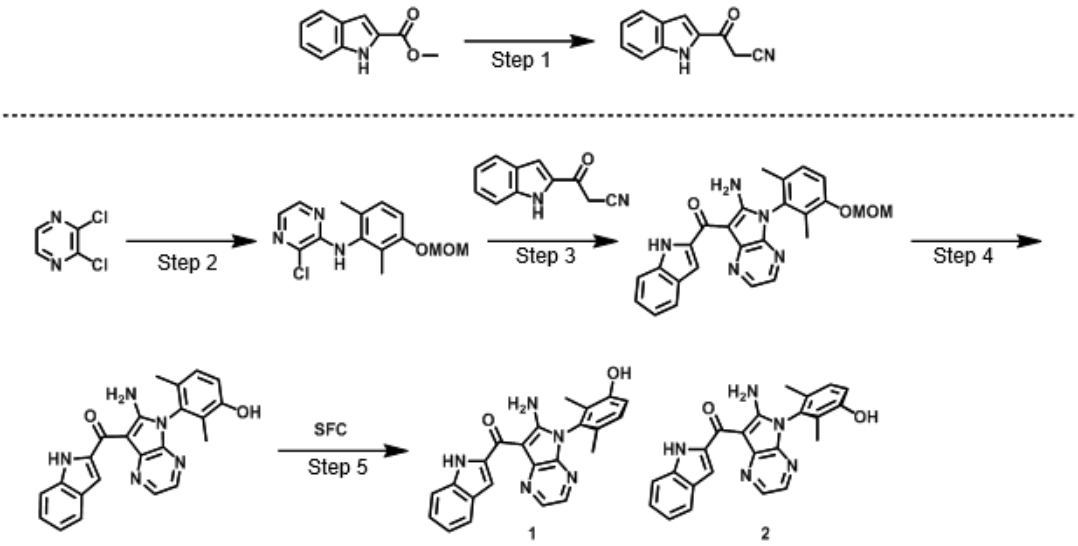
nitrophenoxy)ethyl)trimethylsilane (50 mg, 0.16 mmol) prepared in Step 3 above was dissolved in 2-propanol (5 mL), and then Pd/C (17 mg, 10% purity) was added. The reaction mixture was stirred under hydrogen gas at room temperature for 2 hours. After confirming the completion of the reaction using LC-MS, the mixture was filtered through Celite and concentrated under reduced pressure to obtain the target compound (50 mg, 90% purity).

^{1}H NMR (400 MHz, $CDCl_3$): δ 6.11 (d, *J* = 11.6 Hz, 1H), 4.00 (t, *J* = 8.0 Hz, 2H), 3.70 (s, 2H), 2.04 (d, *J* = 1.6 Hz, 3H), 2.02 (s, 3H), 1.17 - 1.11 (m, 2H), 0.08 (s, 9H).

Example: Preparation of Compounds of Present Invention

Examples 1 and 2. Preparation of (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone and (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

[Scheme 3]



[Step 1] Preparation of 3-(1H-indol-2-yl)-3-oxopropanenitrile

Methyl 1H-indole-2-carboxylate (5 g, 28.54 mmol) was dissolved in tetrahydrofuran (50 mL), and acetonitrile (6.44 g, 156.98 mmol, 8.26 mL) was added. The reaction mixture was cooled to -78℃, and lithium bis(trimethylsilyl)amide (LiHMDS; 1 M, tetrahydrofuran solution, 85.62 mL) was slowly added dropwise under nitrogen gas, followed by stirring for 2 hours. The reaction mixture was added to a saturated aqueous ammonium chloride solution (300 mL) at 0℃, and then extracted with ethyl acetate (200 mL × 2). The collected organic layer was washed with saturated brine (200 mL), and the resulting product was dried over anhydrous sodium sulfate to remove the remaining water, and concentrated. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-30%) to obtain the target compound

(3 g, 57% yield). MS (ESI): m/z = 185.0 $[M+H]^+$

[Step 2] Preparation of 3-chloro-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine

2,3-Dichloropyrazine (1.64 g, 11.04 mmol) and the 3-(methoxymethoxy)-2,6-dimethylamine (2 g, 11.04 mmol) obtained in Preparation Example 1 were dissolved in toluene (20 mL), then potassium tert-butoxide (t-BuOK; 1.86 g, 16.55 mmol), Xantphos (319.27 mg, 0.552 mmol), and $Pd_2(dba)_3$ (1.01 g, 1.10 mmol) were added, and the mixture was stirred at 80℃ for 12 hours. After confirming the completion of the reaction by LC-MS, the reaction mixture was concentrated. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-15%) and further purified by prep-HPLC to obtain the target compound (500 mg, 15% yield). MS (ESI): m/z = 294.0 $[M+H]^+$

[Step 3] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

The 3-(1H-indol-2-yl)-3-oxo-propanenitrile (62.7 mg, 0.34 mmol) prepared in Step 1 above was dissolved in dioxane (5 mL), and then sodium tert-butoxide (98.15 mg, 1.02 mmol) was added at 0℃ and stirred for 30 minutes. The 3-chloro-*N*-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (100 mg, 0.34 mmol) prepared in Step 2 above and BINAP Pd G_3 (33.82 mg, 0.034 mmol) were added and stirred at 100℃ for

12 hours. The reaction mixture was concentrated and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (30 mg, 17 % yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 13.80 (s, 1H), 9.14 - 8.49 (m, 1H), 8.44 (d, J = 3.2 Hz, 1H), 7.96 (d, J = 2.8 Hz, 1H), 7.88 (s, 1H), 7.72 (s, 1H), 7.68 (d, J = 8.4 Hz, 1H), 7.36 - 7.20 (m, 3H), 7.12 (t, J = 7.6 Hz, 1H), 3.44 (s, 3H), 1.88 (s, 3H), 1.84 (s, 3H).

[Step 4] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone (30 mg, 0.058 mmol) prepared in Step 3 above was dissolved in methanol (2 mL), 2N hydrochloric acid (0.6 mL) was added, and the mixture was stirred at 25℃ for 2 hours. The reaction mixture was concentrated, and purified by Prep-HPLC to obtain the target compound (10 mg, 44% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 13.84 (s, 1H), 9.68 (s, 1H), 8.42 (d, J = 2.8 Hz, 1H), 7.96 (d, J = 3.2 Hz, 1H), 7.84 (d, J = 1.2 Hz, 1H), 7.72 (d, J = 8.0 Hz, 1H), 7.68 (d, J = 8.4 Hz, 1H), 7.31 - 7.26 (m, 1H), 7.15 - 7.07 (m, 2H), 6.96 (d, J = 8.4 Hz, 1H), 1.84 (s, 3H), 1.76 (s, 3).

[Step 5] Preparation of (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-

yl)methanone and (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone (95 mg, 0.239 mmol) obtained in Step 4 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK IC (250 mm × 30 mm, 10 μm); mobile phase: [CO_2/EtOH (0.1 % NH_3H_2O)]) to obtain compounds of Examples 1 and 2.

Example 1. ((S)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone)

Second elution; 43.1 mg, 43% yield; ^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 1.6 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.72 (d, *J* = 8.2 Hz, 1H), 7.64 (d, *J* = 8.2 Hz, 1H), 7.56 (s, 1H), 7.32 (t, *J* = 7.5 Hz, 1H), 7.17 - 7.06 (m, 2H), 6.96 (br d, *J* = 8.1 Hz, 1H), 1.92 (s, 3H), 1.87 (s, 3H); MS (ESI): m/z = 398.1 $[M+H]^+$

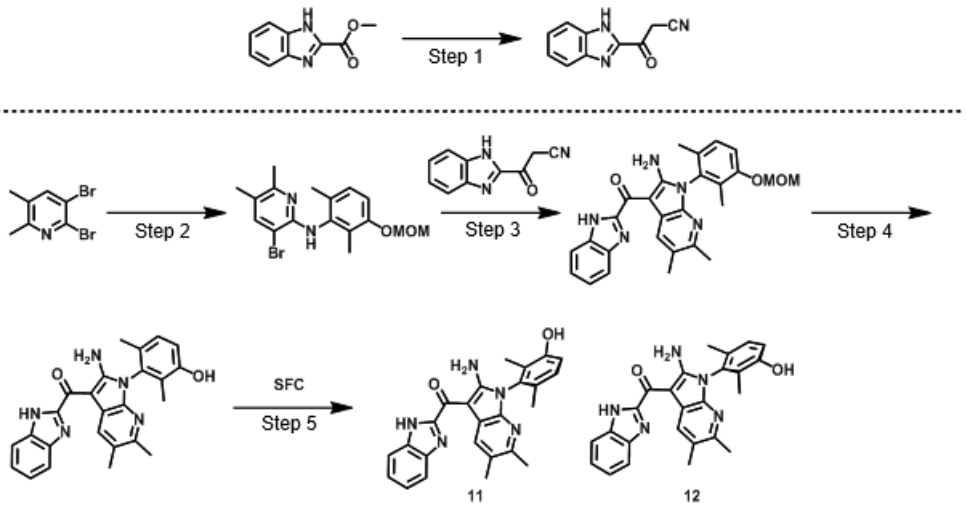
Example 2. ((*R*)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5*H*-pyrrolo[2,3-*b*]pyrazin-7-yl)(1*H*-indol-2-yl)methanone)

First elution; 41.2 mg, 42% yield; ^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 1.6 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.72 (d, *J* = 8.2 Hz, 1H), 7.64 (d, *J* = 8.2 Hz, 1H), 7.56 (s, 1H), 7.32 (t, *J* = 7.5 Hz, 1H), 7.17 - 7.06 (m, 2H), 6.96 (br

d, J = 8.1 Hz, 1H), 1.92 (s, 3H), 1.87 (s, 3H); MS (ESI): m/z = 398.1 $[M+H]^+$

Examples 11 and 12. Preparation of (S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone and (R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone

[Scheme 4]



[Step 1] Preparation of 3-(1H-benzo[d]imidazol-2-yl)-3-oxopropanenitrile

Methyl 1H-benzo[d]imidazole-2-carboxylate (3.7 g, 21 mmol) was dissolved in tetrahydrofuran (40 mL), and acetonitrile (5.17 g, 126 mmol) was added. The reaction mixture was cooled to -78℃, and LiHMDS (1M, tetrahydrofuran solution, 84.01 mL) was slowly added dropwise under nitrogen gas, followed by stirring for 1 hour. The reaction was

completed by adding saturated aqueous ammonium chloride solution at 0℃ and the reaction mixture was purified by prep-HPLC to obtain the target compound (1.37 g, 35% yield). MS (ESI): m/z 186.1 = $[M+H]^+$

^1H NMR (400 MHz, $CDCl_3$): δ 10.32 (s, 1H), 7.92 (d, *J* = 8.4 Hz, 1H), 7.64-7.56 (m, 1H), 7.52 (t, *J* = 7.6 Hz, 1H), 7.46 - 7.40 (m, 1H), 4.48 (s, 2H).

[Step 2] Preparation of 3-bromo-*N*-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5,6-dimethylpyridin-2-amine

The 3-(methoxymethoxy)-2,6-dimethylaniline (1 g, 5.52 mmol) obtained in Preparation Example 1 was dissolved in toluene (50 mL), then 2,3-dibromo-5,6-dimethylpyridine (1.61 g, 6.07 mmol), Xantphos (319 mg, 0.552 mmol), cesium carbonate (5.39 g, 16.55 mmol), and $Pd_2(dba)_3$ (505 mg, 0.552 mmol) were added, and the mixture was stirred at 100℃ for 12 hours. The reaction mixture was concentrated, purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-25%) to obtain the target compound (1.5 g, 69% yield). MS (ESI): m/z = 365.1 $[M+H]^+$

[Step 3] Preparation of (2-amino-1-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone

The 3-(1H-benzo[d]imidazol-2-yl)-3-oxopropanenitrile (38.02 mg, 0.205 mmol) prepared in Step 1 above and the 3-

bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5,6-dimethylpyridin-2-amine (50 mg, 0.137 mmol) prepared in Step 2 above were dissolved in dioxane (1 mL), then BINAP Pd G_3 (13.60 mg, 0.014 mmol), and potassium triphosphate (87.17 mg, 0.411 mmol) were added and stirred at 100℃ for 12 hours. The reaction mixture was concentrated, purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (50 mg, 16% yield). MS (ESI): m/z = 470.2 $[M+H]^+$

[Step 4] Preparation of (2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone

The (2-amino-1-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone (74 mg, 157.60 μmol) prepared in Step 3 above was dissolved in methanol (3 mL), 4N hydrochloric acid (3 mL) was added, and the mixture was stirred at 25℃ for 1 hour. The reaction mixture was concentrated, and purified by Prep-HPLC to obtain the target compound (20 mg, 30% yield). MS (ESI): m/z = 426.1 $[M+H]^+$

[Step 5] Preparation of (S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone and (R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone

The (2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-

dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone (20 mg, 0.047 mmol) obtained in Step 4 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK OD (250 mm × 30 mm, 10 μm); mobile phase: [CO_2/methanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 11 and 12.

Example 11. ((S)-(2-Amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone)

Second elution; 8.4 mg (42% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.72 - 8.41 (m, 1H), 7.76 (dd, *J* = 2.8, 6.0 Hz, 2H), 7.48 (s, 2H), 7.36 - 7.21 (m, 2H), 7.04 (d, *J* = 8.4 Hz, 1H), 2.48 (s, 3H), 2.36 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 426.1 $[M+H]^+$

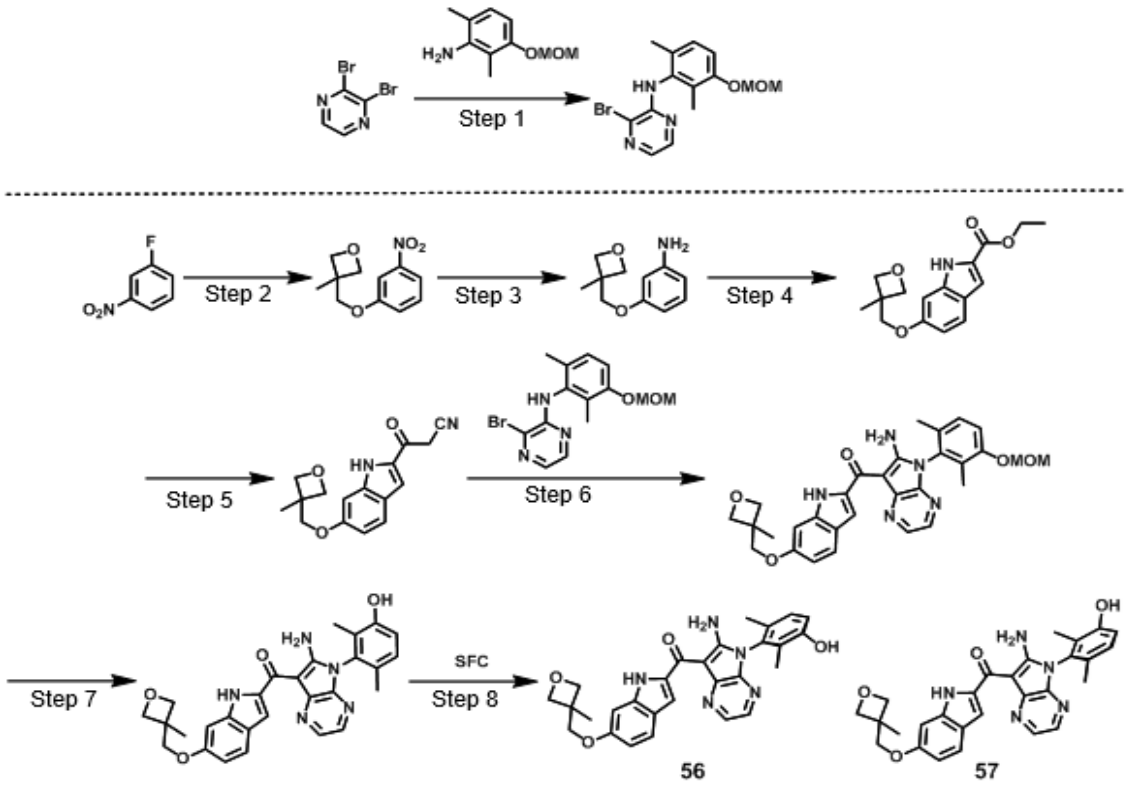
Example 12. ((*R*)-(2-Amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1*H*-pyrrolo[2,3-*b*]pyridin-3-yl)(1*H*-benzo[*d*]imidazol-2-yl)methanone)

First elution; 6.8 mg (34% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.66 - 8.35 (m, 1H), 7.72 (dd, *J* = 2.8, 6.0 Hz, 2H), 7.44 (d, *J* = 8.4 Hz, 2H), 7.30 - 7.15 (m, 2H), 7.00 (d, *J* = 8.4 Hz, 1H), 2.44 (s, 3H), 2.32 (s, 3H), 1.88 (s, 3H), 1.84 (s, 3H); MS (ESI): m/z = 426.1 $[M+H]^+$

Examples 56 and 57. Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-

yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone

[Scheme 5]



[Step 1] Preparation of 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine

2,3-Dibromopyrazine (10 g, 42 mmol) and the 3-(methoxymethoxy)-2,6-dimethylaniline (7.6 g, 42 mmol) obtained in Preparation Example 1 above were dissolved in tetrahydrofuran (100 mL), and then LiHMDS (1M tetrahydrofuran solution, 63 mL) was added at 0℃. The reaction mixture was stirred at room temperature for 2 hours, and after confirming the completion of the reaction by LC-

MS, the reaction was terminated by slowly adding aqueous ammonium chloride solution (200 mL) at 0℃. Then, the organic layer was extracted using ethyl acetate (100 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, concentrated under reduced pressure, and purified by prep-HPLC to obtain the target compound (10.5 g, 74% yield). MS (ESI): m/z = 338.0 $[M+H]^+$

[Step 2] Preparation of 3-methyl-3-((3-nitrophenoxy)methyl)oxetane

(3-Methyloxetan-3-yl)methanol (50.18 g, 491.35 mmol, 48.53 mL) was dissolved in dimethylformamide (500 mL), then sodium hydride (18.14 g, 60% purity) was slowly added over 30 minutes at 0℃, and the resulting mixture was stirred for 30 minutes at 0℃. Then, 1-fluoro-3-nitro-benzene (53.33 g, 377.96 mmol, 40.25 mL) was slowly added dropwise to the reaction mixture over 30 minutes, and the mixture was stirred at room temperature for 12 hours under nitrogen gas. After confirming the completion of the reaction by LC-MS, water (5 L) was added to the reaction mixture, and the organic layer was extracted using ethyl acetate (1 L × 3). The collected organic layer was dried over sodium sulfate, filtered, concentrated under reduced pressure, and purified using MPLC (SiO_2, petroleum ether : ethyl acetate 0-25%) to obtain the target compound (45 g, 53% yield).

^1H NMR (400 MHz, DMSO-d_6): δ 7.83 (dd, J = 1.6, 8.0 Hz,

1H), 7.75 (t, *J* = 2.0 Hz, 1H), 7.59 (t, *J* = 8.4 Hz, 1H), 7.46 (dd, *J* = 2.4, 8.4 Hz, 1H), 4.51 (d, *J* = 6.0 Hz, 2H), 4.31 (d, *J* = 5.6 Hz, 2H), 4.18 (s, 2H), 1.37 (s, 3H).

[Step 3] Preparation of 3-((3-methyloxetan-3-yl)methoxy)aniline

The 3-methyl-3-((3-nitrophenoxy)methyl)oxetane (30 g, 134.39 mmol) prepared in Step 2 above was dissolved in tetrahydrofuran (500 mL), Pd/C (5 g, 10% purity) was added, and the mixture was stirred at room temperature for 12 hours under hydrogen gas. After confirming the completion of the reaction by LC-MS, the mixture was filtered through Celite. The organic layer obtained by filtration was concentrated under reduced pressure to obtain the target compound (27 g).

^{1}H NMR (400 MHz, DMSO-d_6): δ 6.90 (t, *J* = 8.0 Hz, 1H), 6.21 - 6.14 (m, 2H), 6.12 (dd, *J* = 1.6, 8.8 Hz, 1H), 4.46 (d, *J* = 5.6 Hz, 2H), 4.28 (d, *J* = 5.6 Hz, 2H), 3.92 (s, 2H), 1.34 (s, 3H).

[Step 4] Preparation of ethyl 6-((3-methyloxetan-3-yl)methoxy)-1H-indole-2-carboxylate

The 3-((3-methyloxetan-3-yl)methoxy)aniline (5 g, 25.87 mmol) prepared in Step 3 above was dissolved in dimethyl sulfoxide (100 mL), and ethyl 2-oxopropanoate (6.01 g, 51.75 mmol, 5.75 mL), acetic acid (6.22 g, 103.50 mmol, 5.92 mL), 4Å MS (10 g), and $Pd(OAc)_2$ (581 mg, 2.59 mmol) were added. The reaction mixture was stirred at 80℃ under oxygen

gas for 12 hours. After confirming the completion of the reaction by LC-MS, water (2 L) was added to the reaction mixture, and the organic layer was extracted using ethyl acetate (500 mL × 3). The collected organic layer was washed with saturated brine (500 mL), dried over sodium sulfate, concentrated under reduced pressure, and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-35%) to obtain the target compound (3.14 g, 42% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 11.70 (s, 1H), 7.53 (d, J = 8.8 Hz, 1H), 7.08 (d, J = 2.0 Hz, 1H), 6.92 (d, J = 1.6 Hz, 1H), 6.78 (dd, J = 2.0, 8.8 Hz, 1H), 4.52 (d, J = 5.6 Hz, 2H), 4.31 (d, J = 6.4 Hz, 4H), 4.05 (s, 2H), 1.38 (s, 3H), 1.33 (t, J = 7.2 Hz, 3H).

[Step 5] Preparation of 3-(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)-3-oxopropanenitrile

The ethyl 6-((3-methyloxetan-3-yl)methoxy)-1H-indole-2-carboxylate (3.14 g, 10.85 mmol) prepared in Step 4 above was dissolved in tetrahydrofuran (120 mL), and then LiHMDS (1 M tetrahydrofuran solution, 41 mL) was added at 0℃. The reaction solution was then stirred at 0℃ for 1 hour. After confirming the completion of the reaction by LC-MS, aqueous ammonium chloride solution (100 mL) was poured into the reaction mixture, and the organic layer was extracted using ethyl acetate (30 mL × 3). The organic layer was dried over sodium sulfate and concentrated under reduced pressure to

obtain the target compound (2.09 g, 68% yield). MS (ESI): m/z = 283.2 $[M-H]^-$

[Step 6] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone

The 3-(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)-3-oxopropanenitrile (2.09 g, 7.35 mmol) prepared in Step 5 above and the 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (2.48 g, 7.35 mmol) prepared in Step 1 above were dissolved in 1,4-dioxane (500 mL), and then cesium carbonate (6.88 g, 21.1 mmol) and BINAP Pd G3 (0.7 g) were added. The reaction mixture was then stirred at 100℃ for 12 hours. After confirming the completion of the reaction by LC-MS, the reaction mixture was concentrated under reduced pressure and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (1.75 g, 44% yield).

[Step 7] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone (1 g, 1.85 mmol) prepared in Step 6 above was dissolved in water

(100 mL) and trifluoroacetic acid (100 mL), and the mixture was stirred at room temperature for 2 hours. After confirming the completion of the reaction by LC-MS, water (200 mL) was added to the reaction mixture and the pH of the reaction mixture was adjusted to 8 using potassium carbonate. Then, the organic layer was extracted using ethyl acetate (50 mL × 3), and the combined organic layer was washed with saturated brine (100 mL × 2). The organic layer was dried over sodium sulfate, filtered, concentrated under reduced pressure, and purified by prep-HPLC to obtain the target compound (0.43 g, 47% yield). MS (ESI): m/z = 498.2 $[M+H]^+$

[Step 8] Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone (0.43 g, 0.86 mmol) obtained in Step 7 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK IC (250 mm × 30 mm, 10 μm); mobile phase: [CO_2-acetonitrile / isopropanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 56 and 57.

Example 56. (R)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone

First elution; 162 mg, 38% yield; ^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.58 (d, *J* = 8.8 Hz, 1H), 7.51 (s, 1H), 7.19 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.01 - 6.93 (m, 1H), 6.83 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.73 (d, *J* = 6.0 Hz, 2H), 4.48 (d, *J* = 6.0 Hz, 2H), 4.14 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.48 (s, 3H); MS (ESI): m/z = 498.2 $[M+H]^+$

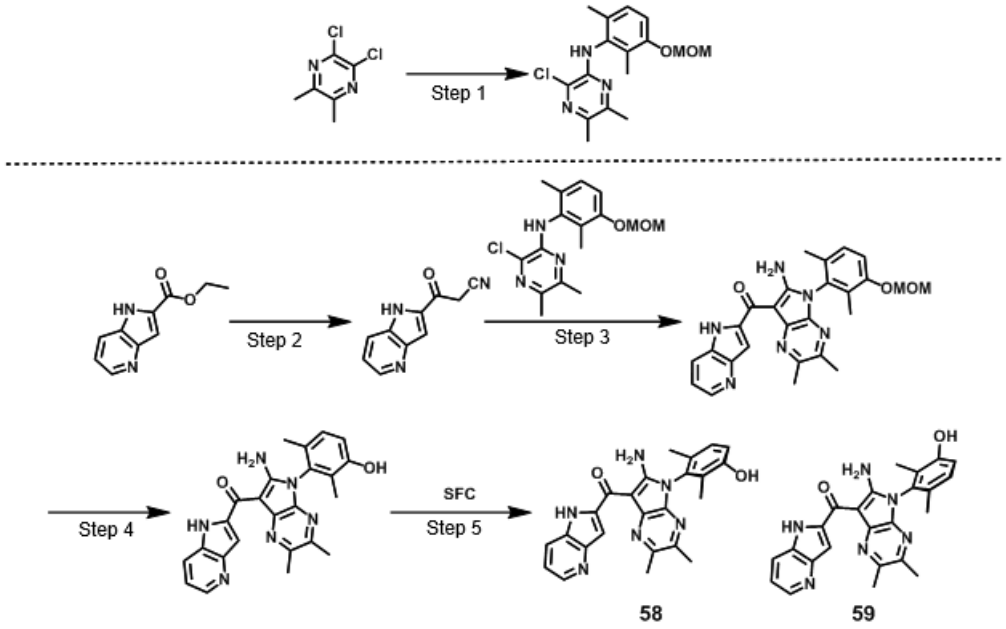
Example 57. (S)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone

Second elution; 158 mg (37% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.58 (d, *J* = 8.8 Hz, 1H), 7.51 (s, 1H), 7.20 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.05 - 6.97 (m, 1H), 6.83 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.73 (d, *J* = 6.0 Hz, 2H), 4.49 (d, *J* = 6.0 Hz, 2H), 4.14 (s, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.48 (s, 3H); MS (ESI): m/z = 498.2 $[M+H]^+$

Examples 58 and 59. Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-

yl)methanone

[Scheme 6]



[Step 1] Preparation of 3-chloro-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5,6-dimethylpyrazine-2-amine

2,3-Dichloro-5,6-dimethyl-pyrazine (5 g, 28.24 mmol) and the 3-(methoxymethoxy)-2,6-dimethylaniline (3.41 g, 18.83 mmol) obtained in Preparation Example 1 above were dissolved in toluene (350 mL), and then K_3PO_4 (4.0 g, 18.83 mmol) and Xantphos Pd G_4 (1.8 g, 1.88 mmol) were added. The reaction mixture was then stirred at 100℃ for 12 hours. After confirming the completion of the reaction by LC-MS, the reaction mixture was filtered through Celite and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-20%) to obtain the target compound (1.1 g, 18%

yield).

^{1}H NMR (400 MHz, $CDCl_3$): δ 7.09 - 7.02 (m, 1H), 7.01 - 6.94 (m, 1H), 6.26 (s, 1H), 5.21 (s, 2H), 3.51 (s, 3H), 2.37 (s, 3H), 2.26 (s, 3H), 2.16 (s, 3H), 2.12 (s, 3H).

[Step 2] Preparation of 3-oxo-3-(1H-pyrrolo[3,2-b]pyridin-2-yl)propanenitrile

Ethyl 1H-pyrrolo[3,2-b]pyridine-2-carboxylate (10 g, 52.58 mmol) was dissolved in 2-methyltetrahydrofuran (200 mL), and acetonitrile (15 mL) was added. Then, LiHMDS (1 M tetrahydrofuran solution, 184 mL) was slowly added dropwise to the reaction mixture at 0℃. The reaction mixture was stirred at 0 ℃ for 1 hour, and after confirming the completion of the reaction by LC-MS, the reaction was terminated by slowly adding water (400 mL) at 0℃. Then, the organic layer was extracted using 2-MeTHF (300 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (8 g, 82% yield).

^{1}H NMR (400 MHz, MeOD): δ 8.24 (dd, J = 1.2, 4.8 Hz, 1H), 7.80 (d, J = 8.0 Hz, 1H), 7.13 (dd, J = 4.8, 8.0 Hz, 1H), 6.82 (s, 1H), 4.85 (s, 2H).

[Step 3] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The 3-chloro-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5,6-dimethylpyrazine-2-amine (1.1 g, 3.42 mmol) prepared in Step 1 above and the 3-oxo-3-(1H-pyrrolo[3,2-b]pyridin-2-yl)propanenitrile (1.27 g, 6.86 mmol) prepared in Step 2 above were dissolved in 1,4-dioxane (150 mL), and then cesium carbonate (3.3 g, 10.26 mmol) and BINAP Pd G3 (0.34 g, 0.34 mmol) were added. The reaction mixture was then stirred at 100℃ for 12 hours, and after confirming the completion of the reaction by LC-MS, water (100 mL) was poured into the reaction mixture, followed by extraction with ethyl acetate (100 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, concentrated under reduced pressure, and purified by prep-HPLC to obtain the target compound (144 mg, 9% yield). MS (ESI): m/z = 471.1 $[M+H]^+$

[Step 4] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone (144 mg, 0.31 mmol) prepared in Step 3 above was dissolved in HCl (4 M, 1,4-dioxane solution, 40 mL), and the mixture was stirred at room temperature for 1 hour. After confirming the completion of the reaction by LC-MS, the pH of the reaction mixture was

adjusted to 6 using solid sodium bicarbonate. Then, water was added to the reaction mixture, followed by extraction using ethyl acetate (50 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (124 mg, 95% yield).

[Step 5] Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone (124 mg, 0.29 mmol) obtained in Step 4 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK OD (250 mm × 30 mm, 10 μm); mobile phase: [CO_2/methanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 58 and 59.

Example 58. (R)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

First elution; 40 mg (32 % yield); ^{1}H NMR (400 MHz, MeOD): δ 8.45 (dd, *J* = 1.2, 4.8 Hz, 1H), 8.15 (d, *J* = 8.4 Hz, 1H), 7.60 (s, 1H), 7.37 (dd, *J* = 4.8, 8.4 Hz, 1H), 7.16

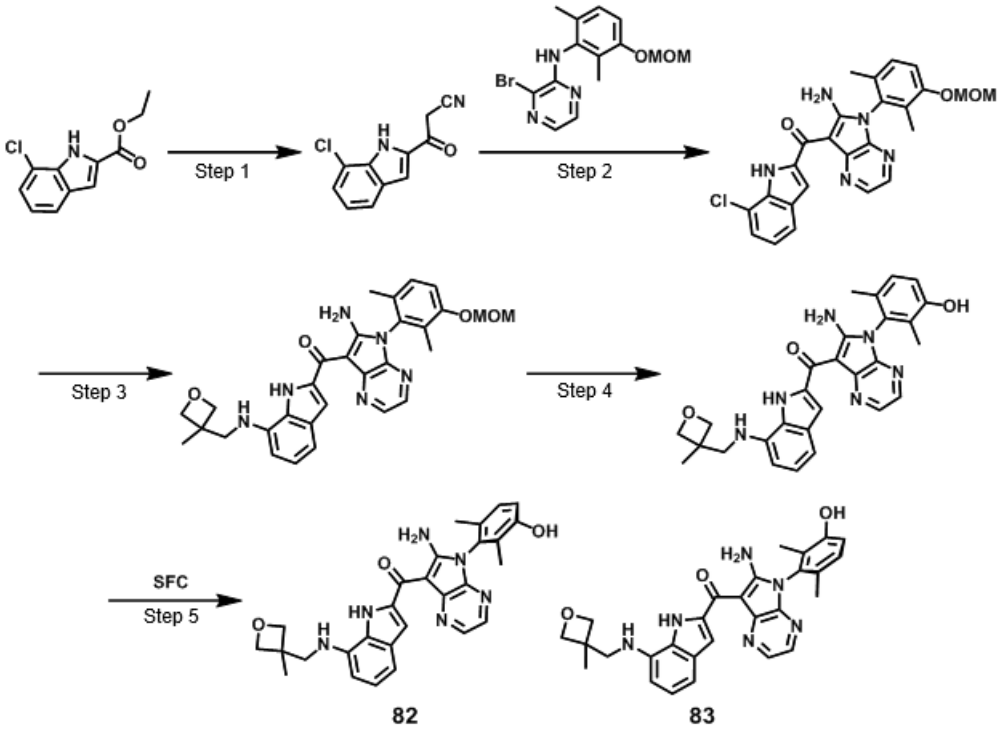
(d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 2.79 (s, 3H), 2.50 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 427.1 $[M+H]^+$

Example 59. (S)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

Second elution; 45 mg (36% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.45 (dd, J = 1.2, 4.8 Hz, 1H), 8.15 (d, J = 8.4 Hz, 1H), 7.60 (s, 1H), 7.37 (dd, J = 4.8, 8.4 Hz, 1H), 7.16 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 2.79 (s, 3H), 2.50 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 427.1 $[M+H]^+$

Examples 82 and 83. Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone

[Scheme 7]



[Step 1] Preparation of 3-(7-chloro-1H-indol-2-yl)-3-oxopropanenitrile

Ethyl 7-chloro-1H-indole-2-carboxylate (10 g, 44.71 mmol) was dissolved in tetrahydrofuran (100 mL), and acetonitrile (13 mL) was added. Then, LiHMDS (1 M tetrahydrofuran solution, 196 mL) was added at 0℃, and the reaction mixture was stirred at 0℃ for 1 hour. After confirming the completion of the reaction by LC-MS, water (300 mL) was added to the reaction mixture, followed by extraction using 2-methyltetrahydrofuran (150 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (23 g, crude). MS (ESI): m/z = 217.1 [M-H]$^-$

[Step 2] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-indol-2-yl)methanone

The 3-(7-chloro-1H-indol-2-yl)-3-oxopropanenitrile (5.82 g, 26.61 mmol) prepared in Step 1 above and the 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (5 g, 14.78 mmol) prepared in Step 1 of Examples 56 and 57 above were dissolved in 1,4-dioxane (150 mL), and then cesium carbonate (14.45 g, 44.35 mmol) and BINAP Pd G_3 (1.47 g, 1.48 mmol) were added. The reaction mixture was stirred at 100℃ for 12 hours, then the completion of the reaction was confirmed by LC-MS, and the resulting product was filtered through Celite. The filtered organic layer was concentrated under reduced pressure and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-30%) to obtain the target compound (1.8 g, 24% yield). MS (ESI): m/z = 476.1 $[M+H]^+$

[Step 3] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl))methyl)amino)-1H-indol-2-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-indol-2-yl)methanone (300 mg, 0.63 mmol) prepared in Step 2 above was dissolved in toluene (15 mL), and (3-methyloxetan-

3-yl)methanamine (637 mg, 6.30 mmol), sodium tert-butoxide (420 mg, 4.37 mmol), and Pd-PEPPSI™-IPent (50 mg) were added. The reaction mixture was stirred at 100℃ for 12 hours, then the completion of the reaction was confirmed by LC-MS, and the resulting product was filtered through Celite. The filtered organic layer was concentrated under reduced pressure and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-25%) to obtain the target compound (300 mg, 88% yield). MS (ESI): m/z = 541.3 $[M+H]^+$

[Step 4] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl))methyl)amino)-1H-indol-2-yl)methanone (150 mg, 0.28 mmol) prepared in Step 3 above was dissolved in water (90 mL) and trifluoroacetic acid (90 mL), and the mixture was stirred at room temperature for 1 hour. After confirming the completion of the reaction by LC-MS, the pH of the reaction mixture was adjusted to 8 using solid sodium bicarbonate. Then, the organic layer was extracted using dichloromethane (150 mL × 3), and the collected organic layer was dried over sodium sulfate and concentrated under reduced pressure. The concentrated mixture was purified by Prep-HPLC

to obtain the target compound (35 mg, 13% yield). MS (ESI): m/z = 497.3 $[M+H]^+$

[Step 5] Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone (35 mg, 0.07 mmol) obtained in Step 4 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK IC (250 mm × 30 mm, 10 μm); mobile phase: [CO_2-acetonitrile / isopropanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 82 and 83.

Example 82. (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone

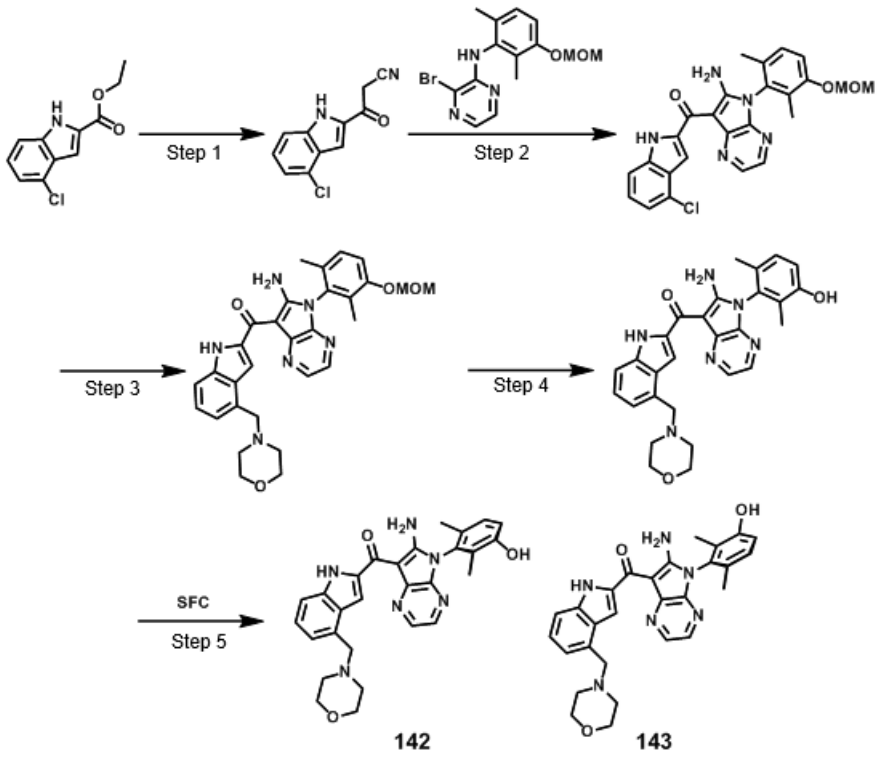
First elution; 16.8 mg (48% yield); ^1H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 2.8 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.22 - 7.10 (m, 2H), 7.03 - 6.94 (m, 2H), 6.63 (d, *J* = 7.6 Hz, 1H), 4.81 (d, *J* = 6.0 Hz, 2H), 4.54 (d, *J* = 6.0 Hz, 2H), 3.51 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.56 (s, 3H); MS (ESI): m/z = 497.2 $[M+H]^+$

Example 83. (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone

Second elution; 15.7 mg (45% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.15 (dd, *J* = 8.4, 10.8 Hz, 2H), 7.03 - 6.94 (m, 2H), 6.63 (d, *J* = 7.6 Hz, 1H), 4.81 (d, *J* = 6.0 Hz, 2H), 4.54 (d, *J* = 6.0 Hz, 2H), 3.51 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.56 (s, 3H); MS (ESI): m/z = 497.2 $[M+H]^+$

Examples 142 and 143. Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone

[Scheme 8]



[Step 1] Preparation of 3-(4-chloro-1H-indol-2-yl)-3-oxopropanenitrile

Ethyl 4-chloro-1H-indole-2-carboxylate (4 g, 17.88 mmol) was dissolved in tetrahydrofuran (40 mL), and acetonitrile (5 mL) was added. Then, LiHMDS (1 M tetrahydrofuran solution, 80 mL) was added to the reaction mixture at 0℃. The reaction mixture was stirred at 0℃ for 1 hour, and after confirming the completion of the reaction by LC-MS, the reaction was terminated by slowly adding aqueous ammonium chloride solution (200 mL) at 0℃. Then, the organic layer was extracted using ethyl acetate (100 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure

to obtain the target compound (4.5 g, crude). MS (ESI): m/z = 217.1 $[M-H]^-$

[Step 2] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-chloro-1H-indol-2-yl)methanone

The 3-(4-chloro-1H-indol-2-yl)-3-oxopropanenitrile (4.5 g, 20.58 mmol) prepared in Step 1 above and the 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (3.87 g, 11.43 mmol) prepared in Step 1 of Examples 56 and 57 above were dissolved in 1,4-dioxane (200 mL), and then cesium carbonate (11.18 g, 34.30 mmol) and BINAP Pd G_3 (1.14 g, 1.14 mmol) were added. The reaction mixture was then stirred at 100℃ for 12 hours. After confirming the completion of the reaction by LC-MS, the reaction mixture was concentrated under reduced pressure and purified by Prep-HPLC to obtain the target compound (3.2 g, 58% yield). MS (ESI): m/z = 476.1 $[M+H]^+$

[Step 3] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-chloro-1H-indol-2-yl)methanone (300 mg, 0.62 mmol) prepared in Step 2 above, and potassium trifluoro(morpholinomethyl)borate were

dissolved in 1,4-dioxane (20 mL), followed by the addition of water (0.2 mL), potassium carbonate (0.55 mg, 3.94 mmol), and RhPhos Pd G_3 (52 mg). The reaction mixture was then stirred at 100℃ for 12 hours. Water (30 mL) was added to the reaction mixture, followed by extraction with ethyl acetate (100 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, concentrated under reduced pressure, and purified using MPLC (SiO_2, petroleum ether : ethyl acetate 0-80%) to obtain the target compound (230 mg, 68% yield). MS (ESI): m/z = 541.3 $[M+H]^+$

^1H NMR (400 MHz, $CDCl_3$): δ 8.37 (d, *J* = 2.8 Hz, 1H), 8.05 (d, *J* = 2.8 Hz, 1H), 7.78 (s, 1H), 7.60 (d, *J* = 8.0 Hz, 1H), 7.36-7.27 (m, 2H), 7.24 (s, 1H), 7.20-7.10 (m, 1H), 5.31-5.22 (m, 2H), 3.91 (d, *J* = 2.0 Hz, 2H), 3.80-3.72 (m, 4H), 3.54 (s, 3H), 2.71-2.52 (m, 4H), 2.00 (s, 3H), 1.95 (s, 3H).

[Step 4] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone (220 mg, 0.40 mmol) prepared in Step 3 above was dissolved in HCl (4 M, 1,4-dioxane solution, 25 mL), followed by stirring at room temperature for 30 minutes. Then, aqueous sodium bicarbonate

solution (100 mL) was poured to the reaction mixture, and the reaction mixture was extracted with ethyl acetate (100 mL×3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (200 mg). MS (ESI): m/z = 497.2 $[M+H]^+$

[Step 5] Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone (85 mg, 0.17 mmol) prepared in Step 4 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK IC (250 mm × 30 mm, 10 μm); mobile phase: [CO_2-acetonitrile/isopropanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 142 and 143.

Example 142. (R)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5*H*-pyrrolo[2,3-*b*]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone

First elution; 39.4 mg (45% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.79 (d, *J* = 0.8 Hz, 1H), 7.61 (d, *J* = 8.4 Hz, 1H), 7.34-

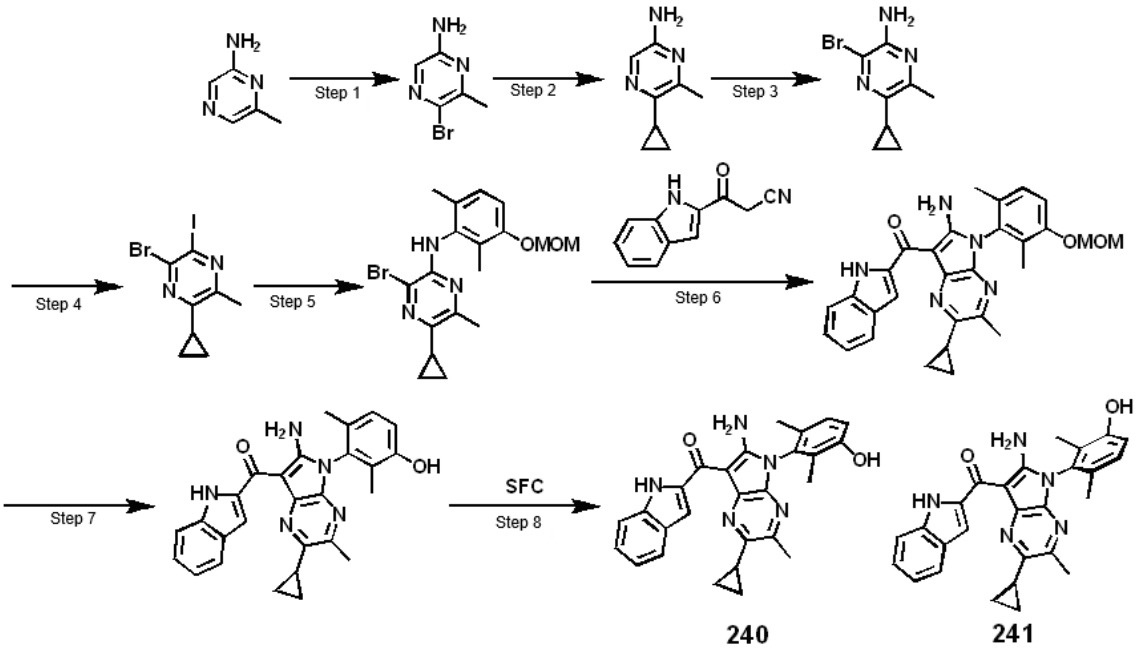
7.25 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 7.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.93 (s, 2H), 3.73 (t, *J* = 4.8 Hz, 4H), 2.63 (s, 4H), 1.93 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 497.3 $[M+H]^+$

Example 143. (S)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5*H*-pyrrolo[2,3-*b*]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone

Second elution; 39.6 mg (46% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.78 (s, 1H), 7.59 (d, *J* = 8.4 Hz, 1H), 7.35-7.23 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.10 (d, *J* = 7.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.87 (s, 2H), 3.71 (t, *J* = 4.8 Hz, 4H), 2.57 (s, 4H), 1.92 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 497.3 $[M+H]^+$

Examples 240 and 241. Preparation of (R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone and (S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

[Scheme 9]



[Step 1] Preparation of 5-bromo-6-methylpyrazine-2-amine

6-Methylpyrazine-2-amine (6 g, 54.98 mmol) was dissolved in dimethyl sulfoxide (300 mL) and water (12 mL), and then N-bromosuccinimide (10.76 g, 60.48 mmol) was added. The reaction mixture was then stirred at room temperature for 10 hours, and after confirming the completion of the reaction by LC-MS, water (500 mL) was poured into the reaction mixture and extracted with ethyl acetate (200 mL × 2). The collected organic layer was washed with saturated aqueous sodium carbonate solution (300 mL) and saturated brine (500 mL × 3), dried over sodium sulfate, and filtered. The organic layer was then concentrated under reduced pressure and purified by MPLC (SiO_2, petroleum ether : ethyl

acetate 0-30%) to obtain the target compound (10 g, 97% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 7.49 (s, 1H), 6.54 (s, 2H), 2.33 (s, 3H).

[Step 2] Preparation of 5-cyclopropyl-6-methylpyrazine-2-amine

The 5-bromo-6-methylpyrazine-2-amine (10 g, 53.18 mmol) prepared in Step 1 above and cyclopropylboronic acid (9.14 g, 106.37 mmol) were dissolved in 1,4-dioxane (300 mL) and water (100 mL), and then potassium carbonate (22.05 g, 159.55 mmol) and Pd(dppf)Cl_2·dichloromethane (6.5 g) were added. The reaction mixture was then stirred at 100℃ for 18 hours. After confirming the completion of the reaction by LC-MS, the resulting product was filtered through Celite, and water (200 mL) was added to the obtained filtrate and extracted with ethyl acetate (200 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether:ethyl acetate 0-20%) to obtain the target compound (3.92 g, 41% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 7.56 (s, 1H), 5.92 (s, 2H), 2.36 (s, 3H), 2.02 - 1.91 (m, 1H), 0.82 - 0.76 (m, 2H), 0.75 - 0.69 (m, 2H).

[Step 3] Preparation of 3-bromo-5-cyclopropyl-6-methylpyrazine-2-amine

The 5-cyclopropyl-6-methylpyrazine-2-amine (3.76 g, 25.20 mmol) prepared in Step 2 above was dissolved in acetonitrile (80 mL), and then N-bromosuccinimide (4.93 g, 27.72 mmol) was added at 0℃. The reaction mixture was stirred at 0℃ for 30 minutes, and after confirming the completion of the reaction by LC-MS, saturated aqueous sodium carbonate solution (100 mL) was slowly poured. Then, the resulting product was extracted with ethyl acetate (80 mL × 2) and the organic layer was washed with saturated brine. The organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (5.67g, 99% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 6.23 (s, 2H), 2.37 (s, 3H), 2.00 - 1.93 (m, 1H), 0.88 - 0.81 (m, 2H), 0.74 - 0.67 (m, 2H).

[Step 4] Preparation of 2-bromo-6-cyclopropyl-3-iodo-5-methylpyrazine

The 3-bromo-5-cyclopropyl-6-methylpyrazine-2-amine (3.4 g, 14.91 mmol) prepared in Step 3 above was dissolved in tetrahydrofuran (90 mL), and then isopentyl nitrite (6.02 mL, 44.72 mmol) was slowly added at 0℃. Then, CuI (4.26 g, 22.36 mmol) and I_2 (4.5 mL, 22.36 mmol) were added at 0℃, and the reaction mixture was stirred at 60℃ for 1 hour. After confirming the completion of the reaction by LC-MS, saturated aqueous sodium bicarbonate solution (200 mL) was

slowly added. The organic layer was extracted using ethyl acetate (50 mL × 4), and the collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether:ethyl acetate 0-10%) to obtain the target compound (2.4 g, 44% yield).

^1H NMR (400 MHz, $CDCl_3$): δ 2.60 (s, 3H), 2.01 - 1.93 (m, 1H), 1.13 - 1.05 (m, 4H).

[Step 5] Preparation of 3-bromo-5-cyclopropyl-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)-6-methylpyrazine-2-amine

The 2-bromo-6-cyclopropyl-3-iodo-5-methylpyrazine (1 g, 2.95 mmol) prepared in Step 4 above and the 3-(methoxymethoxy)-2,6-dimethylaniline (0.54 g, 2.95 mmol) obtained in Preparation Example 1 above were dissolved in toluene (20 mL), and then cesium carbonate (2.88 g, 8.85 mmol), XantPhos (0.34 g, 0.59 mmol), and $Pd_2(dba)_3$ (0.27 g, 0.3 mmol) were added. The reaction mixture was stirred at 100℃ for 2 hours, then the completion of the reaction was confirmed by LC-MS, and the resulting product was filtered through Celite. The filtrate obtained after filtration was concentrated under reduced pressure and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-20%) to obtain the target compound (0.68 g, 58% yield).

^1H NMR (400 MHz, $CDCl_3$): δ 7.08 - 7.01 (m, 1H), 7.00 -

6.93 (m, 1H), 6.29 (s, 1H), 5.21 (s, 2H), 3.51 (s, 3H), 2.36 (s, 3H), 2.15 (s, 3H), 2.11 (s, 3H), 1.94 - 1.86 (m, 1H), 0.97 - 0.88 (m, 4H).

[Step 6] Preparation of (6-amino-2-cyclopropyl-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

The 3-bromo-5-cyclopropyl-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)-6-methylpyrazine-2-amine (350 mg, 0.89 mmol) prepared in Step 5 above and the 3-(1H-indol-2-yl)-3-oxopropanenitrile (164 mg, 0.89 mmol) prepared in Step 1 of Examples 1 and 2 were dissolved in tert-amyl alcohol (100 mL), and then cesium carbonate (1.45 mg, 4.45 mmol) and BINAP Pd G_3 (91 mg) were added. The reaction mixture was stirred at 100℃ for 12 hours, filtered through Celite, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether:ethyl acetate 15-100%) to obtain the target compound (220 mg, 50% yield).

^{1}H NMR (400 MHz, $CDCl_3$): δ 14.55 (s, 1H), 7.80 (dd, J = 5.2, 8.0 Hz, 2H), 7.54 (d, J = 1.2 Hz, 1H), 7.37 (t, J = 7.6 Hz, 1H), 7.26 - 7.21 (m, 2H), 7.18 (t, J = 7.6 Hz, 1H), 5.32 - 5.21 (m, 2H), 3.55 (s, 3H), 2.66 (s, 3H), 2.42 - 2.29 (m, 1H), 1.96 (d, J = 18.8 Hz, 6H), 1.46 - 1.39 (m, 2H), 1.38 - 1.32 (m, 2H).

[Step 7] Preparation of (6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

The (6-amino-2-cyclopropyl-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone (100 mg, 0.20 mmol) prepared in Step 6 above was dissolved in trifluoroacetic acid (100 mL) and water (100 mL), and stirred at room temperature for 1 hour. Saturated aqueous sodium bicarbonate solution (2500 mL) was slowly added to the reaction mixture, and then extracted using ethyl acetate (150 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated mixture was purified by Prep-HPLC to obtain the target compound (100 mg, 89% yield). MS (ESI): m/z = 452.2 $[M+H]^+$

[Step 8] Preparation of (R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone and (S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

The (6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone (100 mg, 0.22 mmol) obtained in Step 7 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK IC (250 mm × 30 mm, 10 μm); mobile

phase: [CO_2-acetonitrile/isopropanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 240 and 241.

Example 240. (R)-(6-Amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

First elution; 22.6 mg (23% yield); ^{1}H NMR (400 MHz, MeOD): δ 7.76 (d, *J* = 8.4 Hz, 1H), 7.71 (d, *J* = 8.4 Hz, 1H), 7.46 (s, 1H), 7.33 (t, *J* = 7.6 Hz, 1H), 7.18 - 7.09 (m, 2H), 6.97 (d, *J* = 8.0 Hz, 1H), 2.63 (s, 3H), 2.50 - 2.41 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.39 - 1.32 (m, 4H); MS (ESI): m/z = 452.2 $[M+H]^+$

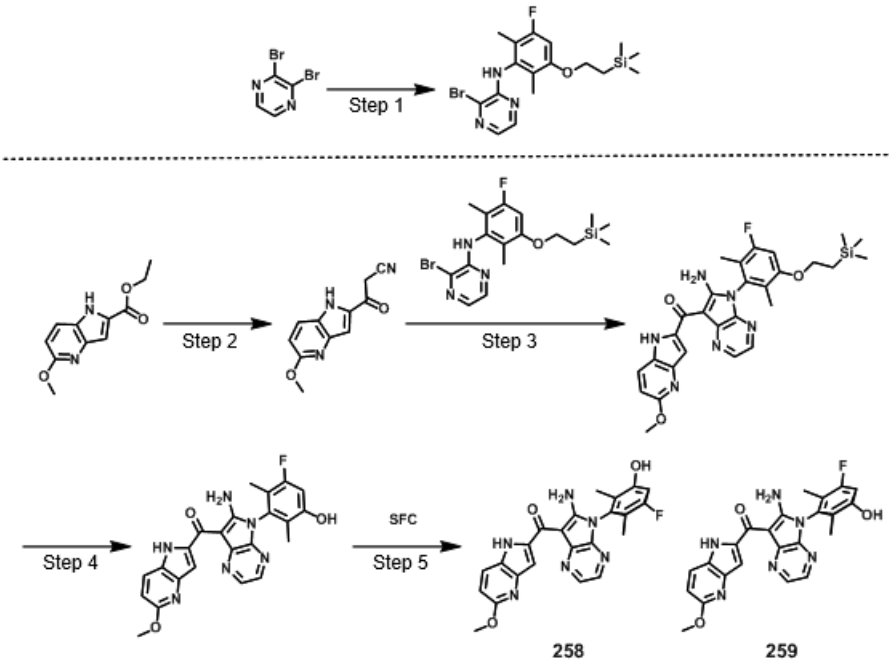
Example 241. (S)-(6-Amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone

Second elution; 24.4 mg (24% yield); ^{1}H NMR (400 MHz, MeOD): δ 7.76 (d, *J* = 8.4 Hz, 1H), 7.71 (d, *J* = 8.4 Hz, 1H), 7.46 (s, 1H), 7.33 (t, *J* = 7.6 Hz, 1H), 7.18 - 7.09 (m, 2H), 6.97 (d, *J* = 8.0 Hz, 1H), 2.63 (s, 3H), 2.49 - 2.41 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.38 - 1.32 (m, 4H); MS (ESI): m/z = 452.2 $[M+H]^+$

Examples 258 and 259. Preparation of (R)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone and (S)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-

1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

[Scheme 10]



[Step 1] Preparation of 3-bromo-N-(3-fluoro-2,6-dimethyl-5-(2-(trimethylsilyl)ethoxy)phenyl)pyrazine-2-amine

The 3-fluoro-2,6-dimethyl-5-(2-trimethylsilyl)ethoxy)aniline (50 mg, 0.16 mmol) obtained in Preparation Example 2 above and 2,3-dibromopyrazine (47 mg, 0.16 mmol) were dissolved in tetrahydrofuran (3 mL), and then LiHMDS (1 M tetrahydrofuran solution, 0.4 mL) was added at 0℃. The reaction mixture was stirred at room temperature for 1 hour, and after confirming the completion of the reaction by LC-MS, the reaction was terminated by slowly adding aqueous ammonium chloride solution (10 mL) at 0℃. Then, the organic layer was extracted using ethyl acetate (5

mL × 3). The organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (80 mg, 99% yield). MS (ESI): m/z = 412.0 $[M+H]^+$

[Step 2] Preparation of 3-(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)-3-oxopropanenitrile

Ethyl 5-methoxy-1H-pyrrolo[3,2-b]pyridine-2-carboxylate (0.5 g, 2.27 mmol) was dissolved in tetrahydrofuran (10 mL), and then acetonitrile (1 mL) was added. The reaction mixture was cooled to 0℃, and LiHMDS (1 M, tetrahydrofuran solution, 6 mL) was slowly added dropwise, followed by stirring for 1 hour. A saturated aqueous ammonium chloride solution (50 mL) was added to the reaction mixture at 0℃, and then extracted with ethyl acetate (25 mL × 3). The collected organic layer was washed with saturated brine (50 mL), dried using anhydrous sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (0.34 g, 70% yield). MS (ESI): m/z = 216.1 $[M+H]^+$

[Step 3] Preparation of (6-amino-5-(3-fluoro-2,6-dimethyl-5-(2-(trimethylsilyl)ethoxy)phenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The 3-bromo-N-(3-fluoro-2,6-dimethyl-5-(2-(trimethylsilyl)ethoxy)phenyl)pyrazine-2-amine (80 mg, 0.19 mmol) prepared in Step 1 above and the 3-(5-methoxy-1H-

pyrrolo[3,2-b]pyridin-2-yl)-3-oxopropanenitrile (63 mg, 0.29 mmol) prepared in Step 2 above were dissolved in tert-amyl alcohol (5 mL), and then cesium carbonate (189 mg, 0.58 mmol) and BINAP Pd G_3 (19 mg) were added. The reaction mixture was stirred at 100℃ for 12 hours, filtered through Celite, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, petroleum ether:ethyl acetate 0-30%) to obtain the target compound (62 mg, 57% yield). MS (ESI): m/z = 547.2 $[M+H]^+$

[Step 4] Preparation of (6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The (6-amino-5-(3-fluoro-2,6-dimethyl-5-(2-(trimethylsilyl)ethoxy)phenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone (60 mg, 0.11 mmol) prepared in Step 3 above, was dissolved in trifluoroacetic acid (6 mL) and stirred at room temperature for 1 hour. After confirming the completion of the reaction by LC-MS, the pH of the reaction mixture was adjusted to 7 by adding saturated aqueous sodium bicarbonate solution. Then, the resulting mixture was extracted with ethyl acetate (10 mL × 3), dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated mixture was purified by Prep-HPLC to obtain the target compound (45 mg, 95% yield). MS (ESI): m/z = 447.1 $[M+H]^+$

[Step 5] Preparation of (R)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone and (S)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The (6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone (45 mg, 0.10 mmol) obtained in Step 4 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK AD (250 mm × 30 mm, 10 μm); mobile phase: [CO_2/isopropanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 258 and 259.

Example 258. (R)-(6-Amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

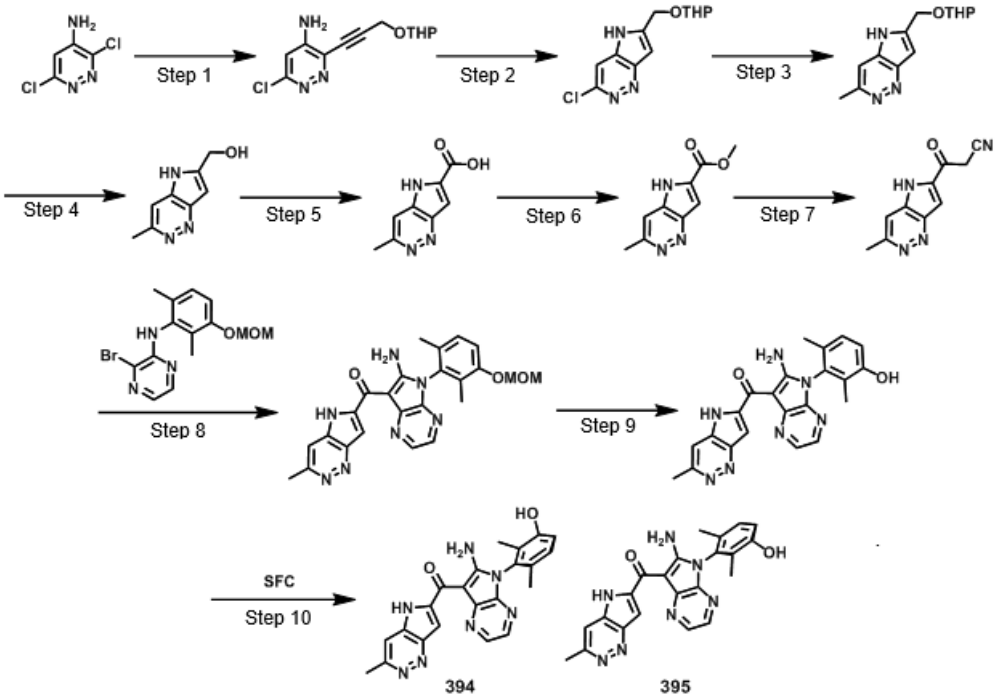
First elution; 15.6 mg (35% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, J = 3.2 Hz, 1H), 8.03 (d, J = 8.8 Hz, 1H), 7.98 (d, J = 3.2 Hz, 1H), 7.53 (s, 1H), 6.81 (d, J = 8.8 Hz, 1H), 6.76 (d, J = 11.2 Hz, 1H), 3.99 (s, 3H), 1.82 (s, 6H); MS (ESI): m/z = 447.2 $[M+H]^+$

Example 259. (S)-(6-Amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

Second elution; 19.5 mg (43% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 8.8 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.53 (d, *J* = 0.8 Hz, 1H), 6.83 (d, *J* = 2.4 Hz, 1H), 6.81 (d, *J* = 4.4 Hz, 1H), 4.00 (s, 3H), 1.85 (s, 6H); MS (ESI): m/z = 447.2 $[M+H]^+$

Examples 394 and 395. Preparation of (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone and (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone

[Scheme 11]



[Step 1] Preparation of 6-chloro-3-(3-((tetrahydro-2H-pyran-2-yl)oxy)prop-1-yn-1-yl)pyridazine-4-amine

3,6-Dichloropyridazine-4-amine (5.00 g, 30.49 mmol) and 2-(prop-2-yn-1-yloxy)tetrahydro-2H-pyran (10.68 g, 76.22 mmol) were dissolved in acetonitrile (100 mL), and then triethylamine (15.43 g, 152.45 mmol), $Pd(PPh_3)_2Cl_2$ (2.14 g, 3.05 mmol), and CuI (580.67 mg, 3.05 mmol) were added to the reaction mixture. The reaction mixture was stirred at 60℃

for 4 hours. Substrate consumption was confirmed to be complete, and the mixture was concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-100%) to obtain the target compound (3.6 g, 43% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 6.94 (br s, 2H), 6.80 (s, 1H), 4.83 (s, 1H), 4.67 - 4.45 (m, 2H), 3.85 - 3.71 (m, 1H), 3.56 - 3.45 (m, 1H), 1.77 - 1.62 (m, 2H), 1.59 - 1.42 (m, 4H).

[Step 2] Preparation of 3-chloro-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-c]pyridazine

The 6-chloro-3-(3-((tetrahydro-2H-pyran-2-yl)oxy)prop-1-yn-1-yl)pyridazine-4-amine (3.20 g, 11.71 mmol) prepared in Step 1 above and potassium tert-butoxide (3.29 g, 29.29 mmol) were dissolved in dimethylacetamide (120 mL) and stirred at 100℃ for 12 hours. The reaction mixture was cooled to room temperature, and water (200 mL) was added to the reaction mixture, followed by extraction with ethyl acetate (150 mL × 3). The collected organic layer was washed with saturated brine (200 mL × 2), dried over sodium sulfate, and filtered. The organic layer was then concentrated under reduced pressure to obtain the target compound (2.7 g, 80% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 12.03 (s, 1H), 7.71 (s, 1H), 6.84 (s, 1H), 4.84 (d, J = 13.6 Hz, 1H), 4.74 (t, J =

3.2 Hz, 1H), 4.69 (d, J = 13.6 Hz, 1H), 3.86 - 3.76 (m, 1H), 3.55 - 3.45 (m, 1H), 1.79 - 1.64 (m, 2H), 1.61 - 1.44 (m, 4H).

[Step 3] Preparation of 3-methyl-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-c]pyridazine

The 3-chloro-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-c]pyridazine (1.5 g, 5.60 mmol) prepared in Step 2 above, 2,4,6-trimethyl-1,3,5,2,4,6-trioxatriborinane (14.07 g, 56.03 mmol), and potassium carbonate (2.32 g, 16.81 mmol) were dissolved in dioxane (40 mL) and water (2 mL), and then $Pd(dppf)Cl_2$ (0.41 g, 0.56 mmol) was added. The reaction mixture was stirred at 90℃ for 21 hours. Substrate consumption was confirmed to be complete, and water (200 mL) was added to the reaction mixture, followed by extractioin with ethyl acetate (100 mL×3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated mixture was purified by MPLC (SiO_2, ethyl acetate : methanol 0-10%) to obtain the target compound (0.86 g, 49% yield). MS (ESI): m/z = 248.1 $[M+H]^+$

[Step 4] Preparation of (3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanol

The 3-methyl-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-c]pyridazine (0.66 g, 2.67 mmol) prepared in Step 3 above was dissolved in hydrochloric

acid (2 M, dioxane solution, 18 mL) and stirred at room temperature for 3 hours. The resulting solid was filtered to obtain the target compound (0.45 g, 99% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 13.15 (s, 1H), 8.14 (s, 1H), 6.95 (s, 1H), 4.81 (s, 2H), 2.85 (s, 3H).

[Step 5] Preparation of 3-methyl-5H-pyrrolo[3,2-c]pyridazine-6-carboxylic acid

The (3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanol (600 mg, 3.68 mmol) prepared in Step 4 above was dissolved in dimethylformamide (15 mL), and then sodium hydroxide (294.14 mg, 7.35 mmol) and (1-hydroxycyclohexyl)-phenyl-methanone (1.50 g, 7.35 mmol) were added. The reaction mixture was stirred at 80℃ for 16 hours. The resulting solid was filtered, washed with methyl tert-butyl ether (60 mL), and dried to obtain the target compound (442 mg, 68% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 7.25 (s, 1H), 6.77 (s, 1H), 2.64 (s, 3H).

[Step 6] Preparation of methyl 3-methyl-5H-pyrrolo[3,2-c]pyridazine-6-carboxylate

The 3-methyl-5H-pyrrolo[3,2-c]pyridazine-6-carboxylic acid (442 mg, 2.50 mmol) prepared in Step 5 above was dissolved in methanol (10 mL), and then thionyl chloride (594 mg, 4.99 mmol) was added. The reaction mixture was stirred at 60℃ for 16 hours. Substrate consumption was confirmed to be complete, and the reaction mixture was

concentrated under reduced pressure. Saturated sodium bicarbonate (30 mL) was slowly added to the concentrated mixture at 0℃. Then, the reaction mixture was extracted with ethyl acetate (60 mL × 5), and the collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (305 mg, 64% yield).

^{1}H NMR (400 MHz, DMSO-d_6): δ 12.43 (s, 1H), 7.49 (s, 1H), 7.48 (s, 1H), 3.93 (s, 3H), 2.74 (s, 3H).

[Step 7] Preparation of 3-(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)-3-oxopropanenitrile

The methyl 3-methyl-5H-pyrrolo[3,2-c]pyridazine-6-carboxylate (200 mg, 1.05 mmol) prepared in Step 6 above and acetonitrile (257.67 mg, 6.28 mmol) were dissolved in tetrahydrofuran (5 mL), and then LiHMDS (1 M tetrahydrofuran solution, 5.23 mL) was slowly added dropwise at 0℃. The reaction mixture was stirred at 0℃ for 1 hour, and water (10 mL) was added. The aqueous layer was washed with petroleum ether (15 mL × 3), recovered, concentrated under reduced pressure, and purified by Prep-HPLC to obtain the target compound (180 mg, 90% yield).

^{1}H NMR (400 MHz, MeOD): δ 7.37 (d, J = 3.6 Hz, 1H), 7.02 (d, J = 4.0 Hz, 1H), 5.04 (s, 2H), 2.68 (d, J = 4.0 Hz, 3H).

[Step 8] Preparation of (6-amino-5-(3-

(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone

This reaction was performed in seven parallel batches. The 3-(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)-3-oxopropanenitrile (30 mg, 0.149 mmol) prepared in Step 7 above and the 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (25.34 mg, 74.93 μmol) prepared in Step 1 of Examples 56 and 57 were dissolved in tert-amyl alcohol (12 mL). Then, cesium carbonate (244.12 mg, 749.26 μmol) and BINAP Pd G_3 (14.87 mg, 14.99 μmol) were added, and the reaction mixture was stirred at 100℃ for 16 hours. The reaction mixture was cooled to room temperature, and water (80 mL) was added, followed by extraction with ethyl acetate (50 mL × 4). The collected organic layer was concentrated under reduced pressure and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (100 mg, 20% yield).

^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, J = 3.2 Hz, 1H), 8.05 (s, 1H), 8.00 (d, J = 3.2 Hz, 1H), 7.87 (s, 1H), 7.31 (d, J = 2.0 Hz, 2H), 5.30 (s, 2H), 3.51 (s, 3H), 2.85 (s, 3H), 1.97 (s, 3H), 1.94 (s, 3H).

[Step 9] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone (90 mg, 196.73 μmol) prepared in Step 8 above was dissolved in HCl (2 M, dioxane solution, 9 mL) and stirred at 25℃ for 1 hour. The reaction was terminated by adding saturated aqueous sodium bicarbonate solution (50 mL) to the reaction mixture, and the mixture was extracted with ethyl acetate (30 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure to obtain the target compound (85 mg, 98% yield). MS (ESI): m/z = 414.1 $[M+H]^+$

[Step 10] Preparation of (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone and (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone (90 mg, 217.69 μmol) obtained in Step 9 above was purified by supercritical fluid chromatography (Column: DAICEL CHIRALPAK AD (250 mm × 30 mm, 10 μm); Mobile phase: [CO_2/ethanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 394 and 395.

Example 394. (S)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-*b*]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone

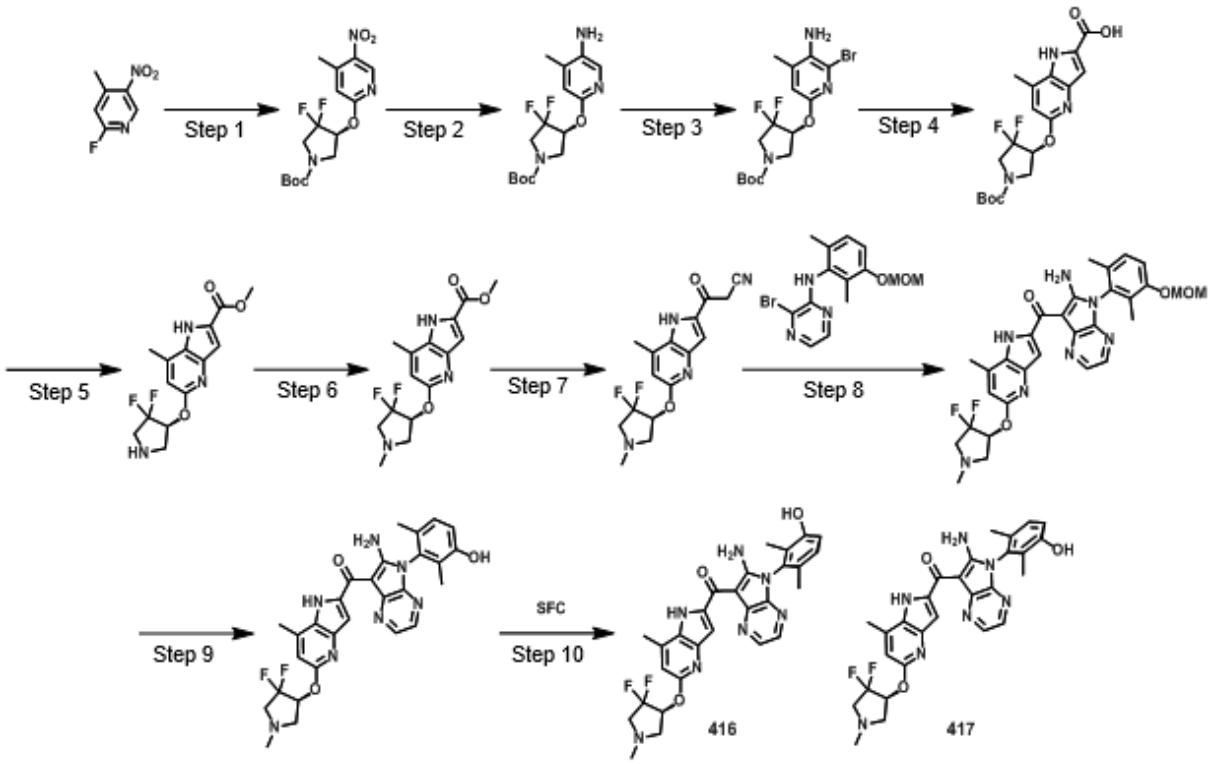
First elution; 17 mg (18% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.87 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.85 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 414.1 $[M+H]^+$

Example 395. (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone

Second elution; 27 mg (28% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.02 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.88 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.85 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 414.0 $[M+H]^+$

Examples 416 and 417. Preparation of (6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone and (6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

[Scheme 12]



[Step 1] Preparation of tert-butyl (S)-3,3-difluoro-4-((4-methyl-5-nitropyridin-2-yl)oxy)pyrrolidine-1-carboxylate

2-Fluoro-4-methyl-5-nitropyridine (560 mg, 3.59 mmol) and tert-butyl (S)-3,3-difluoro-4-hydroxypyrrolidine-1-carboxylate (800 mg, 3.59 mmol) were dissolved in tetrahydrofuran (10 mL), and cesium carbonate (2.34 g, 7.17 mmol) was added. The reaction mixture was stirred at 65℃ for 4 hours. The reaction mixture was cooled to room temperature, filtered, and the filtrate was concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (900 mg, 70% yield). MS

(ESI): m/z = 304.0 $[M+H-56]^+$

^1H NMR (400 MHz, $CDCl_3$): δ 8.91 (s, 1H), 6.78 (s, 1H), 5.72 (s, 1H), 3.93 - 3.83 (m, 3H), 3.70 - 3.59 (m, 1H), 2.65 (s, 3H), 1.48 (s, 9H).

[Step 2] Preparation of tert-butyl (S)-4-((5-amino-4-methylpyridin-2-yl)oxy)-3,3-difluoropyrrolidine-1-carboxylate

The tert-butyl (S)-3,3-difluoro-4-((4-methyl-5-nitropyridin-2-yl)oxy)pyrrolidine-1-carboxylate (760 mg, 2.12 mmol) prepared in Step 1 above was dissolved in tetrahydrofuran (16 mL) and water (4 mL), and then ammonium chloride (565 mg, 10.58 mmol) and Zn-Cu couple (1.36 g, 10.58 mmol) were added at 0℃. The reaction mixture was stirred at room temperature for 12 hours. LC-MS confirmed that all substrates were consumed, and then sodium sulfate was added to the reaction mixture, dried, and filtered. The filtrate was concentrated under reduced pressure to obtain the target compound (700 mg, crude), which was used in the next reaction without separate purification. MS (ESI): m/z = 330.2 $[M+H]^+$

[Step 3] Preparation of tert-butyl (S)-4-((5-amino-6-bromo-4-methylpyridin-2-yl)oxy)-3,3-difluoropyrrolidine-1-carboxylate

The tert-butyl (S)-4-((5-amino-4-methylpyridin-2-yl)oxy)-3,3-difluoropyrrolidine-1-carboxylate (700 mg, 2.13 mmol) prepared in Step 2 above was dissolved in acetic acid

(8 mL), and then pyridinium perbromide (680 mg, 2.13 mmol) was added. The reaction mixture was stirred at 25℃ for 1 hour. The reaction mixture was slowly poured into ice water (50 mL) and the pH was adjusted to 7-8 using sodium carbonate. Then, the resulting product was extracted with ethyl acetate (40 mL × 3), and the organic layer was collected, dried over sodium sulfate, and filtered. The filtrate was concentrated under reduced pressure and purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-25%) to obtain the target compound (600 mg, 62% yield). MS (ESI): m/z = 352.0 $[M+H-56]^+$

[Step 4] Preparation of (S)-5-((1-(tert-butoxycarbonyl)-4,4-difluoropyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridine-2-carboxylic acid

This reaction was performed in two parallel batches.

The tert-butyl (S)-4-((5-amino-6-bromo-4-methylpyridin-2-yl)oxy)-3,3-difluoropyrrolidine-1-carboxylate (250 mg, 0.612 mmol) prepared in Step 3 above, DABCO (206 mg, 1.84 mmol), and $Pd(dppf)Cl_2$·dichloromethane (50 mg, 0.061 mmol) were dissolved in dimethylformamide (7.5 mL), followed by stirring at 100℃ for 12 hours under nitrogen gas. The reaction mixture was poured into water (100 mL) and the pH was adjusted to 9 using 1N aqueous sodium hydroxide solution. Then, the aqueous layer was washed with ethyl acetate (50 mL × 3). The pH of the aqueous layer was adjusted to 5 using 3N hydrochloric acid, then the reaction

mixture was extracted with 2-methyltetrahydrofuran (50 mL × 3), and the collected organic layer was washed with saturated brine (100 mL × 3), dried over sodium sulfate, and filtered. The filtrate was concentrated under reduced pressure to obtain the target compound (500 mL, crude), which was used in the next reaction without separate purification. MS (ESI): m/z = 398.1 $[M+H]^+$

[Step 5] Preparation of methyl (S)-5-((4,4-difluoropyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridine-2-carboxylate

The (S)-5-((1-(tert-butoxycarbonyl)-4,4-difluoropyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridine-2-carboxylic acid (500 mg, 1.26 mmol) obtained in Step 4 above was dissolved in hydrochloric acid solution (2 M, methanol solution, 25 mL) and stirred at 35℃ for 12 hours. LC-MS confirmed that all substrates were consumed, and the reaction mixture was concentrated under reduced pressure to obtain the target compound (400 mg, crude), which was used in the next reaction without separate purification. MS (ESI): m/z = 312.1 $[M+H]^+$

[Step 6] Preparation of methyl (S)-5-((4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridine-2-carboxylate

The methyl (S)-5-((4,4-difluoropyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridine-2-carboxylate (500 mg,

1.61 mmol) prepared in Step 5 above was dissolved in methanol, and then formaldehyde aqueous solution (37%, 0.48 mL) was added and stirred at room temperature for 10 minutes. Then, $NaBH_3CN$ (302 mg, 4.82 mmol) was slowly added and stirred at room temperature for 1 hour. Water (60 mL) was added to the reaction mixture and the pH was adjusted to 7-8 using sodium bicarbonate. Then, the resulting product was extracted with ethyl acetate (50 mL × 3), and the organic layer was collected, dried over sodium sulfate, and filtered. The filtrate was concentrated under reduced pressure and purified by Prep-HPLC to obtain the target compound (220 mg, 42% yield). MS (ESI): m/z = 326.1 $[M+H]^+$

^1H NMR (400 MHz, $CDCl_3$): δ 8.87 (br s, 1H), 6.99 (s, 1H), 6.70 (s, 1H), 5.74 - 5.61 (m, 1H), 3.96 (s, 3H), 3.34 (dd, *J* = 6.4, 10.4 Hz, 1H), 3.11 - 2.97 (m, 2H), 2.78 (dd, *J* = 4.0, 10.8 Hz, 1H), 2.49 (s, 3H), 2.43 (s, 3H).

[Step 7] Preparation of (S)-3-(5-((4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)-3-oxopropanenitrile

The methyl (S)-5-((4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridine-2-carboxylate (200 mg, 0.615 mmol) prepared in Step 6 above and acetonitrile (126 mg, 3.07 mmol) were dissolved in tetrahydrofuran (1.2 mL), and then LiHMDS (1 M, tetrahydrofuran solution, 2.46 mL) was slowly added at 0℃.

The reaction mixture was stirred at room temperature for 1 hour. Then, water (3 mL) was added at 0℃ and the aqueous layer was washed with petroleum ether (5 mL x 2). The pH of the aqueous layer was adjusted to 6 using 1 N HCl, and the generated solid was collected by filtration to obtain the target compound (80 mg, crude). MS (ESI): m/z = 335.1 $[M+H]^+$

^{1}H NMR (400 MHz, DMSO-d_6): δ 12.21 (s, 1H), 7.37 (d, J = 2.0 Hz, 1H), 6.73 (s, 1H), 5.60 - 5.47 (m, 1H), 4.68 (s, 2H), 2.30 (s, 3H).

[Step 8] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

This reaction was performed in two parallel batches.

The (S)-3-(5-((4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)-3-oxopropanenitrile (35 mg, 0.105 mmol) obtained in Step 7 above and the 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (35.4 mg, 0.105 mmol) prepared in Step 1 of Examples 56 and 57 were dissolved in tert-amyl alcohol (3.5 mL), and then BINAP Pd G_3 (10.4 mg, 0.015 mmol) and cesium carbonate (170 mg, 0.523 mmol) were added. The reaction mixture was stirred at 100℃ under nitrogen gas for 12 hours. Water (20 mL) was added to the reaction mixture, followed by extraction with ethyl acetate

(30 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 10-60%) to obtain the target compound (60 mg, 48% yield). MS (ESI): m/z = 592.3 $[M+H]^+$

^1H NMR (400 MHz, $CDCl_3$): δ 15.06 (s, 1H), 8.31 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 2.8 Hz, 1H), 7.49 (s, 1H), 7.26 - 7.18 (m, 2H), 6.73 (s, 1H), 5.85 - 5.68 (m, 1H), 5.30 - 5.23 (m, 2H), 3.54 (s, 3H), 3.48 - 3.36 (m, 1H), 3.13 - 3.05 (m, 1H), 2.72 (s, 3H), 2.46 (s, 2H), 2.07 - 2.01 (m, 3H), 1.99 (s, 3H), 1.95 (s, 3H).

[Step 9] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The 6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone (60 mg, 0.101 mmol) prepared in Step 8 above was dissolved in hydrochloric acid (2 M, dioxane solution, 12 mL) and stirred at room temperature for 1 hour. Water (20 mL) was added to the reaction mixture and potassium carbonate was slowly added at 0℃ to adjust the pH to 7-8. Then, the resulting mixture was

extracted with ethyl acetate (20 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated reaction mixture was purified by Prep-HPLC to obtain the target compound (50 mg, 88% yield). MS (ESI): m/z = 548.3 $[M+H]^+$

[Step 10] Preparation of (6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone and (6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone (50 mg) obtained in Step 9 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK OX (250 mm × 30 mm, 10 μm); mobile phase: [CO_2 / ethanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 416 and 417.

Example 416. (6-Amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

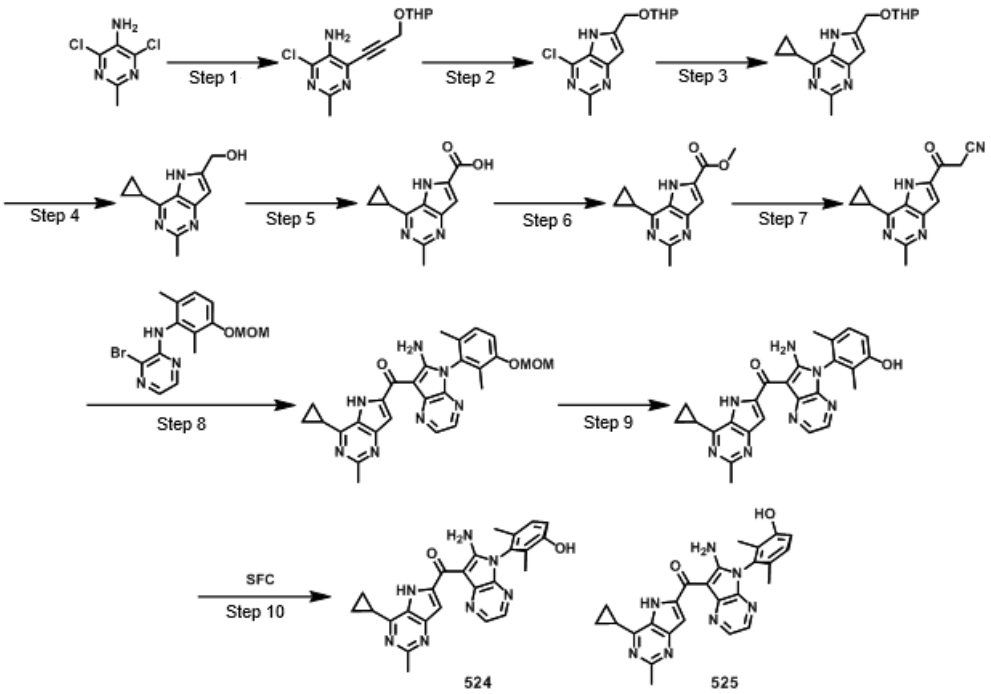
First elution; 15 mg (29% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.72 (s, 1H), 5.71 - 5.56 (m, 1H), 3.40 (dd, *J* = 6.4, 10.4 Hz, 1H), 3.16 - 2.94 (m, 2H), 2.78 (dd, *J* = 4.8, 11.2 Hz, 1H), 2.74 (s, 3H), 2.42 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 548.2 $[M+H]^+$

Example 417. (6-Amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

Second elution; 16.5 mg (31% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.72 (s, 1H), 5.72 - 5.58 (m, 1H), 3.44 (dd, *J* = 6.4, 10.8 Hz, 1H), 3.20 - 3.01 (m, 2H), 2.88 - 2.81 (m, 1H), 2.75 (s, 3H), 2.46 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H); MS (ESI): m/z = 548.2 $[M+H]^+$

Examples 524 and 525. Preparation of (R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

[Scheme 13]



[Step 1] Preparation of 4-chloro-2-methyl-6-(3-((tetrahydro-2H-pyran-2-yl)oxy)prop-1-yn-1-yl)pyrimidine-5-amine

4,6-Dichloro-2-methyl-pyrimidine-5-amine (9.00 g, 50.56 mmol) and 2-(prop-2-yn-1-yloxy)tetrahydro-2H-pyran (6.38 g, 45.50 mmol) were dissolved in acetonitrile (180 mL), and then CuI (481.42 mg, 2.53 mmol), triethylamine (15.35 g, 151.67 mmol), and $Pd(PPh_3)_2Cl_2$ (1.77 g, 2.53 mmol) were added. The reaction mixture was stirred at 50℃ under nitrogen gas for 1 hour. After confirming the completion of the reaction by LC-MS, the reaction mixture was concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-25%) to obtain the target compound (5.3 g, 37% yield).

^{1}H NMR (400 MHz, $CDCl_3$): δ 4.87 (t, J = 3.2 Hz, 1H), 4.57 (s, 2H), 3.91 - 3.85 (m, 1H), 3.62 - 3.51 (m, 1H), 2.57 (s, 3H), 1.86 - 1.74 (m, 2H), 1.68 - 1.61 (m, 2H), 1.59 - 1.54 (m, 2H).

[Step 2] Preparation of 4-chloro-2-methyl-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-d]pyrimidine

The 4-chloro-2-methyl-6-(3-((tetrahydro-2H-pyran-2-yl)oxy)prop-1-yn-1-yl)pyrimidin-5-amine (4.30 g, 15.26 mmol) obtained in Step 1 above was dissolved in N-methyl-2-pyrrolidone (45 mL), and then potassium tert-butoxide (3.43 g, 30.52 mmol) was added at 0℃. The reaction mixture was then stirred at 0℃ for 1 hour. After confirming the completion of the reaction by LC-MS, water (500 mL) was added to the reaction mixture, followed by extraction with ethyl acetate (100 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The obtained target compound (4.2 g, crude) was used in the next reaction without further purification.
MS (ESI): m/z = 281.9 $[M+H]^+$

[Step 3] Preparation of 4-cyclopropyl-2-methyl-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-d]pyrimidine

The 4-chloro-2-methyl-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-d]pyrimidine (4.2 g, 14.91

mmol) obtained in Step 2 above, cyclopropylboronic acid (32.01 g, 372.69 mmol), and potassium carbonate (20.60 g, 149.07 mmol) were dissolved in 1,4-dioxane (50 mL) and water (5 mL), and then cataCXium® A Pd G3 (1.09 g, 1.49 mmol) was added. The reaction mixture was stirred at 110℃ under nitrogen gas for 12 hours. After confirming the completion of the reaction by LC-MS, water (1000 mL) was added to the reaction mixture, followed by extraction with ethyl acetate (200 mL × 3). The collected organic layer was washed with saturated brine (300 mL), dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (2.40 g, 56% yield). MS (ESI): m/z = 288.0 $[M+H]^+$

[Step 4] Preparation of (4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanol

The 4-cyclopropyl-2-methyl-6-(((tetrahydro-2H-pyran-2-yl)oxy)methyl)-5H-pyrrolo[3,2-d]pyrimidine (1.30 g, 4.52 mmol) obtained in Step 3 above was dissolved in dichloromethane (15 mL), and then trifluoroacetic acid (1.5 mL) was added. The reaction mixture was stirred at 20℃ for 1 hour. After confirming the completion of the reaction by LC-MS, the reaction mixture was concentrated under reduced pressure to obtain the target compound (900 mg, crude), which was used in the next reaction without purification. MS (ESI):

m/z = 204.0 $[M+H]^+$

[Step 5] Preparation of 4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylic acid

The (4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanol (900 mg, 4.43 mmol) obtained in Step 4 above and (1-hydroxycyclohexyl)-phenyl-methanone (1.81 g, 8.86 mmol) were dissolved in dimethoxyethane (30 mL), and then sodium hydroxide (708.47 mg, 17.71 mmol) was added. The reaction mixture was stirred at 80℃ for 12 hours. After confirming the completion of the reaction by LC-MS, the reaction mixture was filtered. The solid obtained by filtration was washed with dimethoxyethane (20 mL) and dried to obtain the target compound (960 mg, crude). MS (ESI): m/z = 218.0 $[M+H]^+$

[Step 6] Preparation of methyl 4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate

The 4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylic acid (960 mg, 4.42 mmol) obtained in Step 5 above was dissolved in methanol (20 mL), and then sulfuric acid (1.33 g, 13.26 mmol) was slowly added dropwise at 25℃. The reaction mixture was stirred at 70℃ for 12 hours. After confirming the completion of the reaction by LC-MS, the reaction mixture was concentrated under reduced pressure to remove methanol. Saturated aqueous sodium bicarbonate solution was added to the concentrated mixture

to adjust the pH to 8. Water (30 mL) was added to the reaction mixture, followed by extraction with ethyl acetate (30 mL × 3). The collected organic layer was washed with saturated brine (50 mL), dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (240 mg, 23% yield). MS (ESI): m/z = 232.0 $[M+H]^+$

[Step 7] Preparation of 3-(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)-3-oxopropanenitrile

The methyl 4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate (240 mg, 1.04 mmol) obtained in Step 6 above and acetonitrile (255.63 mg, 6.23 mmol) were dissolved in tetrahydrofuran (5 mL), and then LiHMDS (1 M, tetrahydrofuran solution, 4.15 mL) was added at 0℃. The reaction mixture was stirred at 0℃ for 30 minutes. The reaction was terminated by slowly adding ice water (2 mL) to the reaction mixture, and the aqueous layer was washed and recovered using petroleum ether (10 mL). The recovered aqueous layer was concentrated under reduced pressure and purified by Prep-HPLC to obtain the target compound (130 mg, 52%). MS (ESI): m/z = 239.0 $[M+H]^+$

[Step 8] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-

d]pyrimidin-6-yl)methanone

The 3-(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)-3-oxopropanenitrile (127.89 mg, 532.23 μmol) obtained in Step 7 above and the 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (120 mg, 354.82 μmol) prepared in Step 1 of Examples 56 and 57 were dissolved in tert-amyl alcohol (20 mL), and then cesium carbonate (346.82 mg, 1.06 mmol) and BINAP Pd G_3 (35.25 mg) were added. The reaction mixture was stirred at 100℃ for 4 hours, filtered through Celite, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate : tetrahydrofuran 1 : 0 : 0 – 2 : 1 : 1) to obtain the target compound (158 mg, 89% yield). MS (ESI): m/z = 498.1 $[M+H]^+$

[Step 9] Preparation of (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone (155 mg, 317.56 μmol) prepared in Step 8 above was dissolved in trifluoroacetic acid (1 mL) and water (1 mL), and stirred at 25℃ for 2 hours. The reaction mixture was poured into ice water (20 mL) and the pH was adjusted to

8 using potassium carbonate. Then, the mixture was extracted with ethyl acetate (20 mL × 3). The collected organic layer was dried over sodium sulfate, filtered, and concentrated under reduced pressure. The concentrated reaction mixture was purified by Prep-HPLC to obtain the target compound (90 mg, 62% yield). MS (ESI): m/z = 454.1 $[M+H]^+$

[Step 10] Preparation of ((R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone and (S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone (90 mg) obtained in Step 9 above was purified by supercritical fluid chromatography (Column: DAICEL CHIRALPAK OD (250 mm × 30 mm, 10 μm); Mobile phase: [CO_2/methanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 524 and 525.

Example 524. ((R)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

First elution; 28 mg (30% yield); ^1H NMR (400 MHz,

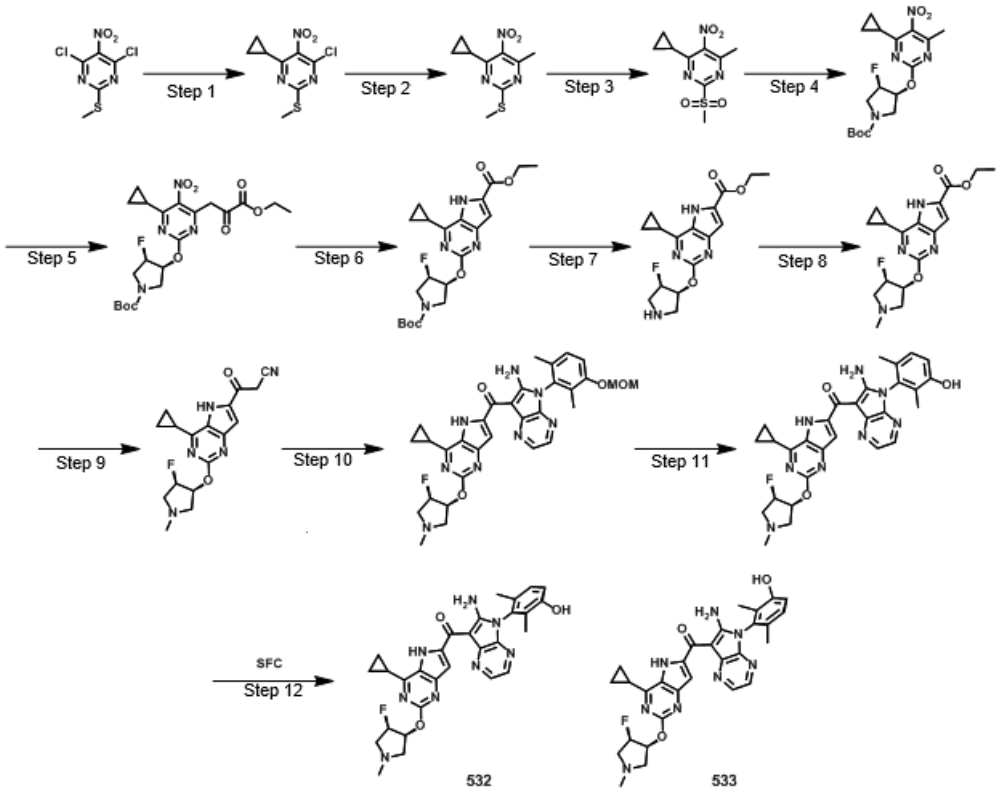
DMSO-d_6): δ 15.13 (s, 1H), 9.80 (s, 1H), 8.45 (d, J = 2.8 Hz, 1H), 8.04 (d, J = 2.8 Hz, 1H), 7.48 (d, J = 2.0 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 7.00 (d, J = 8.4 Hz, 1H), 2.67 - 2.66 (m, 1H), 2.58 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.32 - 1.26 (m, 4H); MS (ESI): m/z = 454.2 $[M+H]^+$

Example 525. ((S)-(6-Amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

Second elution; 33 mg (34% yield); ^{1}H NMR (400 MHz, DMSO-d_6): δ 15.13 (s, 1H), 9.74 (s, 1H), 8.45 (d, J = 3.2 Hz, 1H), 8.04 (d, J = 2.8 Hz, 1H), 7.48 (d, J = 1.6 Hz, 1H), 7.13 (d, J = 8.0 Hz, 1H), 7.00 (d, J = 8.4 Hz, 1H), 2.68 - 2.65 (m, 1H), 2.58 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.31 - 1.25 (m, 4H); MS (ESI): m/z = 454.2 $[M+H]^+$

Examples 532 and 533. Preparation of (6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone and (6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

[Scheme 14]



[Step 1] Preparation of 4-chloro-6-cyclopropyl-2-(methylthio)-5-nitropyrimidine

This reaction was performed in three parallel batches. 4,6-Dichloro-2-(methylthio)-5-nitropyrimidine (20 g, 83.31 mmol), cyclopropylboronic acid (7.16 g, 83.31 mmol), and sodium carbonate (26.49 g, 249.93 mmol) were dissolved in toluene (400 mL) and water (40 mL), and then $Pd(PPh_3)_4$ (9.63 g, 8.33 mmol) was added. The reaction mixture was stirred at 80℃ under nitrogen gas for 12 hours. After confirming the completion of the reaction by LC-MS, ethyl acetate (500 mL) and water (1000 mL) were added to the reaction mixture, followed by filtration to recover the filtrate. The recovered filtrate was extracted with ethyl

acetate (500 mL × 2). The collected organic layer was washed with saturated brine (2000 mL), dried over sodium sulfate, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-5%) to obtain the target compound (46.00 g, 75% yield). MS (ESI): m/z = 245.8 $[M+H]^+$

[Step 2] Preparation of 4-cyclopropyl-6-methyl-2-(methylthio)-5-nitropyrimidine

This reaction was performed in two parallel batches.

The 4-chloro-6-cyclopropyl-2-(methylthio)-5-nitropyrimidine (23 g, 93.62 mmol) obtained in Step 1 above, 2,4,6-trimethyl-1,3,5,2,4,6-trioxatriborinane (51.71 g, 205.95 mmol), and potassium carbonate (38.81 g, 280.85 mmol) were dissolved in 1,4-dioxane (300 mL) and water (30 mL), and then Pd(dppf)Cl_2·dichloromethane (7.64 g, 9.36 mmol) was added. The reaction mixture was stirred at 90℃ under nitrogen gas for 12 hours. After confirming the completion of the reaction by LC-MS, ethyl acetate (500 mL) and water (1000 mL) were added to the reaction mixture, followed by filtration to recover the filtrate. The recovered filtrate was extracted with ethyl acetate (500 mL × 2). The collected organic layer was washed with saturated brine (2000 mL), dried over sodium sulfate, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-4%) to obtain

the target compound (17.00 g, 40% yield). MS (ESI): m/z = 225.9 $[M+H]^+$

[Step 3] Preparation of 4-cyclopropyl-6-methyl-2-(methylsulfonyl)-5-nitropyrimidine

The 4-cyclopropyl-6-methyl-2-(methylthio)-5-nitropyrimidine (15.50 g, 68.81 mmol) obtained in Step 2 above was dissolved in dichloromethane (300 mL), and then 3-chloroperoxybenzoic acid (34.92 g, 172.02 mmol, 85% purity) was slowly added at 0℃. The reaction mixture was then stirred at 20℃ for 2 hours. The reaction mixture was cooled to 0℃ and slowly poured into a saturated aqueous sodium thiosulfate solution (500 mL), followed by the addition of saturated aqueous sodium carbonate solution (500 mL). The reaction mixture was extracted with dichloromethane (500 mL × 2), and the collected organic layer was washed with saturated brine (100 mL), dried over sodium sulfate, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-25%) to obtain the target compound (17.00 g, 96% yield).

^1H NMR (400 MHz, $CDCl_3$): δ 3.33 (s, 3H), 2.65 (s, 3H), 2.12 - 2.05 (m, 1H), 1.49 - 1.42 (m, 2H), 1.42 - 1.35 (m, 2H); MS (ESI): m/z = 257.9 $[M+H]^+$

[Step 4] Preparation of tert-butyl (3S,4R)-3-((4-cyclopropyl-6-methyl-5-nitropyrimidin-2-yl)oxy)-4-

fluoropyrrolidine-1-carboxylate

This reaction was performed in three parallel batches. tert-Butyl (3R,4S)-3-fluoro-4-hydroxy-pyrrolidine-1-carboxylate (730 mg, 3.56 mmol) was dissolved in tetrahydrofuran (50 mL), and potassium tert-butoxide (1 M, tetrahydrofuran solution, 7.11 mL) was slowly added dropwise at 0℃. The reaction mixture was stirred at 0℃ for 30 minutes and then cooled to -60℃. The 4-cyclopropyl-6-methyl-2-(methylsulfonyl)-5-nitropyrimidine (915.11 mg, 3.56 mmol) obtained in Step 3 above was slowly added. After confirming the completion of the reaction by LC-MS, the reaction was terminated by adding saturated aqueous ammonium chloride solution (200 mL). The reaction mixture was extracted with ethyl acetate (50 mL × 3), and the collected organic layer was washed with saturated brine (100 mL), dried over sodium sulfate, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-33%) to obtain the target compound (2.1 g, 40% yield). MS (ESI): m/z = 327.0 $[M+H-tBu]^+$

[Step 5] Preparation of tert-butyl (3S,4R)-3-((4-cyclopropyl-6-(3-ethoxy-2,3-dioxopropyl)-5-nitropyrimidin-2-yl)oxy)-4-fluoropyrrolidine-1-carboxylate

This reaction was performed in two parallel batches. Diethyl oxalate (496.84 mg, 3.40 mmol) was dissolved

in tetrahydrofuran (50 mL), and potassium tert-butoxide (1 M, tetrahydrofuran solution, 3.14 mL) was slowly added dropwise at 0℃. Then, the mixture was stirred at 0℃ for 30 minutes, and tert-butyl (3S,4R)-3-((4-cyclopropyl-6-methyl-5-nitropyrimidin-2-yl)oxy)-4-fluoropyrrolidine-1-carboxylate (1.00 g, 2.62 mmol) obtained in Step 4 above was slowly added. The reaction mixture was stirred at 0℃ for 30 minutes, then the completion of the reaction was confirmed by LC-MS, and water (200 mL) was added. The reaction mixture was extracted with ethyl acetate (100 mL × 3), and the collected organic layer was washed with saturated brine (200 mL), dried over sodium sulfate, and concentrated under reduced pressure to obtain the target compound (3.00 g, crude), which was used in the next reaction without further purification. MS (ESI): m/z = 483.1 $[M+H]^+$

[Step 6] Preparation of ethyl 2-(((3S,4R)-1-(tert-butoxycarbonyl)-4-fluoropyrrolidin-3-yl)oxy)-4-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate

The tert-butyl (3S,4R)-3-((4-cyclopropyl-6-(3-ethoxy-2,3-dioxopropyl)-5-nitropyrimidin-2-yl)oxy)-4-fluoropyrrolidine-1-carboxylate (3.00 g, 6.22 mmol) obtained in Step 5 above was dissolved in acetic acid (100 mL), and then iron (Fe, 1.39 g, 24.87 mmol) was added. The reaction mixture was stirred at 50℃ for 1 hour, then the completion of the reaction was confirmed by LC-MS, and the resulting

product was concentrated under reduced pressure. Saturated aqueous sodium bicarbonate solution (100 mL) was added to the concentrated mixture, followed by extraction with ethyl acetate (50 mL × 3). The collected organic layer was washed with saturated brine (100 mL), dried over sodium sulfate, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, petroleum ether : ethyl acetate 0-50%) to obtain the target compound (1.40 g, 33% yield). MS (ESI): m/z = 435.2 $[M+H]^+$

[Step 7] Preparation of ethyl 4-cyclopropyl-2-(((3S,4R)-4-fluoropyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate

The ethyl 2-(((3S,4R)-1-(tert-butoxycarbonyl)-4-fluoropyrrolidin-3-yl)oxy)-4-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate (1.40 g, 3.22 mmol) obtained in Step 6 above was dissolved in hydrochloric acid solution (2 M, methanol solution, 50 mL) and stirred at 25℃ for 3 hours. After confirming the completion of the reaction by LC-MS, the resulting product was concentrated under reduced pressure to obtain the target compound (1.10 g, 92% yield, HCl salt). MS (ESI): m/z = 335.0 $[M+H]^+$

[Step 8] Preparation of ethyl 4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate

The ethyl 4-cyclopropyl-2-(((3S,4R)-4-

fluoropyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate (1.10 g, 2.97 mmol, HCl salt) obtained in Step 7 above was dissolved in methanol (50 mL), and then 37% formaldehyde aqueous solution (1.20 g, 14.83 mmol) was added. The reaction mixture was stirred at 25℃ for 30 minutes, and then sodium cyanoborohydride (372.84 mg, 5.93 mmol) was added and stirred for 10 minutes. Water (300 mL) was added to the reaction mixture, followed by extraction with ethyl acetate (100 mL × 3). The collected organic layer was washed with saturated brine (100 mL), dried over sodium sulfate, and concentrated under reduced pressure to obtain the target compound (1.00 g, crude). The obtained target compound was used in the following reaction without separate purification.

MS (ESI): m/z = 349.1 $[M+H]^+$

[Step 9] Preparation of 3-(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)-3-oxopropanenitrile

The ethyl 4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidine-6-carboxylate (900.00 mg, 2.58 mmol) obtained in Step 8 above was dissolved in tetrahydrofuran (50 mL), then acetonitrile (530.28 mg, 12.92 mmol) was added, and LiHMDS (1 M, tetrahydrofuran solution, 12.92 mL) was slowly added dropwise at 0℃, followed by stirring for 2 hours. The reaction mixture was poured into saturated aqueous ammonium

chloride solution (50 mL) at 0℃, and the aqueous layer was washed with hexane (30 mL × 3) and concentrated under reduced pressure. The concentrated reaction mixture was purified by Prep-HPLC to obtain the target compound (500 mg, 51 % yield). MS (ESI): m/z = 342.1 $[M+H]^+$

[Step 10] Preparation of (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

This reaction was performed in five parallel batches. The 3-(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)-3-oxopropanenitrile (100 mg, 291.24 μmol) obtained in Step 9 above, the 3-bromo-N-(3-(methoxymethoxy)-2,6-dimethylphenyl)pyrazine-2-amine (98.50 mg, 291.24 μmol) prepared in Step 1 of Examples 56 and 57 were dissolved in tert-amyl alcohol (10 mL), and then cesium carbonate (284.68 mg, 873.73 μmol) and BINAP Pd G_3 (28.89 mg) were added. The reaction mixture was stirred at 100℃ for 2 hours, filtered through Celite, and concentrated under reduced pressure. The concentrated reaction mixture was purified by MPLC (SiO_2, hexane : tetrahydrofuran 0-100%) to obtain the target compound (500 mg, 50% yield). MS (ESI): m/z = 601.4 $[M+H]^+$

[Step 11] Preparation of (6-amino-5-(3-hydroxy-2,6-

dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

This reaction was performed in five parallel batches. The (6-amino-5-(3-(methoxymethoxy)-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone (100 mg, 166.49 μmol) obtained in Step 9 above was dissolved in a hydrochloric acid solution (2 M, 1,4-dioxane solution, 50 mL) and stirred at 25℃ for 1 hour. After confirming the completion of the reaction by LC-MS, the mixture was concentrated under reduced pressure. The concentrated mixture was purified by Prep-HPLC to obtain the target compound (400 mg, 85% yield). MS (ESI): m/z = 557.3 $[M+H]^+$

[Step 12] Preparation of (6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone and (6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

The (6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-

fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone (90 mg) obtained in Step 11 above was purified by supercritical fluid chromatography (column: DAICEL CHIRALPAK OD (250 mm × 30 mm, 10 μm); mobile phase: [CO_2 / isopropanol (0.1% NH_3H_2O)]) to obtain compounds of Examples 532 and 533.

Example 532. (6-Amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

First elution; 39.50 mg (43% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.32 (t, *J* = 3.6 Hz, 1H), 8.06 - 7.87 (m, 1H), 7.25 - 7.13 (m, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.49 - 5.26 (m, 2H), 3.18 - 2.95 (m, 4H), 2.59 - 2.51 (m, 1H), 2.47 (s, 3H), 1.94 (s, 3H), 1.89 (s, 3H), 1.45 (d, *J* = 2.8 Hz, 2H), 1.41 - 1.34 (m, 2H); MS (ESI): m/z = 557.3 $[M+H]^+$

Example 533. (6-Amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

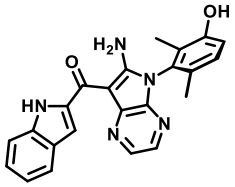
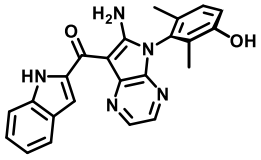
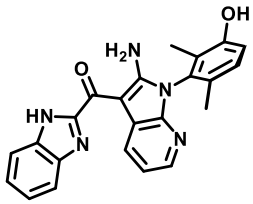
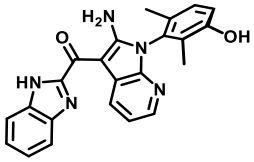
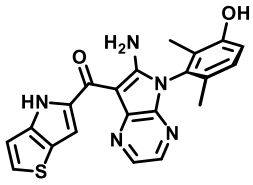
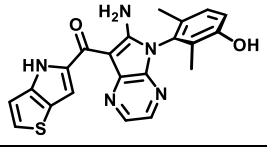
Second elution; 39.04 mg (41% yield); ^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 9.6 Hz, 1H), 8.06 - 7.87 (m, 1H), 7.24 - 7.15 (m, 2H), 7.00 (d, *J* = 8.4 Hz, 1H), 5.59 - 5.31 (m, 2H), 3.30 - 3.08 (m, 4H), 2.61 - 2.50 (m, 4H), 1.95 (s, 3H), 1.91 (s, 3H), 1.49 - 1.43 (m, 2H), 1.43 - 1.37 (m, 2H); MS

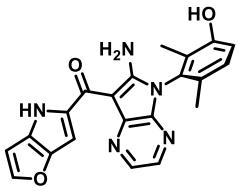
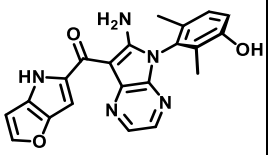
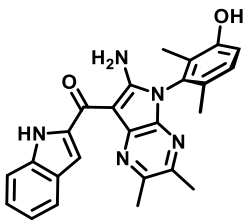
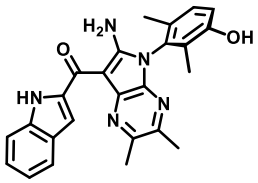
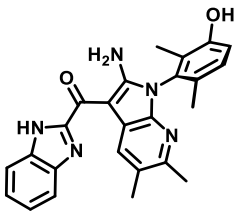
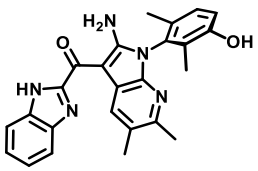
(ESI): m/z = 557.3 $[M+H]^+$

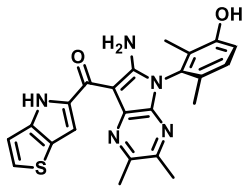
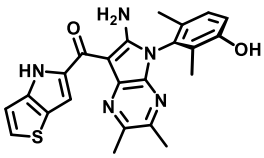
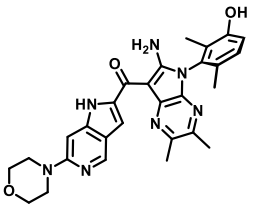
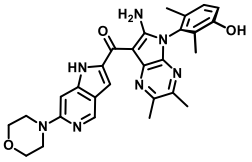
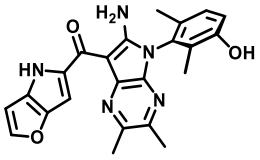
<Examples 1 to 539>

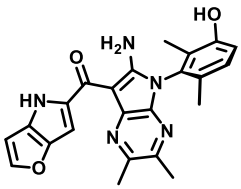
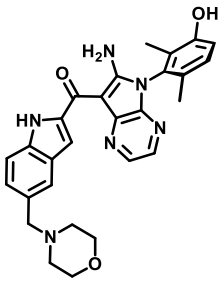
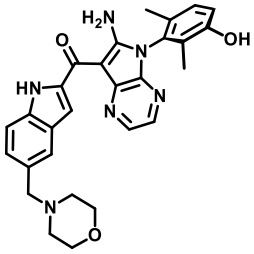
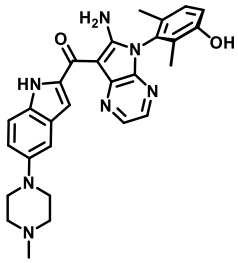
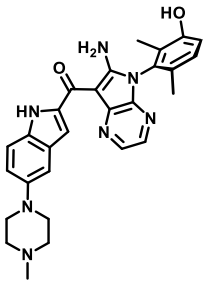
All other compounds according to Examples of the present invention were prepared in a similar manner to Examples 1, 2, 11, 12, 56, 57, 58, 59, 82, 83, 142, 143, 240, 241, 258, 259, 394, 395, 416, 417, 524, 525, 532, and 533 above, and the chemical structural formulas, compound names, NMR, and LC-MS analysis results of respective compounds according to Examples above are summarized and shown in Table 1 below.

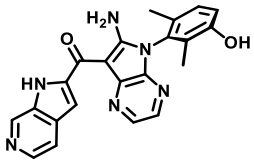
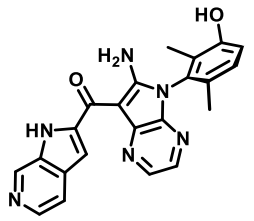
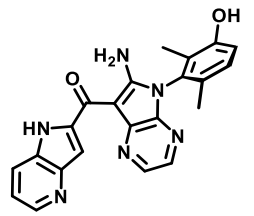
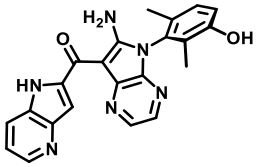
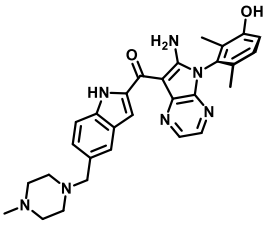
[Table 1]

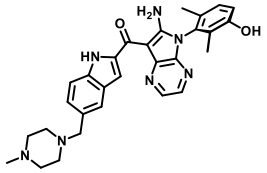
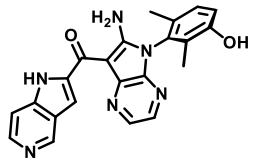
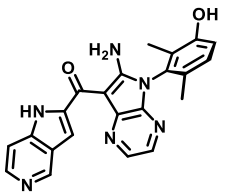
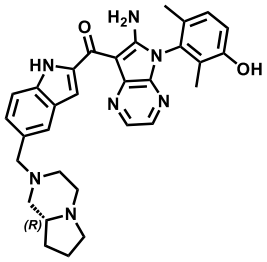
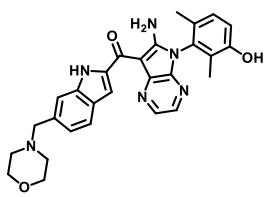
Example	Chemical Structure	Compound name	^{1}H NMR	LC-MS $[M+H]^+$
1		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 1.6 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.72 (d, *J* = 8.2 Hz, 1H), 7.64 (d, *J* = 8.2 Hz, 1H), 7.56 (s, 1H), 7.32 (t, *J* = 7.5 Hz, 1H), 7.17-7.06 (m, 2H), 6.96 (br d, *J* = 8.1 Hz, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	398.2
2		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 1.6 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.72 (d, *J* = 8.2 Hz, 1H), 7.64 (d, *J* = 8.2 Hz, 1H), 7.56 (s, 1H), 7.32 (t, *J* = 7.5 Hz, 1H), 7.17-7.06 (m, 2H), 6.96 (br d, *J* = 8.1 Hz, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	398.2
3		(S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.73 (s 1H), 7.89 (d, *J* = 4.8 Hz, 1H), 7.82 (d, *J* = 7.6 Hz, 1H), 7.67 (d, *J* = 8.0 Hz, 1H), 7.46-7.31 (m, 1H), 7.19 (d, *J* = 8.0 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 1.96 (s, 1H), 1.91 (s, 1H).	398.2
4		(R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.73 (s 1H), 7.87 (d, *J* = 4.0 Hz, 1H), 7.72 (s, 2H), 7.36 (s, 2H), 7.16 (d, *J* = 7.6 Hz, 2H), 6.97 (d, *J* = 8.0 Hz, 1H), 1.91 (d, *J* = 16.4 Hz, 6H).	398.2
5		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.93 (d, *J* = 3.2 Hz, 1H), 7.45 (s, 1H), 7.44 (d, *J* = 5.2 Hz, 1H), 7.19 (d, *J* = 5.2 Hz, 1H), 7.12 (d, *J* = 8.4 Hz, 1H), 6.94 (d, *J* = 8.4 Hz, 1H), 1.90 (s, 3H), 1.86 (s, 3H).	404.1
6		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.92 (d, *J* = 3.2 Hz, 1H), 7.44 (s, 1H), 7.43 (d, *J* = 5.2 Hz, 1H), 7.19 (d, *J* =	404.1

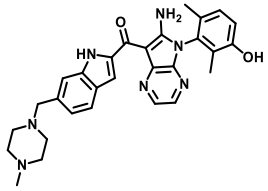
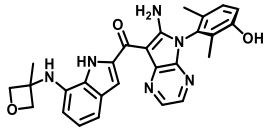
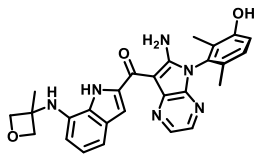
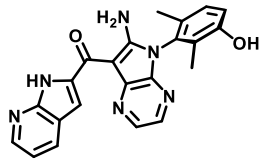
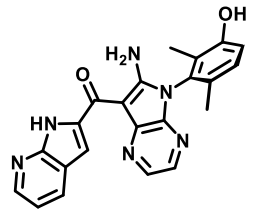
		yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone	5.2 Hz, 1H), 7.09 (d, *J* = 8.4 Hz, 1H), 6.92 (d, *J* = 8.4 Hz, 1H), 1.88 (s, 3H), 1.85 (s, 3H).	
7		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 3.2 Hz, 1H), 7.92 (d, *J* = 3.2 Hz, 1H), 7.67 (d, *J* = 2.4 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.06 (s, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.70 (d, *J* = 2.4 Hz, 1H), 1.91 (s, 3H), 1.86 (s, 3H).	388.1
8		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 3.2 Hz, 1H), 7.92 (d, *J* = 3.2 Hz, 1H), 7.67 (d, *J* = 2.4 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.06 (s, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.70 (d, *J* = 2.4 Hz, 1H), 1.91 (s, 3H), 1.86 (s, 3H).	388.1
9		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 15.00 (s, 1H), 7.80 (d, *J* = 8.0 Hz, 1H), 7.65 (d, *J* = 8.4 Hz, 1H), 7.55 (s, 1H), 7.36 (t, *J* = 7.6 Hz, 1H), 7.17 (t, *J* = 7.6 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.71 (d, *J* = 8.4 Hz, 1H), 2.83 (s, 3H), 2.60 (s, 3H), 1.95 (s, 3H), 1.93 (s, 3H).	426.2
10		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 14.99 (s, 1H), 7.80 (d, *J* = 8.0 Hz, 1H), 7.65 (d, *J* = 8.0 Hz, 1H), 7.56 (s, 1H), 7.36 (t, *J* = 7.6 Hz, 1H), 7.17 (t, *J* = 7.6 Hz, 1H), 6.95 (d, *J* = 8.4 Hz, 1H), 6.68 (d, *J* = 8.4 Hz, 1H), 2.83 (s, 3H), 2.61 (s, 3H), 1.96 (s, 3H), 1.93 (s, 3H).	426.2
11		(S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.72-8.41 (m, 1H), 7.76 (dd, *J* = 2.8, 6.0 Hz, 2H), 7.48 (s, 2H), 7.36-7.21 (m, 2H), 7.04 (d, *J* = 8.4 Hz, 1H), 2.48 (s, 3H), 2.36 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	426.2
12		(R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-	^{1}H NMR (400 MHz, MeOD): δ 8.66-8.35 (m, 1H), 7.72 (dd, *J* = 2.8, 6.0 Hz, 2H), 7.44 (d, *J* = 8.4 Hz, 2H), 7.30-7.15 (m, 2H), 7.00 (d, *J* = 8.4 Hz, 1H), 2.44 (s,	426.2

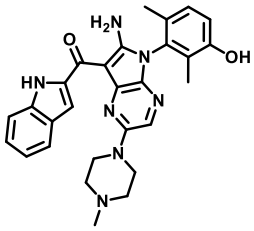
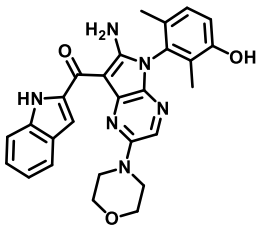
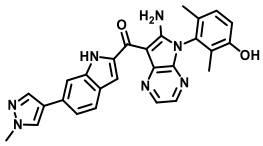
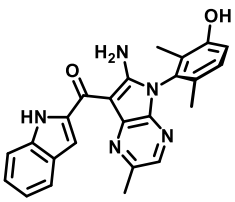
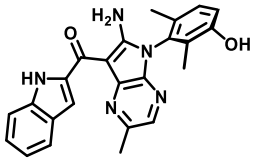
		yl)(1H-benzo[d]imidazol-2-yl)methanone	3H), 2.32 (s, 3H), 1.88 (s, 3H), 1.84 (s, 3H).	
13		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 7.49 (s, 1H), 7.37 (d, *J* = 5.2 Hz, 1H), 7.14 (d, *J* = 5.2 Hz, 1H), 6.94 (d, *J* = 7.6 Hz, 1H), 6.68 (d, *J* = 8.4 Hz, 1H), 3.50 (s, 2H), 2.77 (s, 3H), 2.59 (s, 3H), 1.94 (s, 3H), 1.91 (s, 3H).	432.1
14		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 7.48 (s, 1H), 7.37 (d, *J* = 5.2 Hz, 1H), 7.14 (d, *J* = 5.2 Hz, 1H), 6.97 (d, *J* = 7.6 Hz, 1H), 6.71 (d, *J* = 8.4 Hz, 1H), 3.50 (s, 2H), 2.76 (s, 3H), 2.57 (s, 3H), 1.93 (s, 3H), 1.92 (s, 3H).	432.1
15		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-morpholino-1H-pyrrolo[3,2-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 8.68 (s, 1H), 8.31-8.21 (m, 1H), 7.95-7.80 (m, 2H), 7.08 (d, *J* = 8.0 Hz, 1H), 6.94 (d, *J* = 8.0 Hz, 1H), 6.85 (s, 1H), 3.80-3.72 (m, 4H), 3.45-3.42 (m, 4H), 1.82 (s, 3H), 1.75 (s, 3H).	512.2
16		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-morpholino-1H-pyrrolo[3,2-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 8.67 (s, 1H), 8.28-8.18 (m, 1H), 7.87-7.81 (m, 2H), 7.08 (d, *J* = 8.0 Hz, 1H), 6.93 (d, *J* = 7.6 Hz, 1H), 6.85 (s, 1H), 3.80-3.74 (m, 4H), 3.46-3.42 (m, 4H), 1.82 (s, 3H), 1.75 (s, 3H).	512.2
17		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.66 (d, *J* = 2.4 Hz, 1H), 7.08 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 0.8 Hz, 1H), 6.91 (d, *J* = 8.4 Hz, 1H), 6.70 (dd, *J* = 0.8, 2.0 Hz, 1H), 2.71 (s, 3H), 2.47 (s, 3H), 1.88 (s, 3H), 1.84 (s, 3H).	416.2

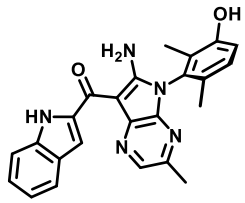
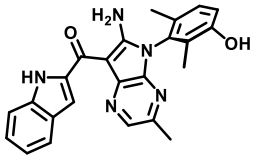
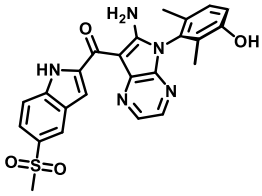
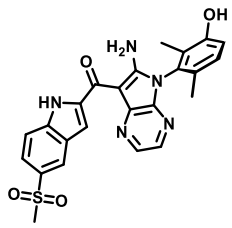
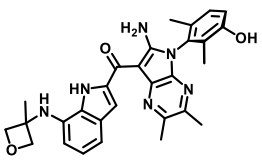
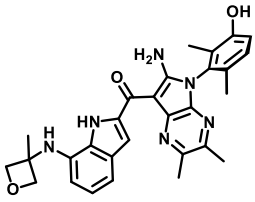
18		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.66 (d, *J* = 2.4 Hz, 1H), 7.07 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 0.8 Hz, 1H), 6.90 (d, *J* = 8.4 Hz, 1H), 6.70 (dd, *J* = 0.8, 2.0 Hz, 1H), 2.71 (s, 3H), 2.47 (s, 3H), 1.87 (s, 3H), 1.84 (s, 3H).	416.2
19		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.82 (s, 1H), 9.66 (s, 1H), 9.11-8.45 (m, 2H), 8.41 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.80 (s, 1H), 7.66-7.58 (m, 2H), 7.33-7.21 (m, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 3.62-3.50 (m, 6H), 2.45-2.31 (m, 4H), 1.83 (s, 3H), 1.75 (s, 3H).	497.2
20		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.82 (s, 1H), 9.66 (s, 1H), 9.18-8.46 (m, 2H), 8.41 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.81 (s, 1H), 7.70-7.53 (m, 2H), 7.30-7.24 (m, 1H), 7.13 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 3.68-3.48 (m, 6H), 2.46-2.34 (m, 4H), 1.83 (s, 3H), 1.75 (s, 3H).	497.2
21		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(4-methylpiperazin-1-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.81 (s, 1H), 9.69 (s, 1H), 8.40 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.64 (s, 1H), 7.56 (d, *J* = 8.8 Hz, 1H), 7.17-7.07 (m, 3H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.16-3.05 (m, 4H), 2.64-2.53 (m, 4H), 2.24 (s, 3H), 1.82 (s, 3H), 1.75 (s, 3H).	496.2
22		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(4-methylpiperazin-1-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.81 (s, 1H), 9.71 (s, 1H), 8.40 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.64 (s, 1H), 7.56 (d, *J* = 8.8 Hz, 1H), 7.16-7.07 (m, 3H), 6.98 (d, *J* = 8.0 Hz, 1H), 3.16-3.06 (m, 4H), 2.63-2.52 (m, 4H), 2.24 (s, 3H), 1.82 (s, 3H), 1.75 (s, 3H).	496.2

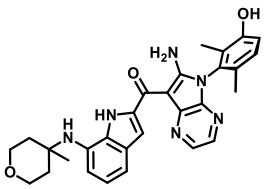
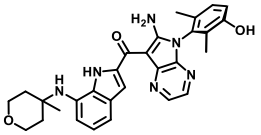
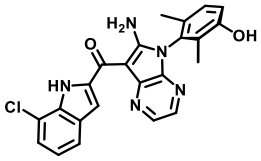
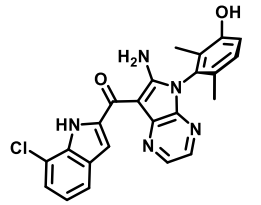
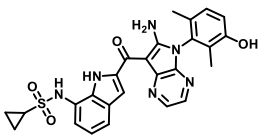
23		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ14.46 (s, 1H), 9.71 (s, 1H), 9.17 (s, 1H), 8.44 (d, J = 3.2 Hz, 1H), 8.22 (d, J = 4.4 Hz, 1H), 8.03 (d, J = 3.2 Hz, 1H), 7.88 (d, J = 1.2 Hz, 1H), 7.78 (d, J = 5.2 Hz, 1H), 7.14 (d, J = 8.4 Hz, 1H), 7.00 (d, J = 8.4 Hz, 1H), 1.84 (s, 3H), 1.76 (s, 3H).	399.1
24		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ14.33 (s, 1H), 9.70 (s, 1H), 9.12 (s, 1H), 8.44 (d, J = 3.2 Hz, 1H), 8.19 (d, J = 4.4 Hz, 1H), 8.02 (d, J = 3.2 Hz, 1H), 7.86 (d, J = 1.2 Hz, 1H), 7.72 (d, J = 5.2 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 1.83 (s, 3H), 1.76 (s, 3H).	399.1
25		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (d, J = 4.0 Hz, 1H), 8.41 (d, J = 4.0 Hz, 1H), 8.18 (d, J = 8.0 Hz, 1H), 7.99 (d, J = 4.0 Hz, 1H), 7.71 (s, 1H), 7.36 (m, 1H), 7.17 (d, J = 8.0 Hz, 1H), 6.99 (d, J = 8.0 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	399.1
26		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (d, J = 4.0 Hz, 1H), 8.41 (d, J = 4.0 Hz, 1H), 8.18 (d, J = 8.0 Hz, 1H), 7.98 (d, J = 4.0 Hz, 1H), 7.71 (s, 1H), 7.36 (m, 1H), 7.17 (d, J = 8.0 Hz, 1H), 6.98 (d, J = 8.0 Hz, 1H), 1.92 (s, 3H), 1.88 (s, 3H).	399.1
27		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.81 (s, 1H), 9.80-9.54 (m, 1H), 8.41 (d, J = 2.8 Hz, 1H), 8.19 (s, 1H), 7.98 (d, J = 2.8 Hz, 1H), 7.79 (s, 1H), 7.66-7.54 (m, 2H), 7.29-7.19 (m, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 3.53 (s, 2H), 2.46-2.25 (m, 8H), 2.16 (s, 3H), 1.83 (s, 3H), 1.75 (s, 3H).	510.3

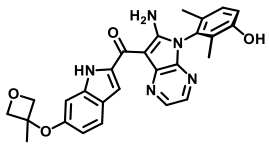
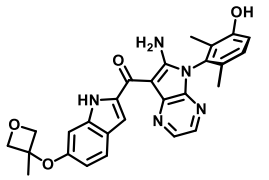
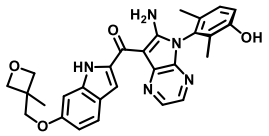
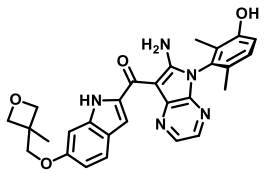
28		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.81 (s, 1H), 9.72-9.63 (m, 1H), 8.41 (d, J = 2.8 Hz, 1H), 8.17 (s, 1H), 7.98 (d, J = 2.8 Hz, 1H), 7.80 (s, 1H), 7.64-7.58 (m, 2H), 7.29-7.19 (m, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.0 Hz, 1H), 3.54 (s, 2H), 2.47-2.34 (m, 8H), 2.18 (s, 3H), 1.83 (s, 3H), 1.75 (s, 3H).	510.3
29		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.01 (s, 1H), 8.42 (d, J = 3.2 Hz, 1H), 8.29 (d, J = 6.0 Hz, 1H), 7.99 (d, J = 3.2 Hz, 1H), 7.83 (s, 1H), 7.75 (d, J = 6.0 Hz, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	399.1
30		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.09 (s, 1H), 8.42 (d, J = 3.2 Hz, 1H), 8.32 (d, J = 6.0 Hz, 1H), 8.00 (d, J = 3.2 Hz, 1H), 7.92 (s, 1H), 7.86 (br d, J = 6.0 Hz, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	399.1
31		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((hexahydropyrrolo[1,2-a]pyrazin-2(1H)-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.81 (s, 1H), 9.73 (s, 1H), 8.84 (s, 2H), 8.41 (d, J = 3.1 Hz, 1H), 7.98 (d, J = 3.1 Hz, 1H), 7.82 (d, J = 2.0 Hz, 1H), 7.64-7.62 (m, 2H), 7.26 (d, J = 8.4 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 7.01 (d, J = 8.3 Hz, 1H), 3.73-3.50 (m, 2H), 3.02-2.85 (m, 3H), 2.83-2.69 (m, 1H), 2.30-2.15 (m, 2H), 2.12-1.93 (m, 3H), 1.83 (s, 3H), 1.75 (s, 3H), 1.74-1.55 (m, 4H).	536.3
32		(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.79 (s, 1H), 9.69 (s, 1H), 8.44 (d, J = 3.0 Hz, 1H), 7.98 (d, J = 3.0 Hz, 1H), 7.83 (d, J = 1.7 Hz, 1H), 7.67 (d, J = 8.2 Hz, 1H), 7.61 (s, 1H), 7.13 (d, J = 8.3 Hz, 1H), 7.08 (dd, J = 8.2, 1.4 Hz, 1H), 6.98 (d, J = 8.3 Hz, 1H), 3.63-3.54 (m, 6H), 2.41 (s, 4H), 1.83 (s, 3H), 1.75 (s, 3H).	497.3

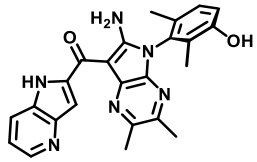
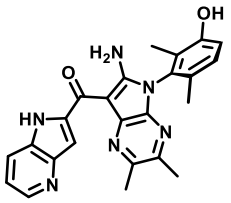
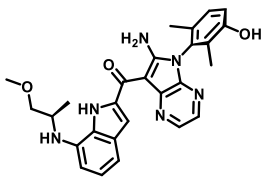
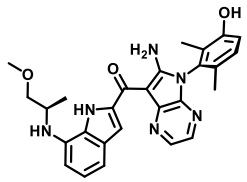
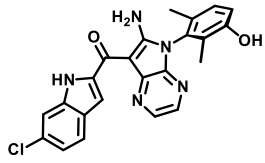
33		(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.79 (d, J = 2.1 Hz, 1H), 9.70 (s, 1H), 8.44 (d, J = 3.0 Hz, 1H), 7.99 (d, J = 3.0 Hz, 1H), 7.83 (d, J = 2.5 Hz, 1H), 7.66 (d, J = 8.2 Hz, 1H), 7.59 (s, 1H), 7.14 (d, J = 8.3 Hz, 1H), 7.07 (dd, J = 8.3, 1.4 Hz, 1H), 6.99 (d, J = 8.3 Hz, 1H), 3.58 (s, 2H), 2.50-2.24 (m, 8H), 2.18 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H).	510.3
34		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, J = 3.2 Hz, 1H), 7.96 (d, J = 3.2 Hz, 1H), 7.61 (s, 1H), 7.19 (s, 1H), 7.16 (d, J = 6.4 Hz, 1H), 6.98 (d, J = 8.0 Hz, 1H), 6.97-6.93 (m, 1H), 6.28 (d, J = 7.6 Hz, 1H), 5.00 (d, J = 6.0 Hz, 2H), 4.73 (d, J = 6.0 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.84 (s, 3H)	483.2
35		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, J = 3.2 Hz, 1H), 7.96 (d, J = 3.2 Hz, 1H), 7.61 (s, 1H), 7.18 (d, J = 5.6 Hz, 1H), 7.16 (d, J = 6.4 Hz, 1H), 6.99 (d, J = 8.0 Hz, 1H), 6.97-6.93 (m, 1H), 6.28 (d, J = 7.6 Hz, 1H), 5.00 (d, J = 6.0 Hz, 2H), 4.73 (d, J = 6.0 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.84 (s, 3H).	483.2
36		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.46-8.44 (m, 1H), 8.43 (d, J = 1.6 Hz, 1H), 8.21 (dd, J = 1.6, 8.0 Hz, 1H), 8.00 (d, J = 3.2 Hz, 1H), 7.48 (s, 1H), 7.23 (dd, J = 4.8, 8.0 Hz, 1H), 7.11 (d, J = 8.4 Hz, 1H), 6.94 (d, J = 8.4 Hz, 1H), 1.90 (s, 3H), 1.87 (s, 3H).	399.1
37		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (s, 1H), 8.43-8.41 (m, 1H), 8.21 (dd, J = 1.6, 8.0 Hz, 1H), 8.00 (d, J = 3.2 Hz, 1H), 7.48 (s, 1H), 7.22 (dd, J = 4.8, 8.0 Hz, 1H), 7.12 (d, J = 8.4 Hz, 1H), 6.94 (d, J = 8.4 Hz, 1H), 1.90 (s, 3H), 1.87 (s, 3H).	399.1

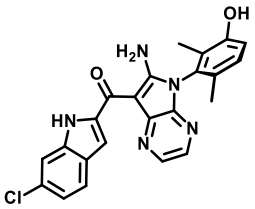
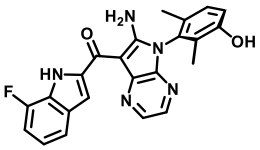
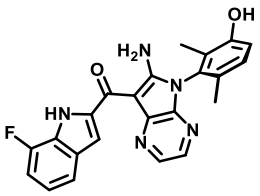
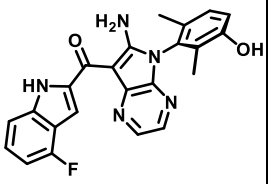
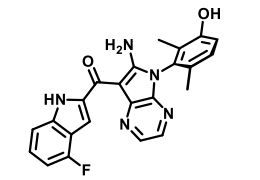
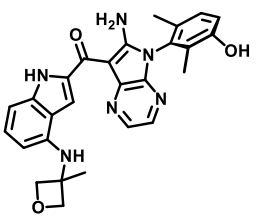
38		(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-(4-methylpiperazin-1-yl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.53 (s, 1H), 9.47 (s, 1H), 8.31 (s, 2H), 7.75 (dd, *J* = 2.1, 0.9 Hz, 1H), 7.70 (d, *J* = 8.0 Hz, 1H), 7.64 (s, 1H), 7.44 (dd, *J* = 8.3, 1.0 Hz, 1H), 7.33-7.27 (m, 1H), 7.14-7.07 (m, 2H), 6.96 (d, *J* = 8.3 Hz, 1H), 3.65-3.58 (m, 4H), 2.65-2.58 (m, 4H), 2.32 (s, 3H), 1.84 (s, 3H), 1.76 (s, 3H).	496.2
39		(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-morpholino-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.41 (s, 1H), 9.65 (s, 1H), 8.42 (s, 2H), 7.83 (dd, *J* = 2.0, 0.9 Hz, 1H), 7.71 (d, *J* = 8.1 Hz, 1H), 7.67 (s, 1H), 7.44 (dd, *J* = 8.3, 1.1 Hz, 1H), 7.33-7.28 (m, 1H), 7.14-7.08 (m, 2H), 6.96 (d, *J* = 8.3 Hz, 1H), 3.93-3.84 (m, 4H), 3.63-3.55 (m, 4H), 1.83 (s, 3H), 1.76 (s, 3H).	483.2
40		(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methyl-1H-pyrazol-4-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.92 (s, 1H), 9.66 (s, 1H), 8.40 (d, *J* = 3.0 Hz, 1H), 8.16 (s, 1H), 7.98 (d, *J* = 3.0 Hz, 1H), 7.90 (s, 1H), 7.84 (s, 1H), 7.74 (s, 1H), 7.68 (d, *J* = 8.4f Hz, 1H), 7.32 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 8.4 Hz, 1H), 6.96 (d, *J* = 8.3 Hz, 1H), 3.87 (s, 3H), 1.81 (s, 3H), 1.73 (s, 3H).	478.3
41		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.86 (s, 1H), 7.71 (d, *J* = 8.0 Hz, 1H), 7.65-7.60 (m, 1H), 7.49 (s, 1H), 7.35-7.29 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.11 (t, *J* = 8.0 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 2.79 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	412.2
42		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.85 (s, 1H), 7.71 (d, *J* = 8.0 Hz, 1H), 7.62 (d, *J* = 8.4 Hz, 1H), 7.49 (s, 1H), 7.35-7.29 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.14-7.08 (m, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 2.79 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	412.2

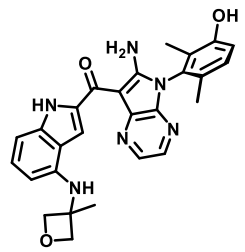
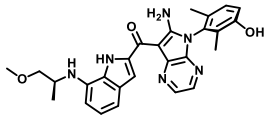
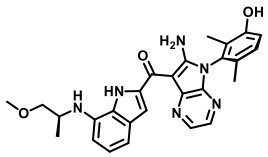
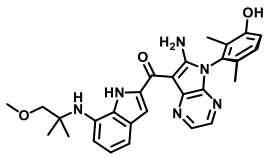
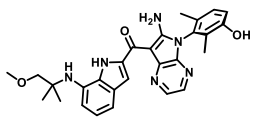
43		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.31 (s, 1H), 7.70 (d, *J* = 8.0 Hz, 1H), 7.64 (dd, *J* = 0.8, 8.4 Hz, 1H), 7.51 (d, *J* = 0.8 Hz, 1H), 7.31 (t, *J* = 1.2, 7.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.13-7.07 (m, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.58 (s, 1H), 2.50 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	412.2
44		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.31 (s, 1H), 7.69 (d, *J* = 8.0 Hz, 1H), 7.63 (dd, *J* = 0.8, 8.4 Hz, 1H), 7.50 (d, *J* = 0.8 Hz, 1H), 7.30 (t, *J* = 1.2, 7.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.13-7.07 (m, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.50 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H).	412.2
45		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(methylsulfonyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 3.2 Hz, 1H), 8.41 (s, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.93-7.89 (m, 1H), 7.86-7.82 (m, 1H), 7.80 (s, 1H), 7.17 (d, *J* = 8.8 Hz, 1H), 6.99 (d, = 8.4 Hz, 1H), 3.17 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	476.1
46		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(methylsulfonyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 3.2 Hz, 1H), 8.41 (s, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.93-7.89 (m, 1H), 7.86-7.83 (m, 1H), 7.80 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.17 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	476.1
47		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.47 (s, 1H), 7.17 (dd, *J* = 8.0, 11.2 Hz, 2H), 6.99-6.91 (m, 2H), 6.20 (d, *J* = 7.2 Hz, 1H), 5.04 (d, *J* = 5.6 Hz, 2H), 4.71 (d, *J* = 5.6 Hz, 2H), 2.78 (s, 4H), 2.48 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.84 (s, 3H).	511.2
48		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-	^{1}H NMR (400 MHz, MeOD): δ 7.47 (s, 1H), 7.17 (dd, *J* = 8.0, 11.2 Hz, 2H), 6.99-6.91 (m, 2H), 6.20 (d, *J* = 7.2 Hz, 1H), 5.04 (d, *J* = 5.6 Hz, 2H), 4.71 (d, *J* = 5.6 Hz, 2H), 2.78 (s, 4H),	511.2

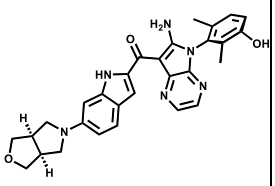
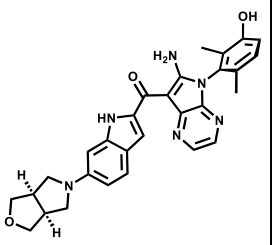
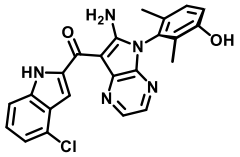
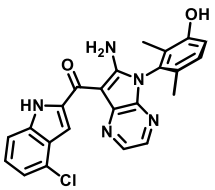
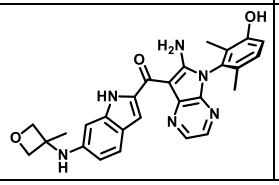
		methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	2.48 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.84 (s, 3H).	
49		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((4-methyltetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.31 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.52 (s, 1H), 7.25 (d, *J* = 8.0 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.01-6.95 (m, 2H), 6.85 (d, *J* = 7.6 Hz, 1H), 4.05-3.89 (m, 2H), 3.81-3.65 (m, 2H), 2.30-2.12 (m, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.86-1.81 (m, 1H), 1.89-1.81 (m, 1H), 1.58 (s, 3H).	511.2
50		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((4-methyltetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.52 (s, 1H), 7.26 (d, *J* = 8.0 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.03-6.94 (m, 2H), 6.86 (d, *J* = 7.6 Hz, 1H), 4.05-3.88 (m, 2H), 3.79-3.70 (m, 2H), 2.23-2.18 (m, 2H), 1.92 (s, 3H), 1.89 (s, 3H), 1.86-1.81 (m, 1H), 1.89-1.81 (m, 1H), 1.52 (s, 3H).	511.2
51		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.65 (d, *J* = 8.0 Hz, 1H), 7.48 (s, 1H), 7.33 (d, *J* = 7.6 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.09 (t, *J* = 7.6 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 1.92 (s, 3H), 1.88 (s, 3H).	432.1
52		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 2.8 Hz, 1H), 7.66 (d, *J* = 8.0 Hz, 1H), 7.48 (s, 1H), 7.33 (d, *J* = 7.6 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.09 (t, *J* = 7.6 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	432.1
53		N-(2-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-carbonyl)-1H-indol-7-	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.73 (s, 1H), 9.66 (s, 2H), 8.37 (d, *J* = 3.0 Hz, 1H), 7.99 (d, *J* = 3.0 Hz, 1H), 7.63 (s, 1H), 7.62 (d, *J* = 4.7 Hz, 1H), 7.23 (d, *J* = 7.4 Hz, 1H), 7.13-7.05	517.2

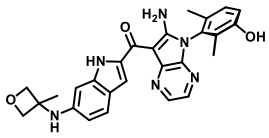
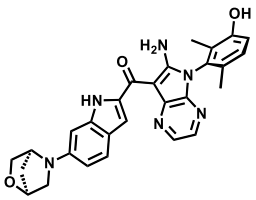
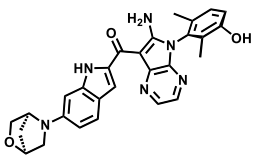
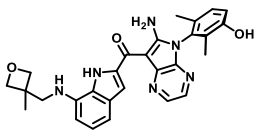
		yl)cyclopropanesulfonamide	(m, 2H), 6.96 (d, *J* = 8.3 Hz, 1H), 2.73-2.68 (m, 1H), 1.81 (s, 3H), 1.74 (s, 3H), 0.92 (dt, *J* = 8.3, 3.2 Hz, 2H), 0.87 (dt, *J* = 5.2, 2.9 Hz, 2H).	
54		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 4.0 Hz, 1H), 7.95 (d, *J* = 4.0 Hz, 1H), 7.60 (d, *J* = 8.0 Hz, 1H), 7.55 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.83 (s, 1H), 6.64 (dd, *J* = 4.0, 8.0 Hz, 1H), 5.00 (d, *J* = 8.0 Hz, 2H), 4.70 (d, *J* = 8.0 Hz, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.80 (s, 3H).	484.2
55		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 4.0 Hz, 1H), 7.94 (d, *J* = 4.0 Hz, 1H), 7.60 (d, *J* = 8.0 Hz, 1H), 7.55 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.82 (s, 1H), 6.64 (dd, *J* = 4.0, 8.0 Hz, 1H), 5.00 (d, *J* = 8.0 Hz, 2H), 4.70 (d, *J* = 8.0 Hz, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.80 (s, 3H).	484.2
56		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.46 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.63 (d, *J* = 8.8 Hz, 1H), 7.55 (s, 1H), 7.25 (d, *J* = 0.8 Hz, 1H), 7.20 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 8.4 Hz, 1H), 6.88 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.77 (d, *J* = 6.0 Hz, 2H), 4.53 (d, *J* = 6.0 Hz, 2H), 4.20 (s, 2H), 1.96 (s, 3H), 1.91 (s, 3H), 1.53 (s, 3H).	498.2
57		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.46 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.63 (d, *J* = 8.8 Hz, 1H), 7.55 (s, 1H), 7.25 (d, *J* = 0.8 Hz, 1H), 7.20 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 8.4 Hz, 1H), 6.88 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.77 (d, *J* = 6.0 Hz, 2H), 4.53 (d, *J* = 6.0 Hz, 2H), 4.20 (s, 2H), 1.96 (s, 3H), 1.91 (s, 3H), 1.53 (s, 3H).	498.2

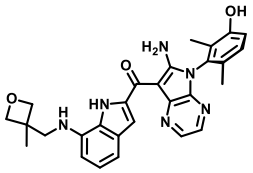
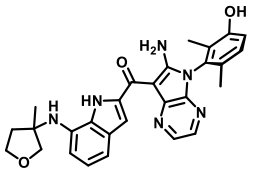
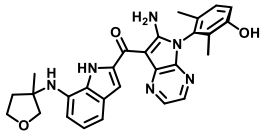
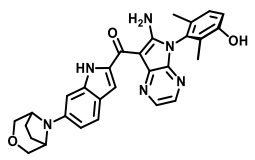
58		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (dd, *J* = 1.2, 4.8 Hz, 1H), 8.15 (d, *J* = 8.4 Hz, 1H), 7.60 (s, 1H), 7.37 (dd, *J* = 4.8, 8.4 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.79 (s, 3H), 2.50 (s, 3H), 1.93 (s, 3H), 1.87 (s, 3H).	427.2
59		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (dd, *J* = 1.2, 4.8 Hz, 1H), 8.16 (d, *J* = 8.4 Hz, 1H), 7.61 (s, 1H), 7.37 (dd, *J* = 4.8, 8.4 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.79 (s, 3H), 2.50 (s, 3H), 1.93 (s, 3H), 1.87 (s, 3H).	427.2
60		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((R)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.51 (s, 1H), 7.17-7.11 (m, 2H), 7.03-6.96 (m, 2H), 6.68 (d, *J* = 7.2 Hz, 1H), 4.06-3.93 (m, 1H), 3.64 (d, *J* = 4.4 Hz, 2H), 3.47 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.39 (d, *J* = 6.4 Hz, 3H).	485.2
61		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((R)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.50 (s, 1H), 7.19-7.11 (m, 2H), 7.02-6.95 (m, 2H), 6.65 (d, *J* = 7.2 Hz, 1H), 4.03-3.92 (m, 1H), 3.63 (d, *J* = 4.4 Hz, 2H), 3.47 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.39 (d, *J* = 6.4 Hz, 3H).	485.2
62		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.71 (s, 1H), 7.67 (d, *J* = 8.4 Hz, 1H), 7.56 (d, *J* = 1.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.09 (dd, *J* = 1.6, 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	432.1

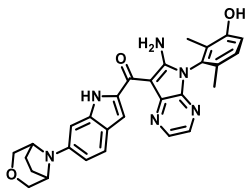
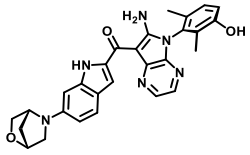
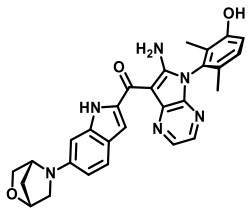
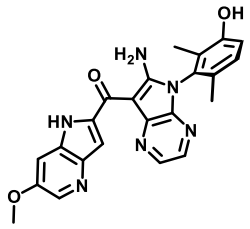
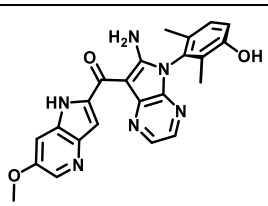
63		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.70 (s, 1H), 7.67 (d, *J* = 8.4 Hz, 1H), 7.56 (s, 1H), 7.12 (d, *J* = 8.4 Hz, 1H), 7.08 (dd, *J* = 1.6, 8.4 Hz, 1H), 6.94 (d, *J* = 8.4 Hz, 1H), 1.90 (s, 3H), 1.86 (s, 3H).	432.1
64		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.57-7.47 (m, 2H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.07-7.04 (m, 1H), 7.03 (d, *J* = 1.6 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.35 (s, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	416.1
65		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.53 (d, *J* = 3.6 Hz, 1H), 7.52 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.08-7.05 (m, 1H), 7.04-7.02 (m, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	416.1
66		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-fluoro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.96 (s, 1H), 9.69 (s, 1H), 8.42 (d, *J* = 4.0 Hz, 1H), 8.04-7.94 (m, 2H), 7.53 (d, *J* = 8.0 Hz, 1H), 7.27 (m, 1H), 7.13 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.76 (dd, *J* = 8.0, 4.0 Hz, 1H), 1.83 (s, 3H), 1.75 (s, 3H).	416.1
67		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-fluoro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 4.0 Hz, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.60 (s, 1H), 7.47 (d, *J* = 8.0 Hz, 1H), 7.26 (m, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.75 (dd, *J* = 8.0, 4.0 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	416.1
68		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-1H-	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 2.8 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 7.13-7.07 (m, 1H), 6.97 (dd, *J* = 4.4, 8.0 Hz, 2H), 5.76 (d, *J* = 7.6 Hz, 1H), 4.95 (d, *J* = 6.0 Hz, 2H), 4.66 (d, *J* = 6.0	483.2

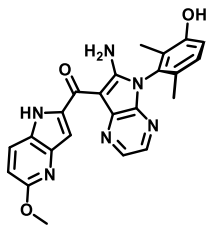
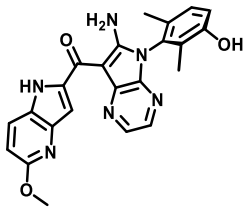
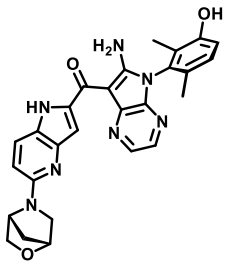
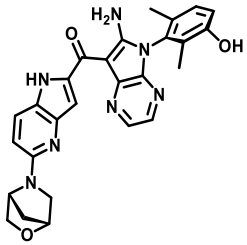
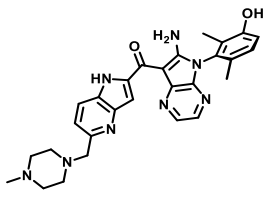
		indol-2-yl)methanone	Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.77 (s, 3H).	
69		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 2.8 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 7.13-7.07 (m, 1H), 6.97 (dd, *J* = 4.4, 8.0 Hz, 2H), 5.76 (d, *J* = 7.6 Hz, 1H), 4.95 (d, *J* = 6.0 Hz, 2H), 4.66 (d, *J* = 6.0 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.77 (s, 3H).	483.2
70		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((S)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.50 (s, 1H), 7.16 (dd, *J* = 6.4, 8.0 Hz, 2H), 7.02-6.96 (m, 2H), 6.65 (d, *J* = 7.6 Hz, 1H), 4.02-3.93 (m, 1H), 3.63 (d, *J* = 4.8 Hz, 2H), 3.47 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.39 (d, *J* = 6.4 Hz, 3H).	485.2
71		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((S)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.50 (s, 1H), 7.16 (dd, *J* = 6.4, 8.0 Hz, 2H), 7.02-6.96 (m, 2H), 6.65 (d, *J* = 7.2 Hz, 1H), 4.04-3.92 (m, 1H), 3.63 (d, *J* = 4.8 Hz, 2H), 3.47 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.39 (d, *J* = 6.4 Hz, 3H).	485.2
72		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((1-methoxy-2-methylpropan-2-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.46 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.51 (s, 1H), 7.35 (d, *J* = 8.0 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 7.6 Hz, 1H), 7.00-6.93 (m, 2H), 3.44 (s, 2H), 3.42 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.41 (s, 6H)	499.2
73		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((1-methoxy-2-methylpropan-2-yl)amino)-1H-	^{1}H NMR (400 MHz, MeOD): δ 8.46 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.51 (s, 1H), 7.36 (d, *J* = 8.0 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.04-7.00 (m, 1H), 7.00-6.92 (m, 2H), 3.44 (s, 2H), 3.42 (s, 3H),	499.2

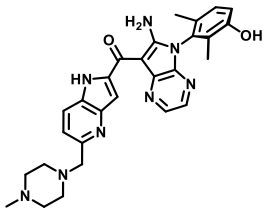
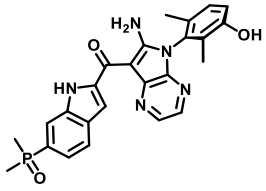
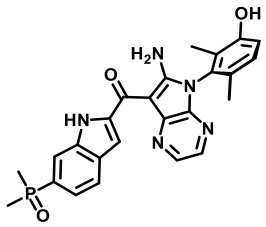
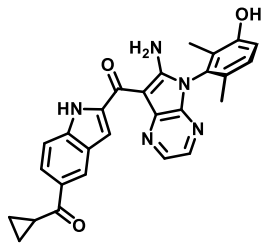
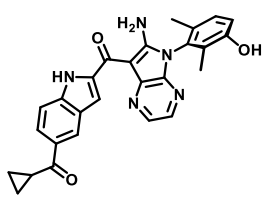
		indol-2-yl)methanone	1.93 (s, 3H), 1.88 (s, 3H), 1.41 (s, 6H)	
74		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.53 (d, *J* = 8.8 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.79 (s, 1H), 6.78-6.74 (m, 1H), 4.01 (dd, *J* = 6.8, 8.8 Hz, 2H), 3.72 (dd, *J* = 3.6, 8.8 Hz, 2H), 3.52 (dd, *J* = 7.2, 9.6 Hz, 2H), 3.35 (dd, *J* = 2.8, 9.6 Hz, 2H), 3.15-3.10 (m, 2H), 1.92 (s, 3H), 1.87 (s, 3H).	509.2
75		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.53 (d, *J* = 8.8 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.78 (s, 1H), 6.78-6.75 (m, 1H), 4.01 (dd, *J* = 6.8, 8.8 Hz, 2H), 3.72 (dd, *J* = 3.6, 8.8 Hz, 2H), 3.52 (dd, *J* = 7.2, 9.6 Hz, 2H), 3.35 (dd, *J* = 2.4, 9.6 Hz, 2H), 3.16-3.08 (m, 2H), 1.92 (s, 3H), 1.87 (s, 3H).	509.2
76		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-chloro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.61 (d, *J* = 8.4 Hz, 1H), 7.59 (d, *J* = 0.8 Hz, 1H), 7.26 (t, *J* = 8.0 Hz, 1H), 7.20-7.11 (m, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	432.1
77		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-chloro-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.61 (d, *J* = 8.4 Hz, 1H), 7.59 (d, *J* = 0.8 Hz, 1H), 7.26 (t, *J* = 8.0 Hz, 1H), 7.20-7.11 (m, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	432.1
78		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-	^{1}H NMR (400 MHz, DMSO-d_6): δ 12.85 (s, 1H), 9.66 (s, 1H), 8.38 (d, *J* = 4.0 Hz, 1H), 7.92 (d, *J* = 4.0 Hz, 1H), 7.90 (s, 1H), 7.44 (d,	483.2

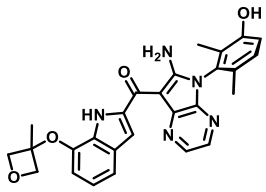
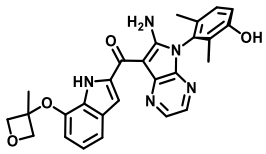
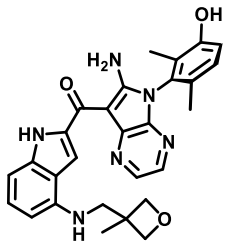
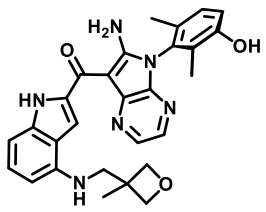
		yl)(6-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	J = 8.0 Hz, 1H), 7.12 (d, J = 8.0 Hz, 1H), 6.97 (d, J = 8.0 Hz, 1H), 6.44 - 6.42 (dd, J = 4.0, 8.0 Hz, 1H), 6.29 (s, 1H), 6.20 (s, 1H), 4.70 (d, J = 4.0 Hz, 2H), 4.53 (d, J = 4.0 Hz, 2H), 1.81 (s, 3H), 1.74 (s, 3H), 1.64 (s, 3H).	
79		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 12.86 (s, 1H), 9.67 (s, 1H), 8.38 (d, J = 4.0 Hz, 1H), 7.93 (d, J = 4.0 Hz, 1H), 7.90 (s, 1H), 7.45 (d, J = 8.0 Hz, 1H), 7.12 (d, J = 8.0 Hz, 1H), 6.97 (d, J = 8.0 Hz, 1H), 6.43 (d, J = 8.0 Hz, 1H), 6.30 (s, 1H), 6.20 (s, 1H), 4.70 (d, J = 4.0 Hz, 2H), 4.53 (d, J = 4.0 Hz, 2H), 1.81 (s, 3H), 1.74 (s, 3H), 1.64 (s, 3H).	483.2
80		(6-((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, J = 3.2 Hz, 1H), 7.94 (d, J = 3.2 Hz, 1H), 7.54 (d, J = 8.8 Hz, 1H), 7.48 (s, 1H), 7.16 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 6.76 (s, 1H), 6.68 (dd, J = 1.6, 8.8 Hz, 1H), 4.67 (d, J = 18.4 Hz, 2H), 4.00-3.95 (m, 1H), 3.94-3.88 (m, 1H), 3.69 (d, J = 8.8 Hz, 1H), 3.22 (d, J = 9.2 Hz, 1H), 2.12-2.06 (m, 1H), 2.03-1.96 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	495.2
81		(6-((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, J = 3.2 Hz, 1H), 7.94 (d, J = 3.2 Hz, 1H), 7.54 (d, J = 8.8 Hz, 1H), 7.48 (s, 1H), 7.16 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 6.76 (s, 1H), 6.68 (dd, J = 1.6, 8.8 Hz, 1H), 4.67 (d, J = 18.4 Hz, 2H), 4.00-3.95 (m, 1H), 3.94-3.88 (m, 1H), 3.69 (d, J = 8.8 Hz, 1H), 3.22 (d, J = 9.2 Hz, 1H), 2.12-2.06 (m, 1H), 2.03-1.96 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	495.2
82		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, J = 3.2 Hz, 1H), 7.94 (d, J = 3.2 Hz, 1H), 7.58 (s, 1H), 7.22-7.10 (m, 2H), 7.03-6.94 (m, 2H),	497.2

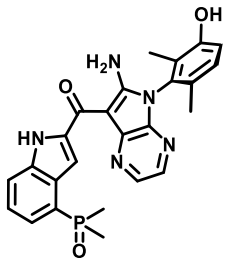
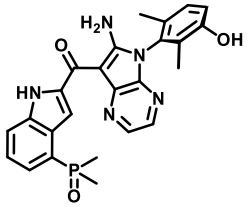
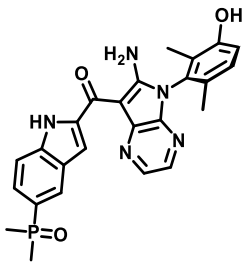
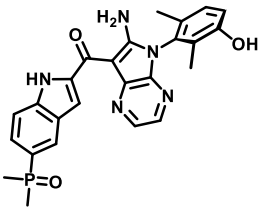
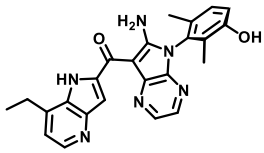
		yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	6.63 (d, *J* = 7.6 Hz, 1H), 4.81 (d, *J* = 6.0 Hz, 2H), 4.54 (d, *J* = 6.0 Hz, 2H), 3.51 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.56 (s, 3H).	
83		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.15 (dd, *J* = 8.4, 10.8 Hz, 2H), 7.03-6.94 (m, 2H), 6.63 (d, *J* = 7.6 Hz, 1H), 4.81 (d, *J* = 6.0 Hz, 2H), 4.54 (d, *J* = 6.0 Hz, 2H), 3.51 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.56 (s, 3H).	497.2
84		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyltetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.17 (t, *J* = 7.6 Hz, 2H), 7.01-6.95 (m, 2H), 6.72 (d, *J* = 7.6 Hz, 1H), 4.18 (d, *J* = 8.4 Hz, 1H), 4.11 (d, *J* = 7.2 Hz, 1H), 3.99 (d, *J* = 6.0 Hz, 1H), 3.81 (d, *J* = 8.6 Hz, 1H), 2.62-2.52 (m, 1H), 2.15-2.07 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.67 (s, 3H).	497.2
85		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyltetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.976 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.14 (t, *J* = 7.6 Hz, 2H), 7.01-6.95 (m, 2H), 6.72 (d, *J* = 7.6 Hz, 1H), 4.18 (d, *J* = 8.4 Hz, 1H), 4.10 (d, *J* = 7.2 Hz, 1H), 3.99 (d, *J* = 6.0 Hz, 1H), 3.81 (d, *J* = 8.6 Hz, 1H), 2.62-2.52 (m, 1H), 2.15-2.07 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.66 (s, 3H).	497.2
86		(6-(3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.57 (d, *J* = 8.8 Hz, 1H), 7.49 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.04 (s, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.88 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.25 (s, 2H), 3.99 (d, *J* = 10.8 Hz, 2H), 3.58 (d, *J* = 10.8 Hz, 2H), 2.08 (s, 4H), 1.92 (s, 3H), 1.87 (s, 3H).	509.2

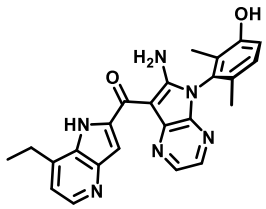
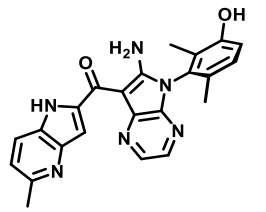
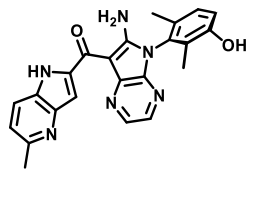
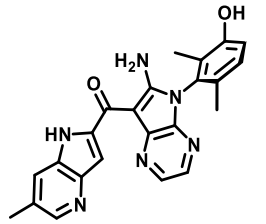
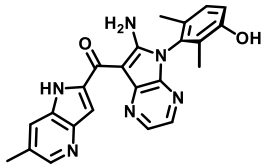
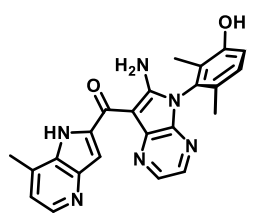
87		(6-(3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 2.8 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.57 (d, *J* = 8.8 Hz, 1H), 7.49 (s, 1H), 7.16 (d, *J* = 8.8 Hz, 1H), 7.04 (s, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.88 (dd, *J* = 1.6, 9.2 Hz, 1H), 4.25 (s, 2H), 3.99 (d, *J* = 10.8 Hz, 2H), 3.58 (d, *J* = 10.8 Hz, 2H), 2.08 (s, 4H), 1.92 (s, 3H), 1.87 (s, 3H).	509.2
88		(6-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.54 (d, *J* = 8.8 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.76 (s, 1H), 6.68 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.68 (d, *J* = 17.6 Hz, 2H), 4.01-3.88 (m, 2H), 3.72-3.65 (m, 1H), 3.23 (d, *J* = 9.6 Hz, 1H), 2.12-1.98 (m, 2H), 1.92 (s, 3H), 1.87 (s, 3H).	495.2
89		(6-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.94 (d, *J* = 3.2 Hz, 1H), 7.54 (d, *J* = 8.8 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.76 (s, 1H), 6.68 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.68 (d, *J* = 18.0 Hz, 2H), 4.00-3.90 (m, 2H), 3.69 (d, *J* = 9.6 Hz, 1H), 3.23 (d, *J* = 9.6 Hz, 1H), 2.11-1.99 (m, 2H), 1.92 (s, 3H), 1.87 (s, 3H).	495.2
90		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 8.19 (d, *J* = 2.4 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.71 (d, *J* = 2.4 Hz, 1H), 7.66 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.98 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	429.2
91		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 8.09 (d, *J* = 2.4 Hz, 1H), 7.88 (d, *J* = 3.2 Hz, 1H), 7.61 (d, *J* = 2.0 Hz, 1H), 7.56 (s, 1H), 7.06 (d, *J* = 8.4 Hz, 1H), 6.88 (d, *J* =	429.2

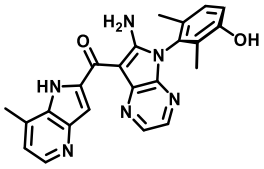
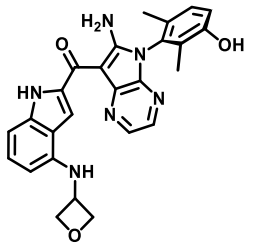
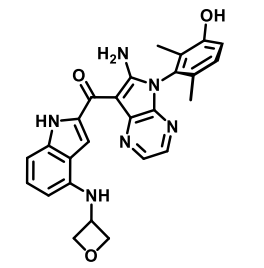
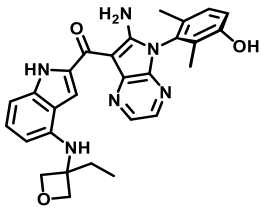
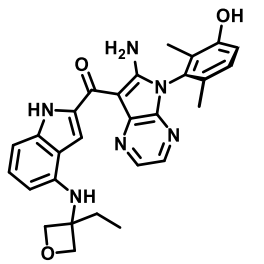
		b]pyridin-2-yl)methanone	8.4 Hz, 1H), 3.88 (s, 3H), 1.83 (s, 3H), 1.78 (s, 3H).	
92		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 2.6 Hz, 1H), 8.01 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 2.6 Hz, 1H), 7.51 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.80 (d, *J* = 8.8 Hz, 1H), 3.98 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	429.2
93		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 2.6 Hz, 1H), 8.01 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 2.6 Hz, 1H), 7.51 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.80 (d, *J* = 8.8 Hz, 1H), 3.98 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	429.2
94		(5-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.00 - 7.88 (m, 2H), 7.41 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.74 (d, *J* = 9.2 Hz, 1H), 4.92 (s, 1H), 4.72 (s, 1H), 3.92 (d, *J* = 2.4 Hz, 2H), 3.68 (d, *J* = 9.6 Hz, 1H), 3.44 (d, *J* = 9.6 Hz, 1H), 2.10-2.05 (m, 1H), 2.03-1.97 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	496.2
95		(5-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.99 - 7.92 (m, 2H), 7.41 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.74 (d, *J* = 9.2 Hz, 1H), 4.92 (s, 1H), 4.72 (s, 1H), 3.92 (d, *J* = 2.4 Hz, 2H), 3.68 (d, *J* = 9.6 Hz, 1H), 3.44 (d, *J* = 9.6 Hz, 1H), 2.10-2.05 (m, 1H), 2.02-1.98 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	496.2
96		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.14 (d, *J* = 8.4 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.70 (s, 1H), 7.50 (d, *J* = 8.4 Hz, 1H), 7.17 (d, *J* = 8.8 Hz, 1H), 6.99 (d, *J* = 8.8 Hz, 1H), 3.80 (s, 2H), 2.64-2.53 (m, 8H), 2.29 (s,	511.2

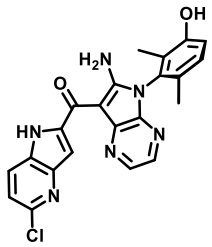
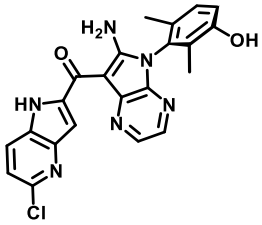
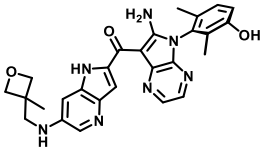
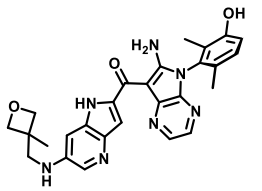
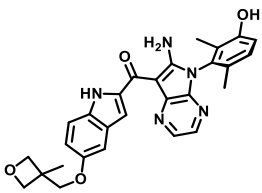
		b]pyridin-2-yl)methanone	3H), 1.93 (s, 3H), 1.88 (s, 3H).	
97		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.15 (d, *J* = 8.4 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.71 (s, 1H), 7.50 (d, *J* = 8.4 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.81 (s, 2H), 2.71-2.51 (m, 8H), 2.31 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	511.2
98		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(dimethylphosphoryl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (d, *J* = 3.2 Hz, 1H), 8.20 (d, *J* = 13.6 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.90 (dd, *J* = 2.8, 8.4 Hz, 1H), 7.62 (s, 1H), 7.52-7.42 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.89 (s, 3H), 1.88 (s, 3H), 1.86 (s, 3H)	474.2
99		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(dimethylphosphoryl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (d, *J* = 3.2 Hz, 1H), 8.20 (d, *J* = 13.6 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.90 (dd, *J* = 2.8, 8.4 Hz, 1H), 7.62 (s, 1H), 7.52-7.42 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.89 (s, 3H), 1.88 (s, 3H), 1.86 (s, 3H)	474.2
100		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropanecarbonyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.61 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.01 (dd, *J* = 1.6, 8.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.78-7.71 (m, 2H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.09-2.88 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.21-1.14 (m, 2H), 1.14-1.05 (m, 2H).	466.2
101		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropanecarbonyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.61 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.01 (dd, *J* = 1.6, 8.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.78-7.71 (m, 2H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.09-2.88 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H),	466.2

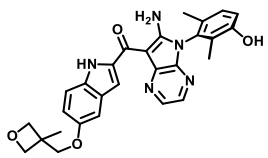
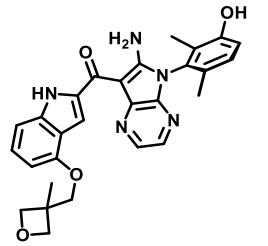
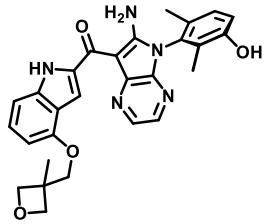
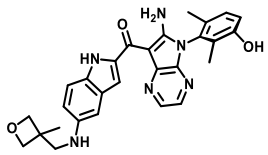
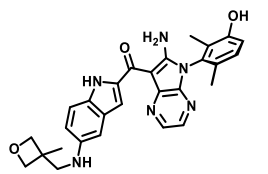
			1.21-1.14 (m, 2H), 1.14-1.05 (m, 2H).	
102		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.08 (s, 1H), 9.72-9.60 (m, 1H), 8.28 (d, J = 3.2 Hz, 1H), 8.01 (d, J = 3.2 Hz, 1H), 7.36-7.30 (m, 2H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 2H), 6.44 (d, J = 7.6 Hz, 1H), 4.97 (d, J = 6.8 Hz, 2H), 4.75 (d, J = 6.8 Hz, 2H), 1.83 (s, 3H), 1.81 (s, 3H), 1.76 (s, 3H).	484.2
103		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.08 (s, 1H), 9.68 (d, J = 3.2 Hz, 1H), 8.28 (d, J = 3.2 Hz, 1H), 8.01 (d, J = 3.2 Hz, 1H), 7.37-7.31 (m, 2H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.0 Hz, 2H), 6.44 (d, J = 7.6 Hz, 1H), 4.97 (d, J = 6.8 Hz, 2H), 4.75 (d, J = 6.8 Hz, 2H), 1.83 (s, 3H), 1.81 (s, 3H), 1.76 (s, 3H).	484.2
104		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, J = 3.2 Hz, 1H), 7.95 (d, J = 3.2 Hz, 1H), 7.68 (s, 1H), 7.20-7.10 (m, 2H), 6.96 (dd, J = 8.4, 16.0 Hz, 2H), 6.23 (d, J = 7.6 Hz, 1H), 4.71 (d, J = 5.6 Hz, 2H), 4.43 (d, J = 5.6 Hz, 2H), 3.49 (s, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.47 (s, 3H).	497.2
105		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, J = 3.2 Hz, 1H), 7.95 (d, J = 3.2 Hz, 1H), 7.67 (s, 1H), 7.18-7.12 (m, 2H), 6.96 (dd, J = 8.4, 16.0 Hz, 2H), 6.23 (d, J = 7.6 Hz, 1H), 4.71 (d, J = 5.6 Hz, 2H), 4.43 (d, J = 5.6 Hz, 2H), 3.49 (s, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.47 (s, 3H).	497.2

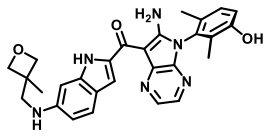
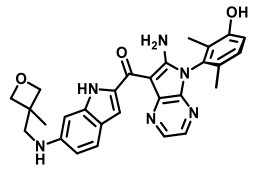
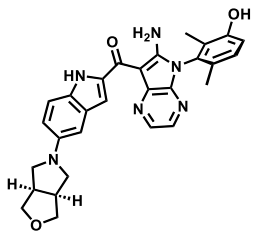
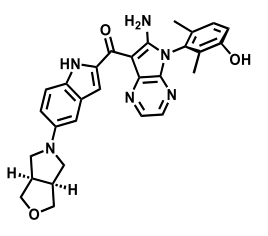
106		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(dimethylphosphoryl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.97-7.92 (m, 2H), 7.63 (dd, *J* = 7.2, 13.6 Hz, 1H), 7.51-7.43 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 1.99 (s, 3H), 1.95 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	474.2
107		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(dimethylphosphoryl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.97-7.91 (m, 2H), 7.63 (dd, *J* = 7.2, 14.0 Hz, 1H), 7.54-7.43 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 1.99 (s, 3H), 1.96 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	474.2
108		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylphosphoryl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.96 (s, 1H), 9.69 (s, 1H), 9.04-8.54 (m, 2H), 8.42 (d, *J* = 2.4 Hz, 1H), 8.20 (d, *J* = 12.4 Hz, 1H), 8.04 (s, 1H), 7.99 (d, *J* = 2.4 Hz, 1H), 7.81 (d, *J* = 8.4 Hz, 1H), 7.65 (t, *J* = 9.2 Hz, 1H), 7.13 (d, *J* = 8.0 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.70 (s, 3H), 1.67 (s, 3H).	474.2
109		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylphosphoryl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.96 (s, 1H), 9.70 (s, 1H), 9.07-8.50 (m, 2H), 8.42 (d, *J* = 2.8 Hz, 1H), 8.19 (d, *J* = 12.4 Hz, 1H), 8.03 (s, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.81 (d, *J* = 7.6 Hz, 1H), 7.64 (t, *J* = 9.2 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.70 (s, 3H), 1.67 (s, 3H).	474.2
110		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-ethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.6 Hz, 2H), 8.06 (d, *J* = 2.8 Hz, 1H), 7.58 (s, 1H), 7.25 (d, *J* = 4.8 Hz, 1H), 7.20 (d, *J* = 8.4 Hz, 1H), 7.03 (d, *J* = 8.4 Hz, 1H), 3.25 (q, *J* = 7.6 Hz, 2H), 1.96 (s, 3H), 1.91 (s, 3H), 1.62 (t, *J* = 7.6 Hz, 3H).	427.2

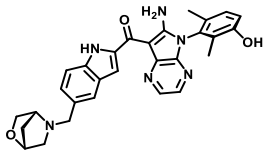
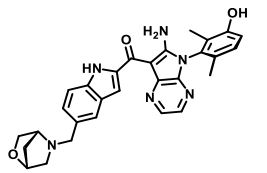
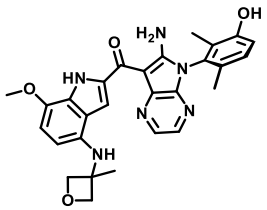
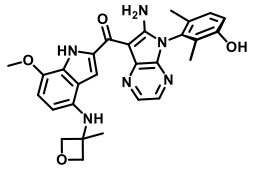
111		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-ethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.6 Hz, 2H), 8.06 (d, *J* = 2.8 Hz, 1H), 7.58 (s, 1H), 7.25 (d, *J* = 4.8 Hz, 1H), 7.20 (d, *J* = 8.4 Hz, 1H), 7.03 (d, *J* = 8.4 Hz, 1H), 3.25 (q, *J* = 7.6 Hz, 2H), 1.96 (s, 3H), 1.91 (s, 3H), 1.62 (t, *J* = 7.6 Hz, 3H).	427.2
112		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.07 (d, *J* = 8.4 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.62 (s, 1H), 7.25 (d, *J* = 8.4 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.66 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H)	413.2
113		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.06 (d, *J* = 8.4 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.62 (s, 1H), 7.25 (d, *J* = 8.4 Hz, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.65 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	413.2
114		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.34 (d, *J* = 1.6 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.98 (s, 1H), 7.68 (s, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 2.56 (s, 3H), 1.94 (s, 3H), 1.90 (s, 3H).	413.2
115		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.34 (d, *J* = 1.6 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.98 (s, 1H), 7.68 (s, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 2.56 (s, 3H), 1.94 (s, 3H), 1.90 (s, 3H).	413.2
116		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.34 (d, *J* = 4.8 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.54 (s, 1H), 7.23 (d, *J* = 4.8 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.83 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	413.2

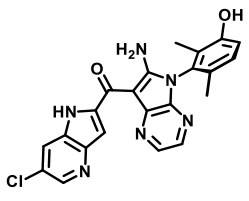
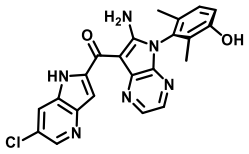
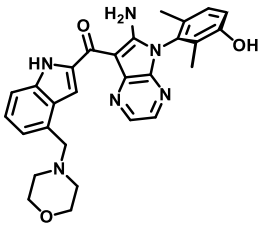
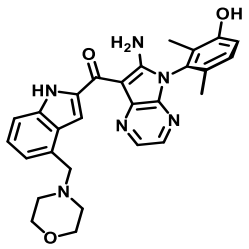
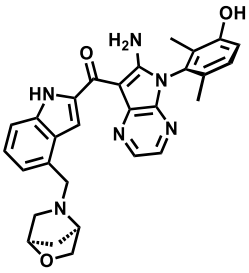
117		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.34 (d, *J* = 4.8 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.54 (s, 1H), 7.23 (d, *J* = 4.8 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.83 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	413.2
118		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(oxetan-3-ylamino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 2.8 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.67 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.14-7.09 (m, 1H), 6.99 (t, *J* = 8.0 Hz, 2H), 5.93 (d, *J* = 7.6 Hz, 1H), 5.08 (t, *J* = 6.4 Hz, 2H), 4.80 (d, *J* = 6.4 Hz, 1H), 4.76 -4.70 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	469.2
119		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(oxetan-3-ylamino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 2.8 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.67 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.14-7.09 (m, 1H), 6.99 (t, *J* = 8.0 Hz, 2H), 5.93 (d, *J* = 7.6 Hz, 1H), 5.08 (t, *J* = 6.4 Hz, 2H), 4.80 (d, *J* = 6.4 Hz, 1H), 4.76 -4.70 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	469.2
120		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-ethyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.65 (d, *J* = 0.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.08 (s, 1H), 7.01-6.93 (m, 2H), 5.71 (d, *J* = 7.6 Hz, 1H), 4.90 (d, *J* = 6.0 Hz, 2H), 4.68 (d, *J* = 6.0 Hz, 2H), 2.24 (q, *J* = 7.2 Hz, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 0.93 (t, *J* = 7.2 Hz, 3H).	497.2
121		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-ethyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.65 (d, *J* = 0.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.08 (s, 1H), 7.01-6.93 (m, 2H), 5.71 (d, *J* = 7.6 Hz, 1H), 4.90 (d, *J* = 6.0 Hz, 2H), 4.68 (d, *J* = 6.0 Hz, 2H), 2.24 (q, *J* = 7.2 Hz, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 0.93 (t, *J* = 7.2 Hz, 3H).	497.2

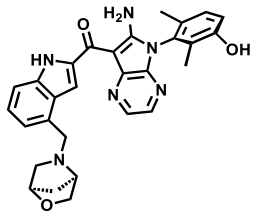
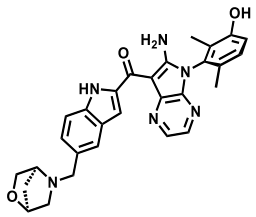
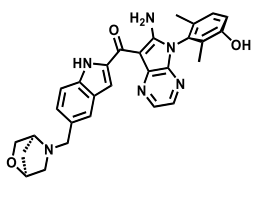
122		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.17 (d, *J* = 8.8 Hz, 1H), 7.99 (d, *J* = 2.8 Hz, 1H), 7.60 (s, 1H), 7.33 (d, *J* = 8.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	433.1
123		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.16 (d, *J* = 8.8 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.59 (s, 1H), 7.32 (d, *J* = 8.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	433.1
124		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.12 (d, *J* = 1.2 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.62 (s, 1H), 7.24 (d, *J* = 1.2 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 4.65 (d, *J* = 6.0 Hz, 2H), 4.48 (d, *J* = 6.0 Hz, 2H), 3.45 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.48 (s, 3H).	498.2
125		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.11 (d, *J* = 2.4 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.23 (d, *J* = 1.6 Hz, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.65 (d, *J* = 6.0 Hz, 2H), 4.48 (d, *J* = 6.0 Hz, 2H), 3.45 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.48 (s, 3H).	498.2
126		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.57 (d, *J* = 9.2 Hz, 1H), 7.46 (s, 1H), 7.23 (d, *J* = 2.0 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.05 (dd, *J* = 2.4, 8.8 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.73 (d, *J* = 6.0 Hz, 2H), 4.48 (d, *J* = 6.0 Hz, 2H), 4.09 (s, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.48 (s, 3H).	498.2

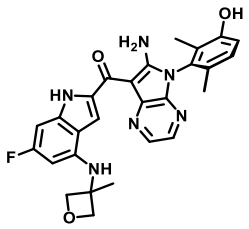
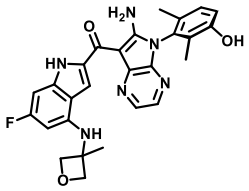
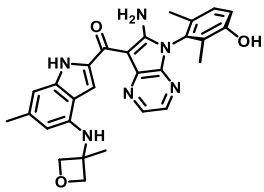
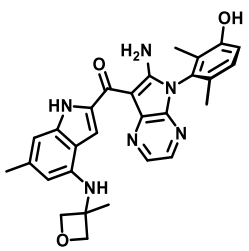
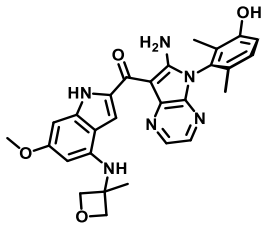
127		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.57 (d, *J* = 8.8 Hz, 1H), 7.46 (s, 1H), 7.23 (d, *J* = 2.4 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.05 (dd, *J* = 2.4, 8.8 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.73 (d, *J* = 6.0 Hz, 2H), 4.48 (d, *J* = 6.0 Hz, 2H), 4.09 (s, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.48 (s, 3H).	498.2
128		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.65 (s, 1H), 7.28-7.21 (m, 2H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.61 (dd, *J* = 2.4, 6.0 Hz, 1H), 4.79 (d, *J* = 6.0 Hz, 2H), 4.53 (d, *J* = 6.0 Hz, 2H), 4.23 (s, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.55 (s, 3H).	498.2
129		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.65 (s, 1H), 7.29-7.21 (m, 2H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.61 (dd, *J* = 2.0, 6.0 Hz, 1H), 4.79 (d, *J* = 6.0 Hz, 2H), 4.52 (d, *J* = 6.0 Hz, 2H), 4.23 (s, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.55 (s, 3H).	498.2
130		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.46 (d, *J* = 8.8 Hz, 1H), 7.34 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.95 (dd, *J* = 2.4, 8.8 Hz, 1H), 6.89 (d, *J* = 2.4 Hz, 1H), 4.64 (d, *J* = 6.0 Hz, 2H), 4.43 (d, *J* = 6.0 Hz, 2H), 3.36 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.46 (s, 3H).	497.2
131		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3-methyloxetan-3-	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.46 (d, *J* = 8.8 Hz, 1H), 7.34 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.95 (dd, *J* =	497.2

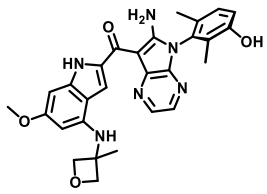
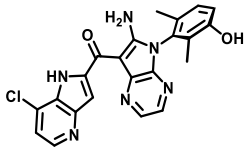
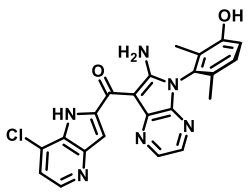
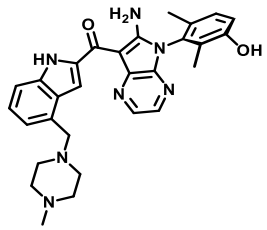
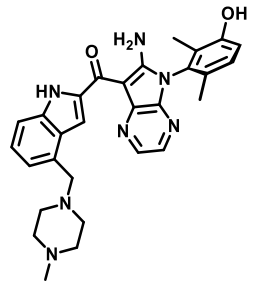
		yl)methyl)amino)-1H-indol-2-yl)methanone	2.0, 8.8 Hz, 1H), 6.89 (d, *J* = 2.0 Hz, 1H), 4.64 (d, *J* = 6.0 Hz, 2H), 4.43 (d, *J* = 6.0 Hz, 2H), 3.36 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.46 (s, 3H).	
132		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.93 (d, *J* = 3.2 Hz, 1H), 7.46 (s, 1H), 7.44 (d, *J* = 8.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.75 (d, *J* = 2.0 Hz, 1H), 6.68 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.65 (d, *J* = 6.0 Hz, 2H), 4.46 (d, *J* = 6.0 Hz, 2H), 3.43 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.47 (s, 3H).	497.2
133		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.93 (d, *J* = 3.2 Hz, 1H), 7.59 (s, 1H), 7.43 (d, *J* = 8.8 Hz, 2H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.75 (d, *J* = 2.0 Hz, 1H), 6.68 (dd, *J* = 2.0, 8.8 Hz, 1H), 4.65 (d, *J* = 6.0 Hz, 2H), 4.46 (d, *J* = 6.0 Hz, 2H), 3.43 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.47 (s, 3H).	497.2
134		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.53 (d, *J* = 9.2 Hz, 1H), 7.39 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.05 (dd, *J* = 2.0, 9.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.95 (d, *J* = 2.0 Hz, 1H), 4.00-3.96 (m, 2H), 3.70 (dd, *J* = 3.2, 9.2 Hz, 2H), 3.42-3.38 (m, 2H), 3.24 (dd, *J* = 3.2, 9.2 Hz, 2H), 3.09-3.05 (m, 2H), 1.92 (s, 3H), 1.87 (s, 3H).	509.2
135		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.53 (d, *J* = 8.8 Hz, 1H), 7.39 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.04 (dd, *J* = 2.0, 8.8 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.95 (d, *J* = 2.0 Hz, 1H), 4.00-3.96 (m, 2H), 3.70 (dd, *J* = 3.2, 9.2 Hz, 2H), 3.42-3.78 (m,	509.2

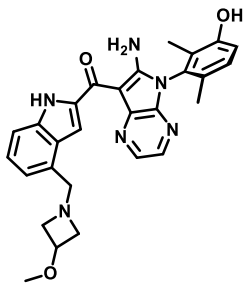
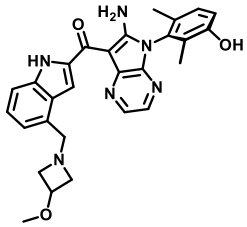
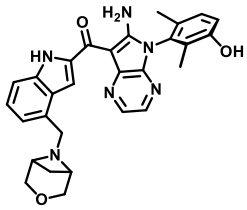
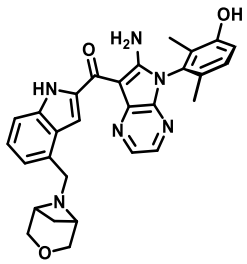
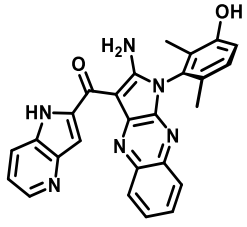
			2H), 3.24 (dd, *J* = 3.2, 9.2 Hz, 2H), 3.08-3.04 (m, 2H), 1.92 (s, 3H), 1.87 (s, 3H).	
136		(5-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.84 (s, 1H), 9.69 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.80 (s, 1H), 7.68-7.54 (m, 2H), 7.31 (d, *J* = 9.2 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 4.37 (s, 1H), 3.98 (d, *J* = 7.6 Hz, 1H), 3.88-3.75 (m, 2H), 3.58-3.52 (m, 1H), 3.49 (s, 1H), 2.78 (d, *J* = 9.6 Hz, 1H), 2.47 (s, 1H), 1.83 (s, 4H), 1.76 (s, 3H), 1.61 (d, *J* = 8.8 Hz, 1H).	509.2
137		(5-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.84 (s, 1H), 9.69 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.80 (s, 1H), 7.68-7.54 (m, 2H), 7.31 (d, *J* = 9.2 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 4.37 (s, 1H), 3.98 (d, *J* = 7.6 Hz, 1H), 3.88-3.75 (m, 2H), 3.58-3.52 (m, 1H), 3.49 (s, 1H), 2.78 (d, *J* = 9.6 Hz, 1H), 2.47 (s, 1H), 1.83 (s, 4H), 1.76 (s, 3H), 1.61 (d, *J* = 8.8 Hz, 1H).	509.2
138		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.65 (d, *J* = 3.2 Hz, 1H), 8.25 (d, *J* = 3.2 Hz, 1H), 7.82 (s, 1H), 7.45 (d, *J* = 8.4 Hz, 1H), 7.27 (d, *J* = 8.4 Hz, 1H), 6.92 (d, *J* = 8.0 Hz, 1H), 6.04 (d, *J* = 8.0 Hz, 1H), 5.22 (d, *J* = 6.0 Hz, 2H), 4.92 (d, *J* = 6.0 Hz, 2H), 4.32 (s, 3H), 2.22 (s, 3H), 2.17 (s, 3H), 2.04 (s, 3H).	513.2
139		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.63 (d, *J* = 2.8 Hz, 1H), 8.24 (d, *J* = 3.2 Hz, 1H), 7.80 (s, 1H), 7.44 (d, *J* = 8.4 Hz, 1H), 7.25 (d, *J* = 8.4 Hz, 1H), 6.90 (d, *J* = 8.0 Hz, 1H), 6.02 (d, *J* = 8.0 Hz, 1H), 5.21 (d, *J* = 6.0 Hz, 2H), 4.90 (d, *J* = 6.0 Hz, 2H), 4.30 (s, 3H),	513.2

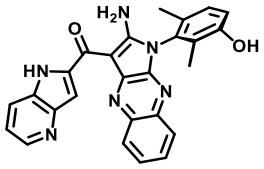
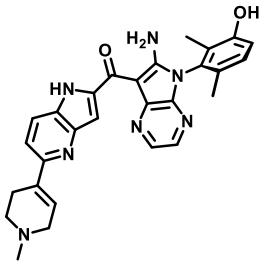
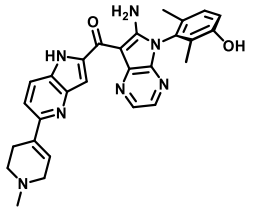
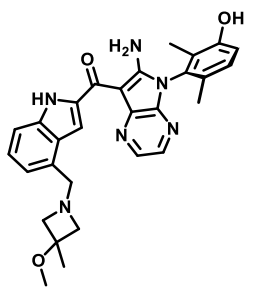
			2.20 (s, 3H), 2.15 (s, 3H), 2.02 (s, 3H).	
140		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34-8.29 (m, 2H), 8.17 (d, *J* = 1.2 Hz, 1H), 7.89 (d, *J* = 2.8 Hz, 1H), 7.62 (s, 1H), 7.07 (d, *J* = 8.4 Hz, 1H), 6.88 (d, *J* = 8.4 Hz, 1H), 1.83 (s, 3H), 1.78 (s, 3H).	433.1
141		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45-8.39 (m, 2H), 8.29 (d, *J* = 1.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.73 (d, *J* = 0.8 Hz, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	433.1
142		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.79 (d, *J* = 0.6 Hz, 1H), 7.61 (d, *J* = 8.4 Hz, 1H), 7.34-7.25 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 7.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.93 (s, 2H), 3.73 (t, *J* = 4.8 Hz, 4H), 2.63 (s, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	497.2
143		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.78 (s, 1H), 7.59 (d, *J* = 8.4 Hz, 1H), 7.35-7.23 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.10 (d, *J* = 7.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.87 (s, 2H), 3.71 (t, *J* = 4.8 Hz, 4H), 2.57 (s, 4H), 1.92 (s, 3H), 1.88 (s, 3H).	497.2
144		(4-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.94 (s, 1H), 9.69 (s, 1H), 8.41 (d, *J* = 2.8 Hz, 1H), 8.03-7.96 (m, 2H), 7.57 (d, *J* = 8.4 Hz, 1H), 7.23 (t, *J* = 7.6 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 7.07 (d, *J* = 7.2 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.38 (s, 1H), 4.13-3.95 (m, 3H), 3.55 (d, *J* = 7.2 Hz,	509.2

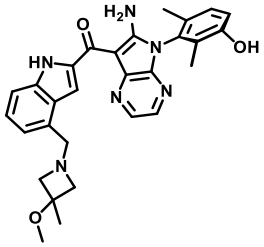
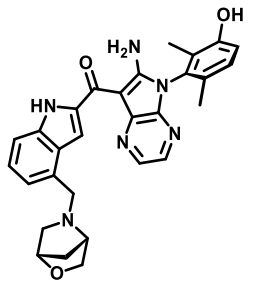
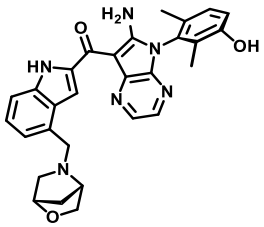
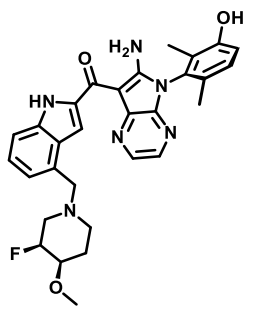
		b]pyrazin-7-yl)methanone	1H), 3.52 (s, 1H), 2.81 (d, *J* = 9.2 Hz, 1H), 2.53 (d, *J* = 10.0 Hz, 1H), 1.87 (d, *J* = 9.2 Hz, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.61 (d, *J* = 9.2 Hz, 1H).	
145		(4-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	1H NMR (400 MHz, DMSO-d_6): δ 13.94 (s, 1H), 9.69 (s, 1H), 8.41 (d, *J* = 2.8 Hz, 1H), 8.03-7.96 (m, 2H), 7.57 (d, *J* = 8.4 Hz, 1H), 7.23 (t, *J* = 7.6 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 7.07 (d, *J* = 7.2 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.38 (s, 1H), 4.13-3.95 (m, 3H), 3.55 (d, *J* = 7.2 Hz, 1H), 3.52 (s, 1H), 2.81 (d, *J* = 9.2 Hz, 1H), 2.53 (d, *J* = 10.0 Hz, 1H), 1.87 (d, *J* = 9.2 Hz, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.61 (d, *J* = 9.2 Hz, 1H).	509.2
146		(5-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.70 (s, 1H), 7.64 (d, *J* = 8.4 Hz, 1H), 7.54 (s, 1H), 7.39 (d, *J* = 8.4 Hz, 1H), 7.17 (d, *J* = 8.8 Hz, 1H), 6.98 (d, *J* = 8.8 Hz, 1H), 4.46 (s, 1H), 4.16 (d, *J* = 7.2 Hz, 1H), 3.94-3.86 (m, 2H), 3.65 (d, *J* = 7.2 Hz, 1H), 3.59 (s, 1H), 2.92 (d, *J* = 10.8 Hz, 1H), 2.73 (d, *J* = 10.8 Hz, 1H), 2.00 (d, *J* = 11.2 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.76 (d, *J* = 11.2 Hz, 1H).	509.2
147		(5-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.70 (s, 1H), 7.64 (d, *J* = 8.8 Hz, 1H), 7.54 (s, 1H), 7.39 (d, *J* = 8.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.46 (s, 1H), 4.16 (d, *J* = 8.0 Hz, 1H), 3.95-3.86 (m, 2H), 3.65 (d, *J* = 8.0 Hz, 1H), 3.59 (s, 1H), 2.92 (d, *J* = 10.4 Hz, 1H), 2.73 (d, *J* = 10.4 Hz, 1H), 2.00 (d, *J* = 10.0 Hz, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.76 (d, *J* = 10.0 Hz, 1H).	509.2

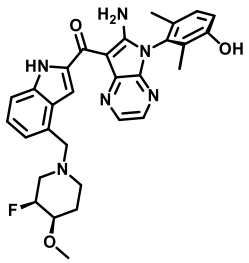
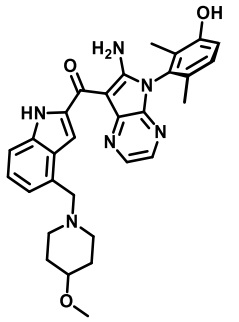
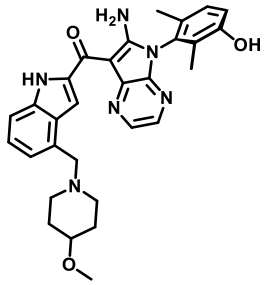
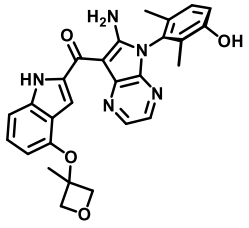
148		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 4.0 Hz, 1H), 7.94 (d, *J* = 4.0 Hz, 1H), 7.61 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.64 (d, *J* = 8.0 Hz, 1H), 5.53 (dd, *J* = 12.0, 4.0 Hz, 1H), 4.94 (d, *J* = 8.0 Hz, 2 H), 4.65 (d, *J* = 8.0 Hz, 2H), 1.92 (s, 3 H), 1.87 (s, 3H), 1.77 (s, 3H).	501.2
149		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 4.0 Hz, 1H), 7.94 (d, *J*=4.0 Hz, 1H), 7.61 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, J=8.0 Hz, 1H) 6.64 (d, *J* = 8.0 Hz, 1H), 5.53 (dd, *J* = 12.0, 4.0 Hz, 1H), 4.94 (d, *J* = 8.0 Hz, 2H), 4.65 (d, *J* = 8.0 Hz, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.77 (s, 3H).	501.2
150		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 2.8 Hz, 1H), 7.94 (d, *J* = 2.8 Hz, 1H), 7.56 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.78 (s, 1H), 5.60 (s, 1H), 4.95 (d, *J* = 6.0 Hz, 2H), 4.66 (d, *J* = 6.0 Hz, 2H), 2.39 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.77 (s, 3H).	497.2
151		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 2.8 Hz, 1H), 7.94 (d, *J* = 2.8 Hz, 1H), 7.56 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.78 (s, 1H), 5.60 (s, 1H), 4.95 (d, *J* = 6.0 Hz, 2H), 4.66 (d, *J* = 6.0 Hz, 2H), 2.39 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.77 (s, 3H).	497.2
152		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.59 (s, 1H), 7.19 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 8.4 Hz, 1H), 6.52 (s, 1H), 5.42 (d, *J* = 1.6 Hz, 1H), 4.96 (d, *J* = 6.0 Hz, 2H), 4.67 (d, *J* = 6.0 Hz, 2H), 3.89 (s, 3H), 1.95 (s, 3H), 1.90 (s, 3H), 1.79 (s, 3H).	513.2

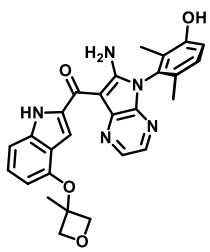
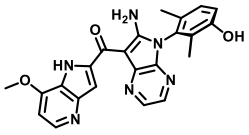
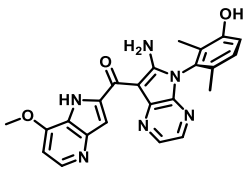
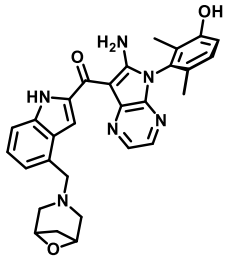
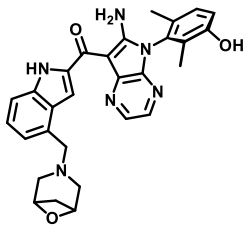
153		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.70 (d, *J* = 2.8 Hz, 1H), 8.23 (d, *J* = 3.2 Hz, 1H), 7.85 (s, 1H), 7.45 (d, *J* = 8.4 Hz, 1H), 7.27 (d, *J* = 8.4 Hz, 1H), 6.78 (s, 1H), 5.67 (s, 1H), 5.22 (d, *J* = 6.0 Hz, 2H), 4.93 (d, *J* = 6.0 Hz, 2H), 4.15 (s, 3H), 2.21 (s, 3H), 2.16 (s, 3H), 2.05 (s, 3H).	513.2
154		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 5.2 Hz, 1H), 8.40 (d, *J* = 3.2 Hz, 1H), 8.05 (d, *J* = 3.2 Hz, 1H), 7.60 (s, 1H), 7.48 (d, *J* = 5.2 Hz, 1H), 7.20 (d, *J* = 8.4 Hz, 1H), 7.02 (d, *J* = 8.4 Hz, 1H), 1.97 (s, 3H), 1.92 (s, 3H).	433.1
155		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 5.2 Hz, 1H), 8.40 (d, *J* = 3.2 Hz, 1H), 8.05 (d, *J* = 3.2 Hz, 1H), 7.60 (s, 1H), 7.48 (d, *J* = 5.2 Hz, 1H), 7.20 (d, *J* = 8.4 Hz, 1H), 7.02 (d, *J* = 8.4 Hz, 1H), 1.97 (s, 3H), 1.92 (s, 3H).	433.1
156		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.78 (d, *J* = 0.8 Hz, 1H), 7.59 (d, *J* = 8.4 Hz, 1H), 7.29 (dd, *J* = 7.2, 8.4 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.09 (d, *J* = 6.8 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.90 (s, 2H), 2.79-2.33 (m, 8H), 2.27 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	510.3
157		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.47 (s, 2H), 8.42 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.79 (s, 1H), 7.64 (d, *J* = 8.4 Hz, 1H), 7.34 - 7.28 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.10 (d, *J* = 6.8 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.01 (s, 2H), 3.18-3.01 (m, 4H), 2.99-2.73 (m, 4H), 2.71 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	510.3

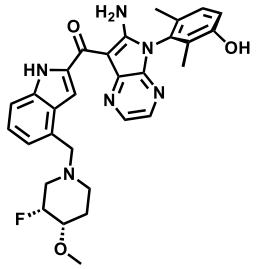
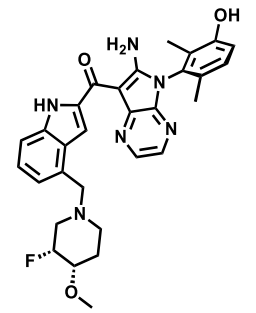
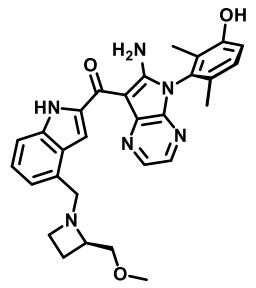
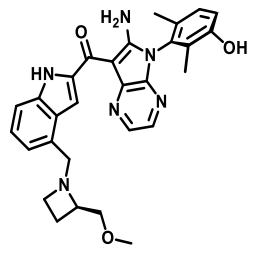
158		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.71 (s, 1H), 7.59 (d, *J* = 8.4 Hz, 1H), 7.30 (t, *J* = 7.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.05 (d, *J* = 7.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.06 (t, *J* = 5.6 Hz, 1H), 4.03 (s, 2H), 3.69-3.63 (m, 2H), 3.25 (s, 3H), 3.19-3.13 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	497.2
159		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.71 (s, 1H), 7.59 (d, *J* = 8.4 Hz, 1H), 7.30 (t, *J* = 7.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.05 (d, *J* = 7.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.07 (t, *J* = 5.6 Hz, 1H), 4.03 (s, 2H), 3.69-3.63 (m, 2H), 3.25 (s, 3H), 3.19-3.13 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	497.2
160		(4-((3-oxa-6-azabicyclo[3.1.1]heptan-6-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.80 (s, 1H), 7.63 (d, *J* = 8.4 Hz, 1H), 7.33 (t, *J* = 8.0 Hz, 1H), 7.20-7.15 (m, 2H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.44 (d, *J* = 11.2 Hz, 4H), 3.95-3.87 (m, 2H), 3.87-3.72 (m, 2H), 2.11-1.89 (m, 5H), 1.88 (s, 3H).	509.2
161		(4-((3-oxa-6-azabicyclo[3.1.1]heptan-6-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.80 (s, 1H), 7.62 (d, *J* = 8.2 Hz, 1H), 7.33 (t, *J* = 7.6 Hz, 1H), 7.17 (dd, *J* = 4.4, 7.6 Hz, 2H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.44 (d, *J* = 11.2 Hz, 4H), 3.88 (d, *J* = 9.2 Hz, 2H), 3.84-3.67 (m, 2H), 2.11-1.90 (m, 5H), 1.88 (s, 3H).	509.2
162		(S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]quinoxalin-3-yl)(1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.91 (s, 1H), 10.16-9.52 (m, 2H), 9.00-8.42 (m, 2H), 8.30 (d, *J* = 7.2 Hz, 2H), 7.95-7.79 (m, 2H), 7.71 (t, *J* = 7.2 Hz, 1H), 7.63-7.54 (m, 1H), 7.39-7.30 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H),	449.1

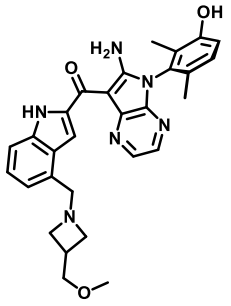
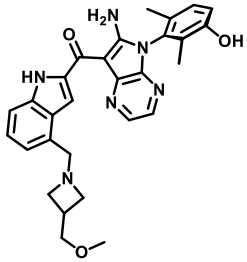
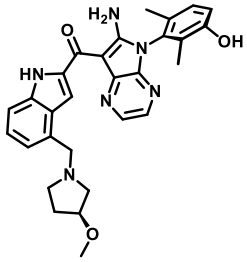
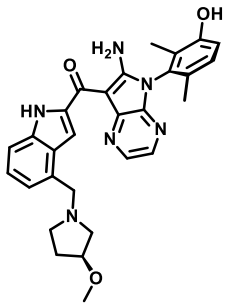
		b]pyridin-2-yl)methanone	7.03 (d, J = 8.4 Hz, 1H), 1.90 (s, 3H), 1.83 (s, 3H)	
163		(R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]quinoxalin-3-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.79 (s, 1H), 9.88 (s, 1H), 9.76 (s, 1H), 8.75-8.65 (m, 1H), 8.51 (d, J = 4.0 Hz, 1H), 8.38-8.27 (m, 2H), 7.98-7.82 (m, 2H), 7.73 (t, J = 7.2 Hz, 1H), 7.68-7.57 (m, 1H), 7.40-7.28 (m, 1H), 7.18 (d, J = 8.4 Hz, 1H), 7.05 (d, J = 8.4 Hz, 1H), 1.91 (s, 3H), 1.84 (s, 3H)	449.1
164		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.53 (s, 1H), 8.43 (d, J = 2.8 Hz, 1H), 8.16 (d, J = 8.8 Hz, 1H), 8.01 (d, J = 2.8 Hz, 1H), 7.76 (s, 1H), 7.66 (d, J = 8.8 Hz, 1H), 7.20 (d, J = 8.4 Hz, 1H), 7.02 (d, J = 8.4 Hz, 1H), 6.58 (s, 1H), 3.87 (s, 2H), 3.44 (t, J = 5.6 Hz, 2H), 3.11 (s, 2H), 2.94 (s, 3H), 1.96 (s, 3H), 1.91 (s, 3H).	494.2
165		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.82 (d, J = 2.8 Hz, 1H), 8.52 (d, J = 8.8 Hz, 1H), 8.39 (d, J = 3.2 Hz, 1H), 8.14 (s, 1H), 8.02 (d, J = 8.8 Hz, 1H), 7.58 (d, J = 8.4 Hz, 1H), 7.39 (d, J = 8.4 Hz, 1H), 6.97 (s, 1H), 3.88 (s, 2H), 3.43 (d, J = 5.2 Hz, 2H), 3.36 (s, 2H), 3.03 (s, 3H), 2.34 (s, 3H), 2.29 (s, 3H).	494.2
166		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxy-3-methylazetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, J = 3.2 Hz, 1H), 7.97 (d, J = 3.2 Hz, 1H), 7.72 (s, 1H), 7.59 (d, J = 8.4 Hz, 1H), 7.31 (t, J = 8.0 Hz, 1H), 7.17 (d, J = 8.4 Hz, 1H), 7.07 (d, J = 6.8 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 4.08 (s, 2H), 3.34 (s, 4H), 3.20 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.47 (s, 3H).	511.2

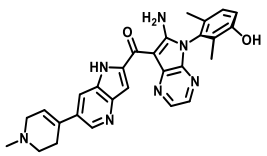
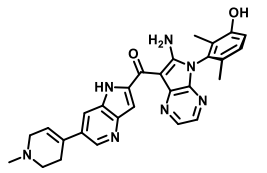
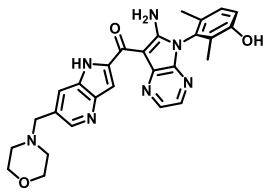
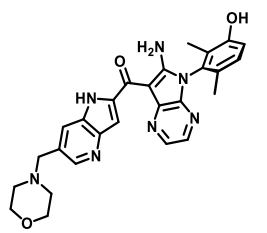
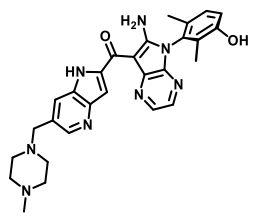
167		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxy-3-methylazetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.1 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.72 (s, 1H), 7.61 (d, *J* = 8.6 Hz, 1H), 7.36 - 7.26 (m, 1H), 7.16 (d, *J* = 8.2 Hz, 1H), 7.09 (d, *J* = 7.1 Hz, 1H), 6.98 (d, *J* = 8.3 Hz, 1H), 4.13 (s, 2H), 3.40 (s, 4H), 3.21 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.47 (s, 3H).	511.2
168		(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.80 (s, 1H), 7.60 (d, *J* = 8.4 Hz, 1H), 7.31 (t, *J* = 7.2 Hz, 1H), 7.17 (d, *J* = 7.2 Hz, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.48 (s, 1H), 4.23-4.14 (m, 3H), 3.68-3.66 (m, 2H), 2.99 (d, *J* = 10.8 Hz, 1H), 2.83 (d, *J* = 10.8 Hz, 1H), 2.08 (d, *J* = 10.4 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.79 (d, *J* = 10.4 Hz, 1H).	509.2
169		(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.81 (s, 1H), 7.62 (d, *J* = 8.4 Hz, 1H), 7.33 (t, *J* = 7.2 Hz, 1H), 7.19 (d, *J* = 7.2 Hz, 2H), 7.00 (d, *J* = 8.4 Hz, 1H), 4.50 (s, 1H), 4.25-4.15 (m, 3H), 3.70-3.68 (s, 2H), 3.00 (d, *J* = 10.4 Hz, 1H), 2.84 (d, *J* = 10.4 Hz, 1H), 2.09 (d, *J* = 11.2 Hz, 1H), 1.95 (s, 3H), 1.90 (s, 3H), 1.81 (d, *J* = 11.2 Hz, 1H).	509.2
170		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3S,4R)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.03 (s, 1H), 8.39 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.95 (s, 1H), 7.60 (d, *J* = 8.0 Hz, 1H), 7.24 (t, *J* = 7.6 Hz, 1H), 7.11 (d, *J* = 8.4 Hz, 1H), 7.04-6.97 (m, 2H), 4.88-4.66 (m, 1H), 3.87-3.78 (m, 2H), 3.50-3.28 (m, 3H), 2.94 (s, 1H), 2.67 (s, 1H), 2.54-2.17 (m, 4H), 1.82 (s, 3H), 1.77-1.62 (m, 5H).	543.2

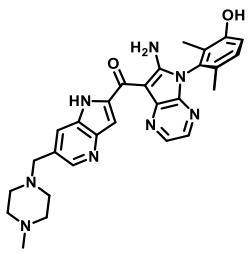
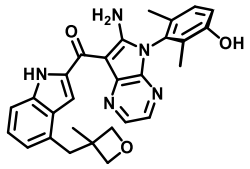
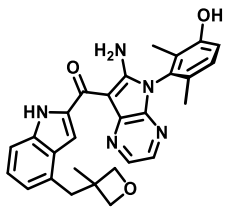
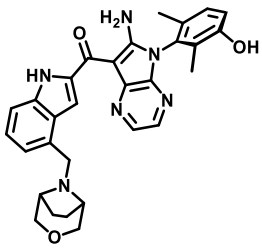
171		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3S,4R)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.03 (s, 1H), 8.39 (d, J = 3.2 Hz, 1H), 7.98 (d, J = 2.8 Hz, 1H), 7.95 (s, 1H), 7.60 (d, J = 8.0 Hz, 1H), 7.24 (t, J = 7.6 Hz, 1H), 7.11 (d, J = 8.4 Hz, 1H), 7.04-6.97 (m, 2H), 4.88-4.66 (m, 1H), 3.87-3.78 (m, 2H), 3.50-3.28 (m, 3H), 2.94 (s, 1H), 2.67 (s, 1H), 2.54-2.17 (m, 4H), 1.82 (s, 3H), 1.77-1.62 (m, 5H)	543.2
172		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, J = 3.2 Hz, 1H), 7.97 (d, J = 3.2 Hz, 1H), 7.77 (s, 1H), 7.61 (d, J = 8.4 Hz, 1H), 7.32 (t, J = 7.6 Hz, 1H), 7.17 (d, J = 8.4 Hz, 1H), 7.13 (d, J = 7.2 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 3.93 (s, 2H), 3.33 (s, 3H), 3.30-3.29 (m, 1H), 3.02 - 2.80 (m, 2H), 2.49-2.31 (m, 2H), 1.93 (s, 5H), 1.88 (s, 3H), 1.68-1.58 (m, 2H).	525.3
173		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, J = 3.2 Hz, 1H), 7.97 (d, J = 3.2 Hz, 1H), 7.77 (s, 1H), 7.64 (d, J = 8.4 Hz, 1H), 7.33 (t, J = 7.6 Hz, 1H), 7.16 (t, J = 7.2 Hz, 2H), 6.98 (d, J = 8.4 Hz, 1H), 4.03 (s, 2H), 3.33 (s, 3H), 3.30-3.30 (m, 1H), 3.10 -2.89 (m, 2H), 2.63-2.42 (m, 2H), 1.93 (s, 5H), 1.88 (s, 3H), 1.73-1.62 (m, 2H).	525.3
174		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, J = 2.8 Hz, 1H), 7.96 (d, J = 3.2 Hz, 1H), 7.59 (s, 1H), 7.32-7.24 (m, 1H), 7.21-7.13 (m, 2H), 6.98 (d, J = 8.4 Hz, 1H), 6.08 (d, J = 7.6 Hz, 1H), 5.03 (d, J = 6.8 Hz, 2H), 4.71 (d, J = 6.8 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.85 (s, 3H).	484.2

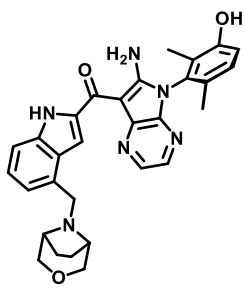
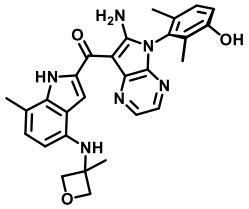
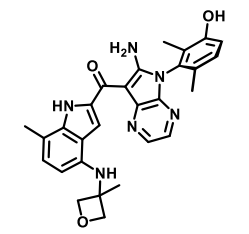
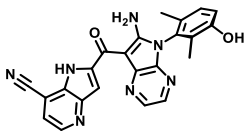
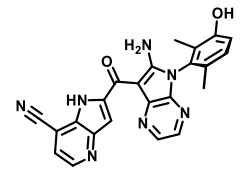
175		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.59 (s, 1H), 7.31-7.24 (m, 1H), 7.22-7.14 (m, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.08 (d, *J* = 7.6 Hz, 1H), 5.03 (d, *J* = 6.8 Hz, 2H), 4.71 (d, *J* = 6.8 Hz, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.85 (s, 3H).	484.2
176		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.58 (d, *J* = 6.4 Hz, 1H), 8.37 (d, *J* = 3.2 Hz, 1H), 8.05 (d, *J* = 3.2 Hz, 1H), 7.57 (s, 1H), 7.35 (d, *J* = 6.4 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 4.42 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	429.2
177		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.47 (d, *J* = 6.4 Hz, 1H), 8.34 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.52 (s, 1H), 7.18 (d, *J* = 6.4 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.32 (s, 3H), 1.93 (s, 3H), 1.89 (s, 3H).	429.2
178		(4-((6-oxa-3-azabicyclo[3.1.1]heptan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.84 (s, 1H), 7.58 (d, *J* = 8.4 Hz, 1H), 7.30-7.26 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.53 (d, *J* = 7.2 Hz, 2H), 4.11 (s, 2H), 3.14 (d, *J* = 11.2 Hz, 2H), 3.01-2.96 (m, 1H), 2.88 (d, *J* = 11.2 Hz, 2H), 2.50 (d, *J* = 7.2 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	509.2
179		(4-((6-oxa-3-azabicyclo[3.1.1]heptan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.84 (s, 1H), 7.58 (d, *J* = 8.4 Hz, 1H), 7.30-7.26 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.52 (d, *J* = 7.2 Hz, 2H), 4.12 (s, 2H), 3.15 (d, *J* = 12.0 Hz, 2H), 3.01-2.96 (m, 1H), 2.89 (d, *J* = 12.0 Hz, 2H), 2.49 (d, *J* = 7.2	509.2

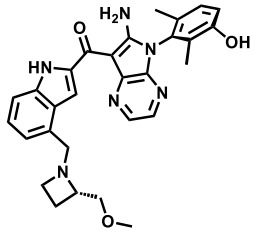
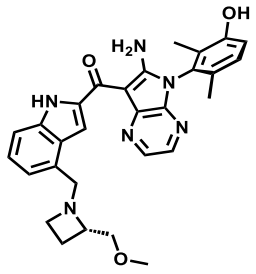
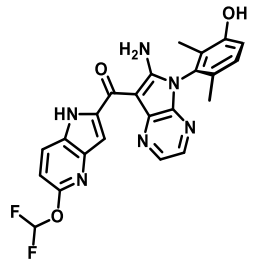
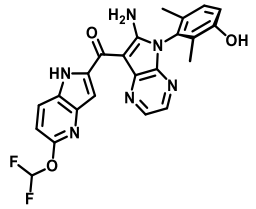
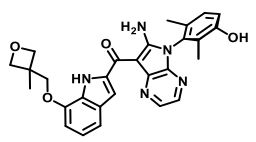
			Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	
180		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3R,4S)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.77-7.66 (m, 2H), 7.37 (d, *J* = 8.4 Hz, 1H), 7.17 (d, *J* = 8.0 Hz, 2H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.91-4.89 (m, 1H), 4.78 (d, *J* = 4.0 Hz, 1H), 4.14 (s, 2H), 3.53-3.43 (m, 1H), 3.40 (s, 3H), 3.26-3.13 (m, 1H), 3.00 (d, *J* = 2.0 Hz, 1H), 2.88-2.71 (m, 1H), 2.70-2.56 (m, 1H), 2.04-1.95 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	543.2
181		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3R,4S)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOH): δ 8.43 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.84-7.74 (m, 2H), 7.42 (d, *J* = 8.4 Hz, 1H), 7.29 (d, *J* = 7.2 Hz, 1H), 7.19 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 8.4 Hz, 1H), 4.93 (d, *J* = 2.0 Hz, 1H), 4.49 (s, 2H), 3.65-3.47 (m, 2H), 3.43 (s, 3H), 3.37 (s, 1H), 3.25-3.11 (m, 1H), 3.09-2.95 (m, 1H), 2.18-1.97 (m, 2H), 1.95 (s, 3H), 1.90 (s, 3H).	543.2
182		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.73 (s, 1H), 7.58 (d, *J* = 8.4 Hz, 1H), 7.28 (t, *J* = 7.6 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.06 (d, *J* = 7.2 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 4.16 (d, *J* = 12.8 Hz, 1H), 3.90 (d, *J* = 12.8 Hz, 1H), 3.66-3.55 (m, 1H), 3.39-3.32 (m, 2H), 3.31 (s, 4H), 3.18-3.02 (m, 1H), 2.09-1.91 (m, 5H), 1.88 (s, 3H).	511.2
183		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.73 (s, 1H), 7.58 (d, *J* = 8.4 Hz, 1H), 7.28 (t, *J* = 7.6 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.06 (d, *J* = 7.2 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 4.16 (d, *J* = 12.8 Hz, 1H), 3.90 (d, *J* =	511.2

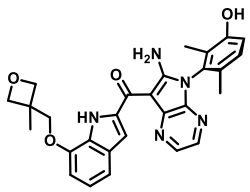
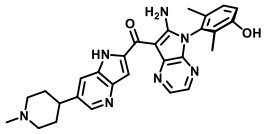
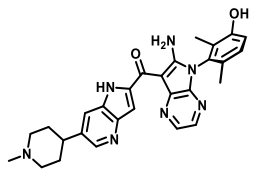
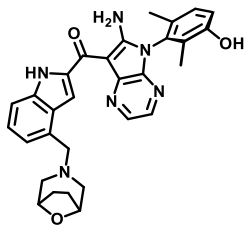
		indol-2-yl)methanone	12.8 Hz, 1H), 3.66-3.55 (m, 1H), 3.39-3.32 (m, 2H), 3.31 (s, 4H), 3.18-3.02 (m, 1H), 2.09-1.91 (m, 5H), 1.88 (s, 3H).	
184		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.71 (s, 1H), 7.61 (d, *J* = 8.4 Hz, 1H), 7.31 (t, *J* = 7.6 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.07 (d, *J* = 7.2 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.10 (s, 2H), 3.60 (t, *J* = 8.0 Hz, 2H), 3.52 (d, *J* = 6.0 Hz, 2H), 3.37 (s, 3H), 3.30-3.27 (m, 2H), 2.85-2.74 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	511.2
185		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.72 (s, 1H), 7.66 (d, *J* = 8.4 Hz, 1H), 7.33 (t, *J* = 7.6 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 7.2 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.24 (s, 2H), 3.82-3.66 (m, 2H), 3.55-3.45 (m, 4H), 3.40 (s, 3H), 3.30-3.28 (m, 2H), 2.93-2.82 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	511.2
186		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.75 (d, *J* = 0.8 Hz, 1H), 7.60 (d, *J* = 8.4 Hz, 1H), 7.31 (dd, *J* = 7.2, 8.4 Hz, 1H), 7.15 (dd, *J* = 7.6, 13.0 Hz, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.12-4.00 (m, 2H), 3.99-3.93 (m, 1H), 3.26 (s, 3H), 2.99-2.76 (m, 2H), 2.74-2.63 (m, 2H), 2.17-2.04 (m, 1H), 1.93 (s, 3H), 1.90-1.80 (m, 4H).	511.2
187		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.31 (d, *J* = 3.2 Hz, 1H), 7.87 (d, *J* = 3.2 Hz, 1H), 7.65 (d, *J* = 0.8 Hz, 1H), 7.51 (d, *J* = 8.4 Hz, 1H), 7.26-7.17 (m, 1H), 7.05 (t, *J* = 8.4 Hz, 2H), 6.88 (d, *J* = 8.4 Hz, 1H), 4.03-3.92 (m, 2H), 3.89 (dd, *J* = 3.2, 6.4 Hz, 1H), 3.24 (s, 3H),	511.2

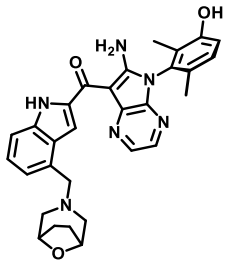
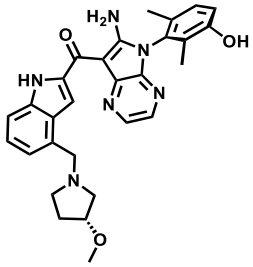
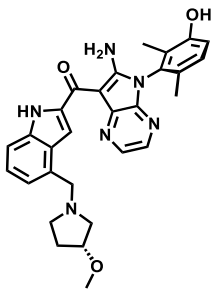
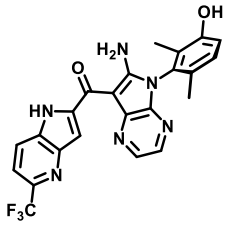
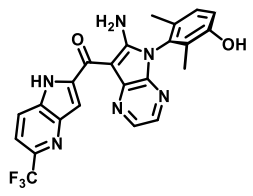
			2.90-2.71 (m, 2H), 2.68-2.58 (m, 2H), 2.07-1.96 (m, 1H), 1.83 (s, 3H), 1.80-1.72 (m, 4H).	
188		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.62 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.20 (s, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.69 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.34 (s, 1H), 3.48 (s, 2H), 3.07 (t, *J* = 5.6 Hz, 2H), 2.87 (s, 2H), 2.64 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	494.2
189		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.62 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.20 (s, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.69 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.34 (s, 1H), 3.48 (s, 2H), 3.07 (t, *J* = 5.6 Hz, 2H), 2.87 (s, 2H), 2.64 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	494.2
190		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.46 (s, 1H), 8.42 (d, *J* = 4.0 Hz, 1H), 8.15 (s, 1H), 7.99 (d, *J* = 4.0 Hz, 1H), 7.69 (s, 1H), 7.12 (d, *J* = 8.0 Hz, 1H), 6.95 (d, *J* = 8.0 Hz, 1H), 3.76-3.71 (m, 6H), 2.56 (m, 4H), 1.91 (s, 3H), 1.87 (s, 3H).	498.2
191		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 4.0 Hz, 1H), 8.22 (s, 1H), 8.00 (d, *J* = 4.0 Hz, 1H), 7.72 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.99 (d, *J* = 8.0 Hz, 1H), 3.88 (s, 2H), 3.79-3.73 (m, 4H), 2.69 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	498.2
192		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.45 (s, 1H), 8.41 (d, *J* = 4.0 Hz, 1H), 8.14 (s, 1H), 7.99 (d, *J* = 4.0 Hz, 1H), 7.69 (s, 1H), 7.14 (d, *J* = 8.0 Hz, 1H), 6.97 (d, *J* = 8.0 Hz, 1H), 3.76 (s, 2H), 2.80-2.36 (m, 8H), 2.29 (s,	511.2

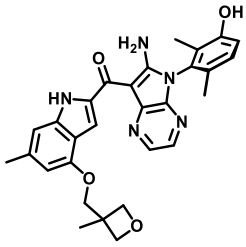
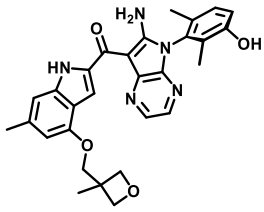
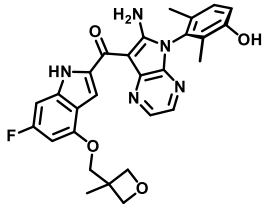
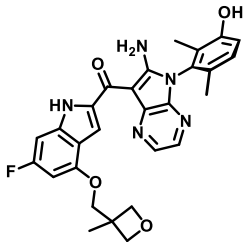
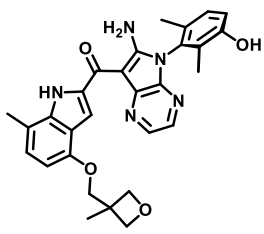
		b]pyridin-2-yl)methanone	3H), 1.92 (s, 3H), 1.88 (s, 3H).	
193		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (s, 1H), 8.42 (d, *J* = 4.0 Hz, 1H), 8.14 (s, 1H), 7.99 (d, *J* = 4.0 Hz, 1H), 7.69 (s, 1H), 7.14 (d, *J* = 8.0 Hz, 1H), 6.97 (d, *J* = 8.0 Hz, 1H), 3.76 (s, 2H), 2.95-2.36 (m, 8H), 2.30 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	511.2
194		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.68 (s, 1H), 7.54 (d, *J* = 8.4 Hz, 1H), 7.27 (t, *J* = 7.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.93 (d, *J* = 7.2 Hz, 1H), 4.81 (d, *J* = 5.6 Hz, 2H), 4.35 (d, *J* = 5.6 Hz, 2H), 3.28 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.40 (s, 3H).	482.2
195		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.68 (s, 1H), 7.54 (d, *J* = 8.4 Hz, 1H), 7.27 (t, *J* = 7.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.93 (d, *J* = 7.2 Hz, 1H), 4.81 (d, *J* = 5.6 Hz, 2H), 4.35 (d, *J* = 5.6 Hz, 2H), 3.28 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.40 (s, 3H).	482.2
196		(4-((3-oxa-8-azabicyclo[3.2.1]octan-8-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.85 (s, 1H), 7.58 (d, *J* = 8.4 Hz, 1H), 7.30 (t, *J* = 7.6 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.88 (d, *J* = 2.0 Hz, 2H), 3.78 (d, *J* = 10.4 Hz, 2H), 3.51 (d, *J* = 9.6 Hz, 2H), 3.19 (s, 2H), 2.27-2.20 (m, 2H), 1.97-1.92 (m, 5H), 1.88 (s, 3H).	523.2

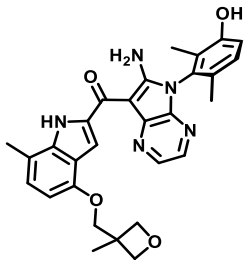
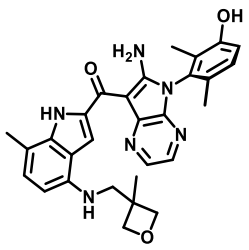
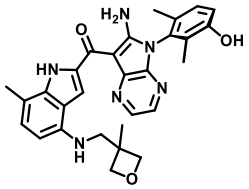
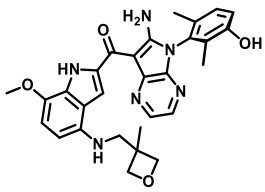
197		(4-((3-oxa-8-azabicyclo[3.2.1]octan-8-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.85 (s, 1H), 7.58 (d, *J* = 8.4 Hz, 1H), 7.33-7.26 (m, 1H), 7.20-7.13 (m, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.88 (s, 2H), 3.78 (d, *J* = 10.4 Hz, 2H), 3.50 (d, *J* = 10.8 Hz, 2H), 3.19 (s, 2H), 2.26-2.20 (m, 2H), 1.96-1.92 (m, 5H), 1.88 (s, 3H).	523.2
198		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 4.0 Hz, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.55 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.90 (d, *J* = 8.0 Hz, 1H), 5.73 (d, *J* = 8.0 Hz, 1H), 4.94 (d, *J* = 4.0 Hz, 2H), 4.64 (d, *J* = 4.0 Hz, 2H), 2.62 (s, 3H).	497.2
199		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 4.0 Hz, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.55 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.90 (d, *J* = 8.0 Hz, 1H), 5.73 (d, *J* = 8.0 Hz, 1H), 4.94 (d, *J* = 4.0 Hz, 2H), 4.64 (d, *J* = 4.0 Hz, 2H), 2.61 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.76 (s, 3H).	497.2
200		(R)-2-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-carbonyl)-1H-pyrrolo[3,2-b]pyridin-7-carbonitrile	^{1}H NMR (400 MHz, MeOD): δ 8.63 (d, *J* = 4.8 Hz, 1H), 8.36 (d, *J* = 3.2 Hz, 1H), 8.05 (d, *J* = 3.2 Hz, 1H), 7.69 (d, *J* = 4.8 Hz, 1H), 7.63 (s, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.94 (s, 3H), 1.90 (s, 3H).	424.1
201		(S)-2-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-carbonyl)-1H-pyrrolo[3,2-b]pyridin-7-carbonitrile	^{1}H NMR (400 MHz, MeOD): δ 8.61 (d, *J* = 4.8 Hz, 1H), 8.33 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.66 (d, *J* = 4.8 Hz, 1H), 7.57 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.95 (s, 3H), 1.90 (s, 3H).	424.1

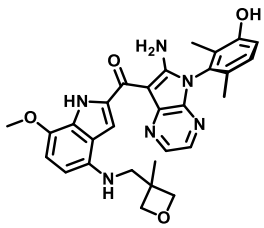
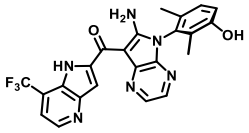
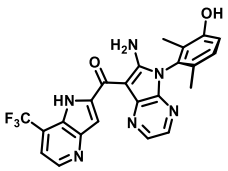
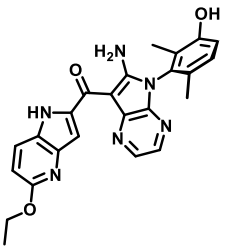
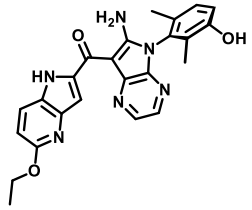
202		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 2.8 Hz, 1H), 7.85 (d, *J* = 8.8 Hz, 1H), 7.80 (s, 1H), 7.44 (t, *J* = 7.6 Hz, 1H), 7.30 (d, *J* = 6.8 Hz, 1H), 7.19 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 8.4 Hz, 1H), 4.79-4.66 (m, 3H), 4.28-4.12 (m, 1H), 4.07-3.92 (m, 1H), 3.61-3.41 (m, 2H), 3.36 (s, 3H), 2.56-2.40 (m, 2H), 1.95 (s, 3H), 1.90 (s, 3H).	511.2
203		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 7.88 (d, *J* = 3.2 Hz, 1H), 7.72-7.57 (m, 2H), 7.26 (t, *J* = 7.6 Hz, 1H), 7.14-7.01 (m, 2H), 6.89 (d, *J* = 8.4 Hz, 1H), 4.46-4.33 (m, 1H), 4.31-4.02 (m, 2H), 3.68-3.49 (m, 2H), 3.43-3.28 (m, 2H), 3.16 (s, 3H), 2.22-2.09 (m, 2H), 1.83 (s, 3H), 1.78 (s, 3H).	511.2
204		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(difluoromethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.19 (d, *J* = 8.8 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.62 (t, *J* = 73.6 Hz, 1H), 7.55 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.93 (d, *J* = 8.8 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	465.1
205		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(difluoromethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.19 (d, *J* = 8.8 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.62 (t, *J* = 73.6 Hz, 1H), 7.55 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.94 (d, *J* = 8.8 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	465.1
206		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.49 (d, *J* = 2.8 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.45 (s, 1H), 7.31 (d, *J* = 8.0 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.04 (t, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.86 (d, *J* = 7.6 Hz, 1H), 5.01 (d, *J* = 5.6 Hz, 2H), 4.58 (d, *J* = 5.6 Hz, 2H), 4.24 (s, 2H),	498.2

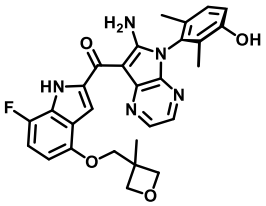
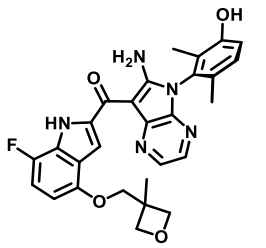
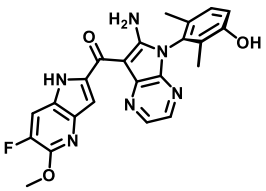
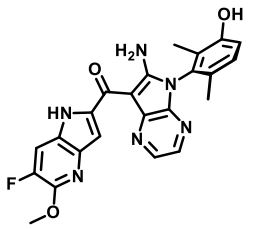
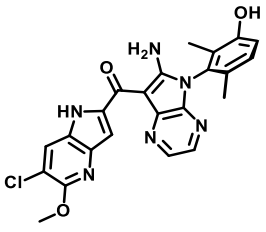
			1.93 (s, 3H), 1.88 (s, 3H), 1.64 (s, 3H).	
207		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.49 (d, *J* = 2.8 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.45 (s, 1H), 7.31 (d, *J* = 8.0 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.04 (t, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.86 (d, *J* = 7.6 Hz, 1H), 5.01 (d, *J* = 5.6 Hz, 2H), 4.58 (d, *J* = 5.6 Hz, 2H), 4.24 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.64 (s, 3H).	498.2
208		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methylpiperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (br d, *J* = 3.2 Hz, 1H), 8.30 (s, 1H), 7.98 (s, 1H), 7.89 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.07 (d, *J* = 8.4 Hz, 1H), 6.89 (d, *J* = 8.4 Hz, 1H), 3.18-3.12 (m, 2H), 2.81 (dt, *J* = 2.0, 10.0 Hz, 1H), 2.44 (br s, 5H), 2.00-1.87 (m, 4H), 1.83 (s, 3H), 1.78 (s, 3H).	496.2
209		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methylpiperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (br d, *J* = 3.2 Hz, 1H), 8.30 (s, 1H), 7.98 (s, 1H), 7.89 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.07 (d, *J* = 8.4 Hz, 1H), 6.89 (d, *J* = 8.4 Hz, 1H), 3.18-3.12 (m, 2H), 2.81 (dt, *J* = 2.0, 10.0 Hz, 1H), 2.44 (br s, 5H), 2.00-1.87 (m, 4H), 1.83 (s, 3H), 1.78 (s, 3H).	496.2
210		(4-(((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 4.0 Hz, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.84 (s, 1H), 7.56 (d, *J* = 8.0 Hz, 1H), 7.25 (m, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 7.03 (d, *J* = 4.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 4.28-4.23 (m, 2H), 2.64 (d, *J* = 8.0 Hz, 2H), 2.37 (d, *J* = 8.0 Hz, 2H), 2.22 (s, 2H), 2.04 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.83-1.76 (m, 2H)	523.2

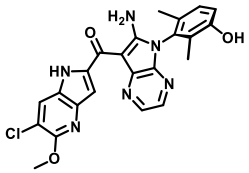
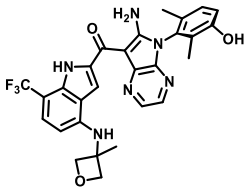
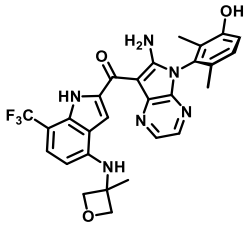
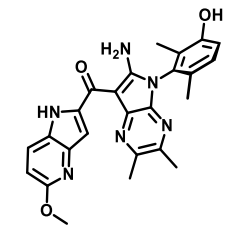
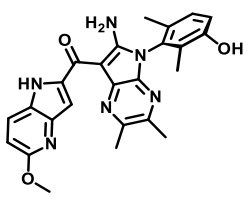
211		(4-(((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 4.0 Hz, 1H), 7.96 (d, *J* = 4.0 Hz, 1H), 7.84 (s, 1H), 7.56 (d, *J* = 8.0 Hz, 1H), 7.29-7.22 (m, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 7.03 (d, *J* = 4.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 4.26 (m, 2H), 2.64 (d, *J* = 8.0 Hz, 2H), 2.37 (d, *J* = 8.0 Hz, 2H), 2.22 (s, 2H), 2.06 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.84-1.77 (m, 2H).	523.2
212		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 4.0 Hz, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.75 (s, 1H), 7.60 (d, *J* = 8.0 Hz, 1H), 7.31 (t, *J* = 8.0 Hz, 1H), 7.15 (dd, *J* = 4.0, 8.0 Hz, 2H), 6.98 (d, *J* = 8.0 Hz, 1H), 4.04 (m, 2H), 4.00-3.95 (m, 1H), 3.26 (s, 3H), 2.92 (m, 2H), 2.75-2.65 (m, 2H), 2.11 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.86-1.78 (m, 1H).	511.2
213		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 4.0 Hz, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.75 (s, 1H), 7.60 (d, *J* = 8.0 Hz, 1H), 7.34-7.28 (m, 1H), 7.15 (dd, *J* = 4.0, 8.0 Hz, 2H), 6.98 (d, *J* = 8.0 Hz, 1H), 4.04 (m, 2H), 3.94 (m, 1H), 3.26 (s, 3H), 2.96-2.77 (m, 2H), 2.71 (m, 2H), 2.15-2.07 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.86-1.79 (m, 1H).	511.2
214		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.00 (s, 1H), 9.68 (s, 1H), 8.44 (d, *J* = 3.2 Hz, 1H), 8.33-8.31 (m, 2H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.75 (d, *J* = 8.8 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 1.84 (s, 3H), 1.77 (s, 3H).	467.1
215		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.00 (s, 1H), 9.67 (s, 1H), 8.44 (d, *J* = 3.2 Hz, 1H), 8.33-8.31 (m, 2H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.75 (d, *J* = 8.8 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H),	467.1

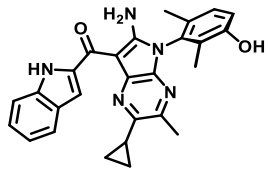
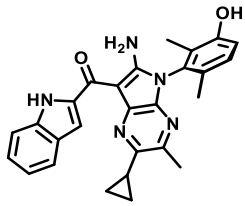
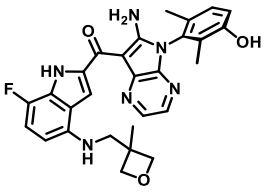
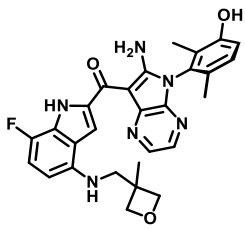
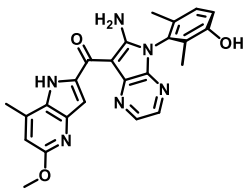
		-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	6.99 (d, *J* = 8.4 Hz, 1H), 1.84 (s, 3H), 1.77 (s, 3H).	
216		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 2.8 Hz, 1H), 7.95 (d, *J* = 2.8 Hz, 1H), 7.60 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.07 (s, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.46 (s, 1H), 4.78 (d, *J* = 6.0 Hz, 2H), 4.52 (d, *J* = 6.0 Hz, 2H), 4.22 (s, 2H), 2.49 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.54 (s, 3H).	512.2
217		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 2.8 Hz, 1H), 7.95 (d, *J* = 2.8 Hz, 1H), 7.60 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.06 (s, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.46 (s, 1H), 4.78 (d, *J* = 6.0 Hz, 2H), 4.52 (d, *J* = 6.0 Hz, 2H), 4.22 (s, 2H), 2.49 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.54 (s, 3H).	512.2
218		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.65 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 7.06-6.91 (m, 2H), 6.62 - 6.30 (m, 1H), 4.78 (d, *J* = 6.0 Hz, 2H), 4.53 (d, *J* = 6.0 Hz, 2H), 4.23 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.54 (s, 3H).	516.2
219		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.66 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.99 (t, *J* = 7.6 Hz, 2H), 6.49 (d, *J* = 11.6 Hz, 1H), 4.78 (d, *J* = 6.0 Hz, 2H), 4.53 (d, *J* = 6.0 Hz, 2H), 4.23 (s, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.55 (s, 3H).	516.2
220		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.90 (s, 1H), 9.68 (s, 1H), 8.36 (d, *J* = 2.8 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.42 (d, *J* = 2.0 Hz, 1H), 7.13 (d, *J* = 8.8 Hz, 1H), 7.00 (dd, *J* = 8.0, 12.8 Hz, 2H), 6.54 (d, *J* = 8.0 Hz, 1H), 4.59 (d, *J* = 6.0 Hz, 2H), 4.37 (d, *J* = 6.0	512.2

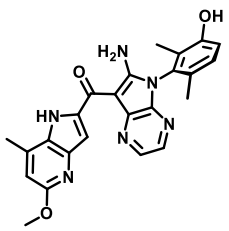
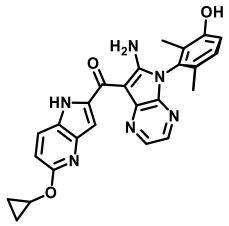
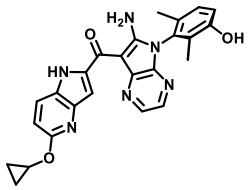
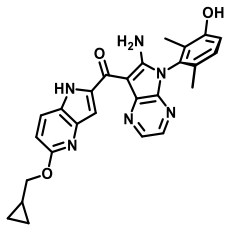
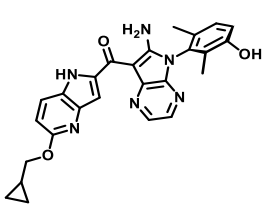
			Hz, 2H), 4.17 (s, 2H), 2.62 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.45 (s, 3H).	
221		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.91 (s, 1H), 10.21 - 9.87 (m, 1H), 8.54 (s, 2H), 8.35 (d, J = 2.8 Hz, 1H), 8.00 (d, J = 3.2 Hz, 1H), 7.42 (d, J = 2.0 Hz, 1H), 7.12 (d, J = 8.4 Hz, 1H), 7.04-6.99 (m, 2H), 6.54 (d, J = 8.0 Hz, 1H), 4.59 (d, J = 6.0 Hz, 2H), 4.37 (d, J = 6.0 Hz, 2H), 4.17 (s, 2H), 2.62 (s, 3H), 1.83 (s, 3H), 1.75 (s, 3H), 1.45 (s, 3H).	512.2
222		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, J = 4.0 Hz, 1H), 7.97 (d, J = 4.0 Hz, 1H), 7.61 (s, 1H), 7.17 (d, J = 8.0 Hz, 1H), 6.99 (d, J = 4.0 Hz, 1H), 6.93 (d, J = 4.0 Hz, 1H), 6.17 (d, J = 8.0 Hz, 1H), 4.70 (d, J = 8.0 Hz, 2H), 4.43 (d, J = 8.0 Hz, 2H), 3.46 (s, 2H), 2.61 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.47 (s, 3H)	511.2
223		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.79 (s, 1H), 9.68 (s, 1H), 8.34 (d, J = 4.0 Hz, 1H), 8.00 (d, J = 4.0 Hz, 1H), 7.74 (d, J = 4.0 Hz, 1H), 7.14 (d, J = 8.0 Hz, 1H), 6.99 (d, J = 8.0 Hz, 1H), 6.87 (d, J = 8.0 Hz, 1H), 6.04 (d, J = 8.0 Hz, 1H), 5.94-5.87 (m, 1H), 4.51 (d, J = 8.0 Hz, 2H), 4.27 (d, J = 8.0 Hz, 2H), 3.35 (d, J = 8.0 Hz, 2H), 2.54 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.38 (s, 3H)	511.2
224		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 14.93 (s, 1H), 8.36 (d, J = 3.2 Hz, 1H), 7.96 (d, J = 3.2 Hz, 1H), 7.59 (s, 1H), 7.16 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 6.67 (d, J = 8.0 Hz, 1H), 6.14 (d, J = 8.0 Hz, 1H), 4.69 (d, J = 5.6 Hz, 2H), 4.43 (d, J = 5.6 Hz, 2H), 4.03 (s, 3H), 3.43 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.48 (s, 3H)	527.2

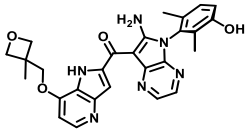
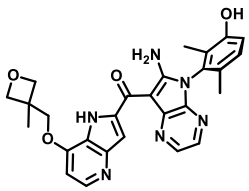
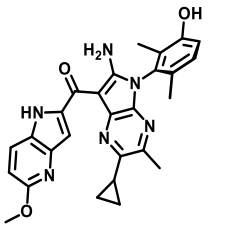
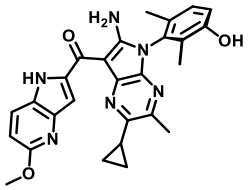
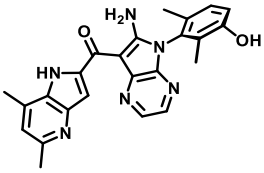
225		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 14.93 (s, 1H), 8.36 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.59 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.67 (d, *J* = 8.0 Hz, 1H), 6.14 (d, *J* = 8.0 Hz, 1H), 4.69 (d, *J* = 5.6 Hz, 2H), 4.43 (d, *J* = 5.6 Hz, 2H), 4.03 (s, 3H), 3.43 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.48 (s, 3H)	527.2
226		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.56 (d, *J* = 4.0 Hz, 1H), 8.20 (s, 1H), 7.93 (s, 1H), 7.54 (s, 2H), 7.07 (d, *J* = 8.0 Hz, 1H), 6.89 (d, *J* = 8.0 Hz, 1H), 1.84 (s, 3H), 1.79 (s, 3H).	467.1
227		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.56 (d, *J* = 4.0 Hz, 1H), 8.20 (s, 1H), 7.93 (s, 1H), 7.54 (s, 2H), 7.07 (d, *J* = 8.0 Hz, 1H), 6.89 (d, *J* = 8.0 Hz, 1H), 1.84 (s, 3H), 1.79 (s, 3H).	467.1
228		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 9.6 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.52 (s, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 6.81 (d, *J* = 8.8 Hz, 1H), 4.41 (q, *J* = 7.2 Hz, 2H), 1.94 (s, 3H), 1.90 (s, 3H), 1.45 (t, *J* = 7.2 Hz, 3H).	443.2
229		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.30 (d, *J* = 3.2 Hz, 1H), 7.92 (dd, *J* = 0.8, 8.8 Hz, 1H), 7.87 (d, *J* = 3.2 Hz, 1H), 7.40 (d, *J* = 0.8 Hz, 1H), 7.06 (d, *J* = 8.4 Hz, 1H), 6.88 (d, *J* = 8.4 Hz, 1H), 6.70 (d, *J* = 8.8 Hz, 1H), 4.29 (q, *J* = 7.2 Hz, 2H), 1.82 (s, 3H), 1.78 (s, 3H), 1.33 (t, *J* = 7.2 Hz, 3H).	443.2

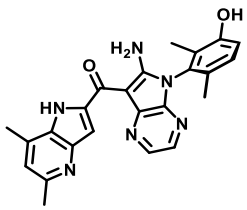
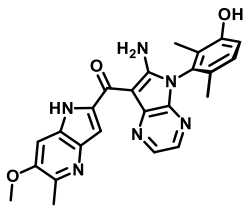
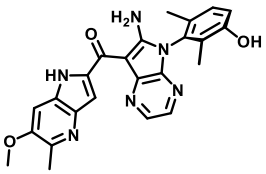
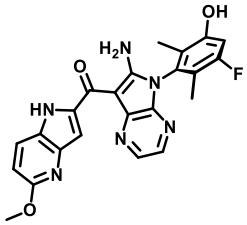
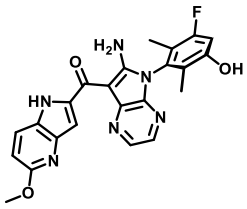
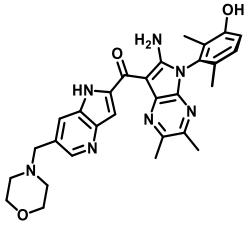
230		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.23 (d, *J* = 3.2 Hz, 1H), 7.87 (d, *J* = 3.2 Hz, 1H), 7.50 (d, *J* = 3.2 Hz, 1H), 7.06 (d, *J* = 8.4 Hz, 1H), 6.88 (d, *J* = 8.4 Hz, 1H), 6.86-6.81 (m, 1H), 6.39 (dd, *J* = 2.8, 8.4 Hz, 1H), 4.67 (d, *J* = 6.0 Hz, 2H), 4.42 (d, *J* = 6.0 Hz, 2H), 4.10 (s, 2H), 1.83 (s, 3H), 1.78 (s, 3H), 1.44 (s, 3H).	516.2
231		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.62 (d, *J* = 3.2 Hz, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 6.99-6.93 (m, 1H), 6.52 (dd, *J* = 2.8, 8.4 Hz, 1H), 4.79 (d, *J* = 6.0 Hz, 2H), 4.54 (d, *J* = 6.0 Hz, 2H), 4.22 (s, 2H), 1.95 (s, 3H), 1.90 (s, 3H), 1.56 (s, 3H).	516.2
232		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.89 (d, *J* = 10.8 Hz, 1H), 7.53 (d, *J* = 0.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.08 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H).	447.2
233		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.90 (d, *J* = 10.8 Hz, 1H), 7.53 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.08 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H).	447.2
234		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 4.0 Hz, 1H), 8.18 (s, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.51 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 4.06 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	463.1

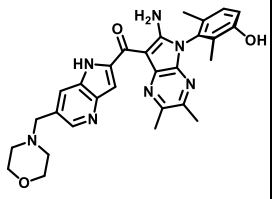
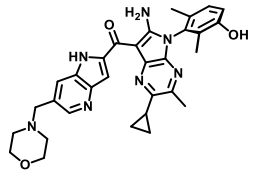
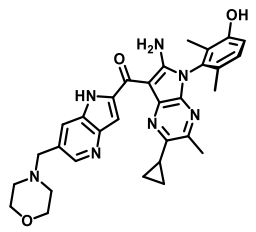
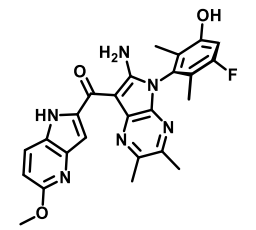
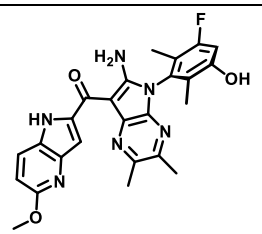
235		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 4.0 Hz, 1H), 8.18 (s, 1H), 7.97 (d, *J* = 4.0 Hz, 1H), 7.51 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 4.06 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	463.1
236		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-7-(trifluoromethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.30 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.66 (s, 1H), 7.39 (d, *J* = 8.4 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.78 (d, *J* = 8.4 Hz, 1H), 4.95 (d, *J* = 6.0 Hz, 2H), 4.67 (d, *J* = 6.0 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.79 (s, 3H).	551.2
237		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-7-(trifluoromethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.30 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.66 (s, 1H), 7.39 (d, *J* = 8.4 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.78 (d, *J* = 8.4 Hz, 1H), 4.95 (d, *J* = 6.0 Hz, 2H), 4.67 (d, *J* = 6.0 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.80 (s, 3H).	551.2
238		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.00 (d, *J* = 9.2 Hz, 1H), 7.42 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 4.00 (s, 3H), 2.78 (s, 3H), 2.50 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H)	457.2
239		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.00 (d, *J* = 9.2 Hz, 1H), 7.42 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 4.00 (s, 3H), 2.78 (s, 3H), 2.50 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H)	457.2

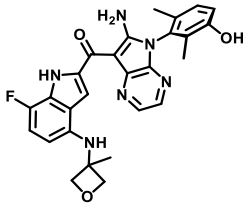
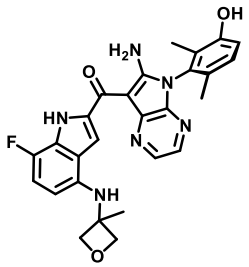
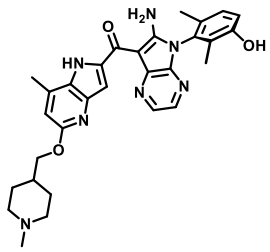
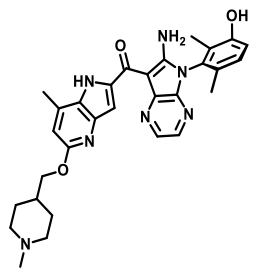
240		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.76 (d, *J* = 8.4 Hz, 1H), 7.71 (d, *J* = 8.4 Hz, 1H), 7.46 (s, 1H), 7.33 (t, *J* = 7.6 Hz, 1H), 7.18-7.09 (m, 2H), 6.97 (d, *J* = 8.0 Hz, 1H), 2.63 (s, 3H), 2.50-2.41 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.39-1.32 (m, 4H).	452.2
241		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ7.76 (d, *J* = 8.4 Hz, 1H), 7.71 (d, *J* = 8.4 Hz, 1H), 7.46 (s, 1H), 7.33 (t, *J* = 7.6 Hz, 1H), 7.18-7.09 (m, 2H), 6.97 (d, *J* = 8.0 Hz, 1H), 2.63 (s, 3H), 2.49-2.41 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.38-1.32 (m, 4H).	452.2
242		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.66 (d, *J* = 3.2 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.89-6.84 (m, 1H), 6.08 (dd, *J* = 3.2, 8.4 Hz, 1H), 4.69 (d, *J* = 6.0 Hz, 2H), 4.44 (d, *J* = 6.0 Hz, 2H), 3.45 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.47 (s, 3H).	515.2
243		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.67 (d, *J* = 3.2 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.90-6.86 (m, 1H), 6.15 (dd, *J* = 3.2, 8.4 Hz, 1H), 4.68 (d, *J* = 6.0 Hz, 2H), 4.44 (d, *J* = 6.0 Hz, 2H), 3.48 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.48 (s, 3H).	515.2
244		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.40 (s, 1H), 7.16 (s, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.66 (s, 1H), 3.96 (s, 3H), 2.73 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	443.2

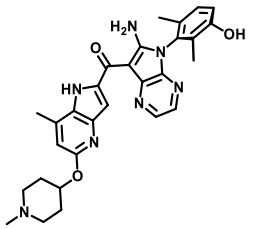
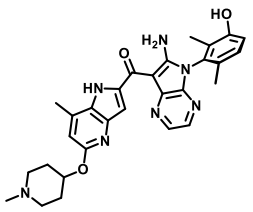
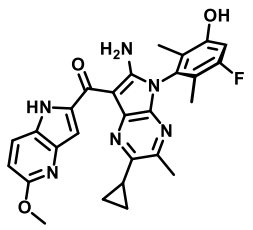
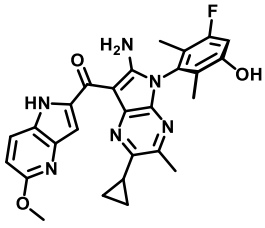
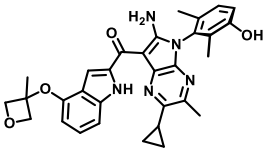
245		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.41 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.66 (s, 1H), 3.96 (s, 3H), 2.73 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H)	443.2
246		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.05 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.86 (d, *J* = 8.8 Hz, 1H), 4.24 (tt, *J* = 3.2, 6.0 Hz, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 0.89-0.82 (m, 2H), 0.82-0.73 (m, 2H).	455.2
247		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.09 - 8.05 (m, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.55 (d, *J* = 0.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.87 (d, *J* = 8.8 Hz, 1H), 4.29-4.20 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 0.89-0.83 (m, 2H), 0.81-0.74 (m, 2H).	455.2
248		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropylmethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.81 (d, *J* = 8.8 Hz, 1H), 4.18 (d, *J* = 7.2 Hz, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.37-1.27 (m, 1H), 0.69-0.63 (m, 2H), 0.39 (d, *J* = 5.2 Hz, 2H)	469.2
249		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropylmethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.10 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.86 (d, *J* = 8.8 Hz, 1H), 4.20 (d, *J* = 7.2 Hz, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.38-1.30 (m, 1H), 0.69-0.60 (m, 2H), 0.40 (d, *J* = 5.2 Hz, 2H)	469.2

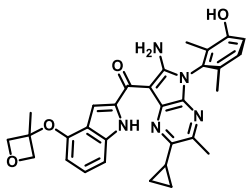
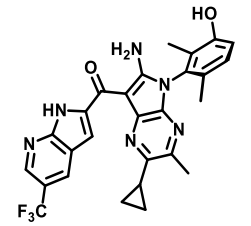
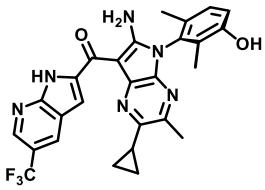
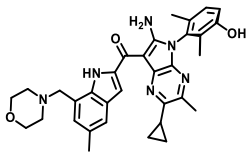
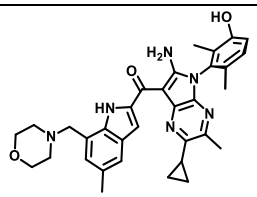
250		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.48 (d, *J* = 3.2 Hz, 1H), 8.33 (d, *J* = 5.6 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.51 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.01-6.95 (m, 2H), 5.02 (d, *J* = 5.6 Hz, 2H), 4.59 (d, *J* = 5.6 Hz, 2H), 4.34 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.63 (s, 3H)	499.2
251		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.48 (d, *J* = 3.2 Hz, 1H), 8.34 (d, *J* = 5.6 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.52 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.01-6.95 (m, 2H), 5.02 (d, *J* = 5.6 Hz, 2H), 4.59 (d, *J* = 5.6 Hz, 2H), 4.34 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.63 (s, 3H)	499.2
252		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.66 (s, 1H), 9.66 (s, 1H), 7.96 (d, *J* = 8.8 Hz, 1H), 7.34 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.86 (d, *J* = 8.8 Hz, 1H), 3.92 (s, 3H), 2.56 (s, 3H), 2.42 (d, *J* = 4.8 Hz, 1H), 1.83 (s, 3H), 1.75 (s, 3H), 1.32-1.28 (m, 2H), 1.21-1.18 (m, 2H).	483.2
253		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.07-14.62 (m, 1H), 7.94 (d, *J* = 8.8 Hz, 1H), 7.27 (s, 1H), 7.08 (d, *J* = 8.0 Hz, 1H), 6.94 (d, *J* = 8.0 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 3.91 (s, 3H), 2.57-2.53 (m, 3H), 2.40-2.36 (m, 1H), 1.82 (s, 3H), 1.74 (s, 3H), 1.28-1.23 (m, 4H).	483.2
254		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5,7-dimethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.15 (d, *J* = 2.4 Hz, 1H), 7.81 (d, *J* = 2.4 Hz, 1H), 7.25 (s, 1H), 7.10 (s, 1H), 6.95 (d, *J* = 8.4 Hz, 1H), 6.77 (d, *J* = 8.4 Hz, 1H), 2.66 (s, 3H), 2.52 (s, 3H), 1.71 (s, 3H), 1.66 (s, 3H).	427.2

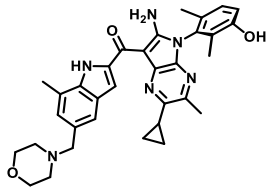
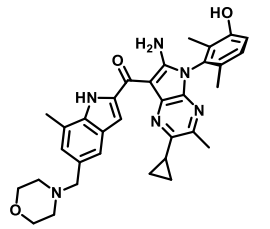
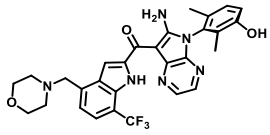
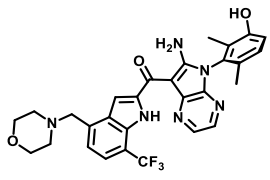
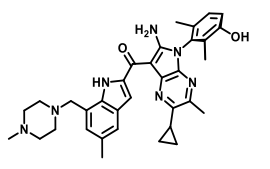
255		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5,7-dimethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.15 (d, *J* = 2.4 Hz, 1H), 7.81 (d, *J* = 2.4 Hz, 1H), 7.25 (s, 1H), 7.10 (s, 1H), 6.95 (d, *J* = 8.4 Hz, 1H), 6.77 (d, *J* = 8.4 Hz, 1H), 2.66 (s, 3H), 2.52 (s, 3H), 1.71 (s, 3H), 1.66 (s, 3H).	427.2
256		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.64 (s, 1H), 7.60 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.01 (s, 3H), 2.53 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H)	443.2
257		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.65 (s, 1H), 7.60 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.01 (s, 3H), 2.53 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H)	443.2
258		(R)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.53 (s, 1H), 6.81 (d, *J* = 8.8 Hz, 1H), 6.76 (d, *J* = 11.2 Hz, 1H), 3.99 (s, 3H), 1.82 (s, 6H).	447.2
259		(S)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, H), 8.04 (d, *J* = 8.8 Hz, H), 7.99 (d, *J* = 3.2 Hz, H), 7.53 (d, *J* = 0.8 Hz, H), 6.83 (d, *J* = 2.4 Hz, H), 6.81 (d, *J* = 4.4 Hz, H), 4.00 (s, 3H), 1.85 - 1.82 (m, 6H).	447.2
260		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl	^{1}H NMR (400 MHz, MeOD): δ 8.43 (s, 1H), 8.09 (s, 1H), 7.57 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 3.77-3.65 (m, 6H), 2.79 (s, 3H), 2.61-2.53 (m, 4H), 2.49 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H).	526.2

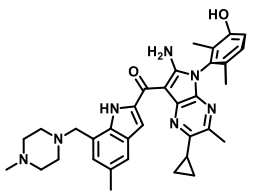
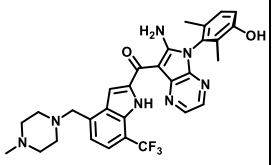
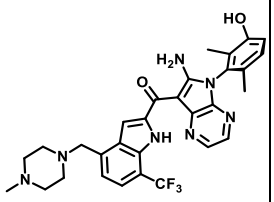
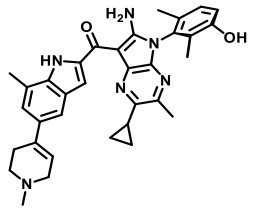
		)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone		
261		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (s, 1H), 8.08 (m, 1H), 7.56 (s, 1H), 7.11 (d, *J* = 8.0 Hz, 1H), 6.94 (d, *J* = 8.0 Hz, 1H), 3.75-3.67 (m, 6H), 2.78 (s, 3H), 2.60-2.52 (m, 4H), 2.49 (s, 3H), 1.90 (s, 3H), 1.87 (s, 3H).	526.2
262		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (s, 1H), 8.18 (s, 1H), 7.52 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 3.79-3.69 (m, 6H), 2.63 (s, 3H), 2.57 (s, 4H), 2.51-2.42 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.39 (dd, *J* = 2.4, 8.0 Hz, 2H), 1.31-1.26 (m, 2H).	552.3
263		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (s, 1H), 8.18 (s, 1H), 7.52 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 3.79-3.70 (m, 6H), 2.63 (s, 3H), 2.57 (s, 4H), 2.50-2.43 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.39 (dd, *J* = 2.4, 8.0 Hz, 2H), 1.31-1.25 (m, 2H).	552.3
264		(R)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.99 (d, *J* = 9.2 Hz, 1H), 7.40 (s, 1H), 6.81 (d, *J* = 8.8 Hz, 1H), 6.60 (d, *J* = 12.4 Hz, 1H), 3.99 (s, 3H), 2.77 (s, 3H), 2.49 (s, 3H), 1.78 (s, 3H), 1.76 (d, *J* = 1.2 Hz, 3H).	475.2
265		(S)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-	^{1}H NMR (400 MHz, MeOD): δ 7.99 (d, *J* = 8.8 Hz, 1H), 7.40 (s, 1H), 6.81 (d, *J* = 8.8 Hz, 1H), 6.58 (d, *J* = 12.8 Hz, 1H), 3.99 (s, 3H), 2.77 (s, 3H), 2.49 (s, 3H), 1.77 (s, 3H), 1.75 (s, 3H).	475.2

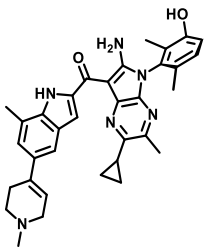
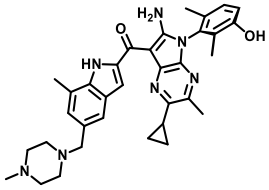
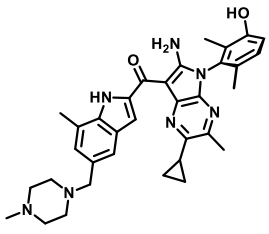
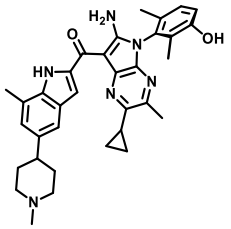
		yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone		
266		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.59 (d, *J* = 3.2 Hz, 1H), 7.09 (d, *J* = 8.4 Hz, 1H), 6.92 (d, *J* = 8.4 Hz, 1H), 6.85-6.80 (m, 1H), 5.63 (dd, *J* = 3.2, 8.4 Hz, 1H), 4.93 (d, *J* = 6.0 Hz, 2H), 4.64 (d, *J* = 6.0 Hz, 2H), 1.89 (s, 3H), 1.86 (s, 3H), 1.75 (s, 3H).	501.1
267		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.60 (d, *J* = 3.2 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.85-6.80 (m, 1H), 5.63 (dd, *J* = 3.2, 8.4 Hz, 1H), 4.93 (d, *J* = 6.0 Hz, 2H), 4.64 (d, *J* = 6.0 Hz, 2H), 1.92 (s, 3H), 1.88 (s, 3H), 1.75 (s, 3H).	501.2
268		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.92 (s, 1H), 9.69 (s, 1H), 8.38 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.34 (d, *J* = 1.6 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.64 (s, 1H), 4.14 (d, *J* = 6.0 Hz, 2H), 2.78 (d, *J* = 11.2 Hz, 2H), 2.65 (s, 3H), 2.15 (s, 3H), 1.92-1.84 (m, 2H), 1.83 (s, 3H), 1.75 (s, 3H), 1.73 (s, 2H), 1.32 (d, *J* = 11.2 Hz, 2H).	540.2
269		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.91 (s, 1H), 9.68 (s, 1H), 8.38 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.34 (d, *J* = 2.0 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.63 (s, 1H), 4.14 (d, *J* = 6.0 Hz, 2H), 2.79 (d, *J* = 11.2 Hz, 2H), 2.65 (s, 3H), 2.16 (s, 3H), 1.91-1.84 (m, 2H), 1.83 (s, 3H), 1.75 (s, 3H), 1.75-1.68 (m, 2H), 1.40-1.23 (m, 2H).	540.3

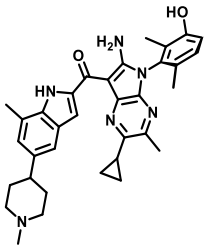
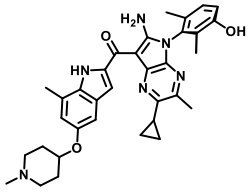
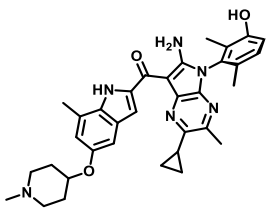
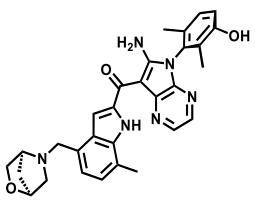
270		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, *J* = 8.8 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 3.39-3.35 (m, 1H), 3.03-2.93 (m, 2H), 2.74 (s, 3H), 2.71-2.63 (m, 2H), 2.50 (s, 3H), 2.21-2.11 (m, 2H), 2.00-1.94 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	526.2
271		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.41 (s, 1H), 7.20 (d, *J* = 8.8 Hz, 1H), 7.02 (d, *J* = 8.4 Hz, 1H), 6.69 (s, 1H), 3.32-3.26 (m, 1H), 3.06-2.96 (m, 2H), 2.77 (s, 3H), 2.74-2.63 (m, 2H), 2.52 (s, 3H), 2.23-2.14 (m, 2H), 2.04-1.97 (m, 2H), 1.96 (s, 3H), 1.91 (s, 3H).	526.2
272		(R)-(6-amino-2-cyclopropyl-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.60 (s, 1H), 10.20 (s, 1H), 7.94 (d, *J* = 8.8 Hz, 1H), 7.34 (s, 1H), 6.91-6.81 (m, 2H), 3.91 (s, 3H), 2.56 (s, 3H), 2.41 (dt, *J* = 4.0, 8.0 Hz, 1H), 1.74 (d, *J* = 1.2 Hz, 3H), 1.70 (s, 3H), 1.33-1.25 (m, 2H), 1.23-1.14 (m, 2H).	501.2
273		(S)-(6-amino-2-cyclopropyl-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.61 (s, 1H), 10.18 (s, 1H), 7.95 (d, *J* = 8.8 Hz, 1H), 7.34 (s, 1H), 6.97-6.78 (m, 2H), 3.91 (s, 3H), 2.56 (s, 3H), 2.46-2.36 (m, 1H), 1.74 (s, 3H), 1.70 (s, 3H), 1.29 (dd, *J* = 2.4, 8.0 Hz, 2H), 1.22-1.13 (m, 2H).	501.2
274		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-	^{1}H NMR (400 MHz, MeOD): δ 7.60 (s, 1H), 7.37 (d, *J* = 8.4 Hz, 1H), 7.20 (t, *J* = 8.4 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.09 (d, *J* = 7.6 Hz, 1H), 5.04 (d, *J* = 6.8 Hz, 2H), 4.72 (d, *J* = 6.8 Hz, 2H), 2.63 (s, 3H),	538.2

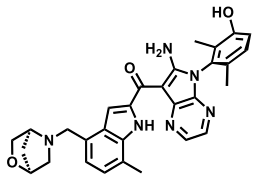
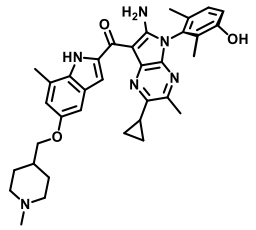
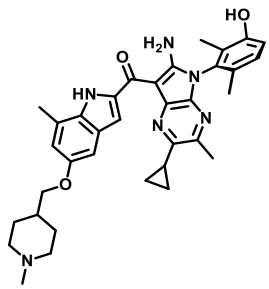
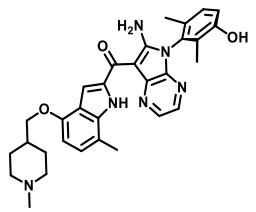
		yl)oxy)-1H-indol-2-yl)methanone	2.44 (s, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.86 (s, 3H), 1.35-1.31 (m, 4H).	
275		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.60 (s, 1H), 7.37 (d, *J* = 8.4 Hz, 1H), 7.20 (t, *J* = 8.4 Hz, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.09 (d, *J* = 7.6 Hz, 1H), 5.04 (d, *J* = 6.8 Hz, 2H), 4.72 (d, *J* = 6.8 Hz, 2H), 2.63 (s, 3H), 2.44 (s, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.86 (s, 3H), 1.35-1.31 (m, 4H).	538.2
276		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.22 (s, 1H), 9.65 (s, 1H), 8.81 (d, *J* = 1.6 Hz, 1H), 8.60 (d, *J* = 1.6 Hz, 1H), 7.59 (s, 1H), 7.12 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.55 (s, 3H), 2.37-2.32 (m, 1H), 1.83 (s, 3H), 1.75 (s, 3H), 1.43 (d, *J* = 3.2 Hz, 2H), 1.20 (dd, *J* = 2.4, 8.0 Hz, 2H).	521.1
277		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.22 (s, 1H), 9.66 (s, 1H), 8.82 (d, *J* = 1.6 Hz, 1H), 8.61 (d, *J* = 1.6 Hz, 1H), 7.59 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.56 (s, 3H), 2.37-2.32 (m, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.38 (d, *J* = 3.2 Hz, 2H), 1.21 (dd, *J* = 2.4, 8.0 Hz, 2H).	521.2
278		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-7-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.51 (s, 1H), 7.43 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.06 (s, 1H), 6.96 (d, *J* = 8.4 Hz, 1H), 3.94 (s, 2H), 3.69 (t, *J* = 4.4 Hz, 4H), 2.59 (s, 3H), 2.53 (s, 4H), 2.45 (s, 3H), 2.35-2.27 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.23-1.17 (m, 2H), 1.16-1.08 (m, 2H).	565.3
279		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-	^{1}H NMR (400 MHz, MeOD): δ 8.54 (s, 1H), 7.46 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.09 (s, 1H), 6.96 (d, *J* = 8.4 Hz, 1H), 4.19-3.88 (m, 2H), 3.71 (s, 4H), 2.82-	565.3

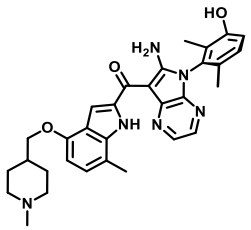
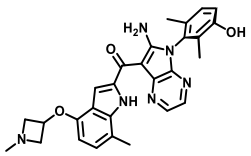
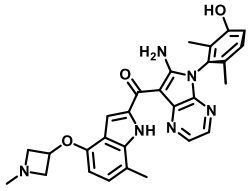
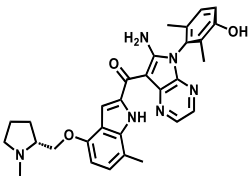
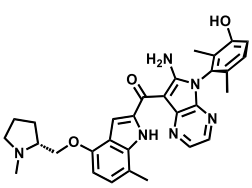
		b]pyrazin-7-yl)(5-methyl-7-(morpholinomethyl)-1H-indol-2-yl)methanone	2.60 (m, 3H), 2.59 (s, 4H), 2.46 (s, 3H), 2.34-2.27 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H), 1.25-1.16 (m, 2H), 1.16-1.09 (m, 2H).	
280		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.04 (s, 1H), 7.51 (s, 1H), 7.18-7.11 (m, 2H), 6.97 (d, *J* = 8.4 Hz, 1H), 3.72 (t, *J* = 4.0 Hz, 4H), 3.67 (s, 2H), 2.72 (s, 3H), 2.62-2.55 (m, 7H), 2.37-2.28 (m, 1H), 1.91 (s, 3H), 1.86 (s, 3H), 1.17-1.10 (m, 2H), 1.14-1.06 (m, 2H).	565.4
281		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.04 (s, 1H), 7.51 (s, 1H), 7.20-7.11 (m, 2H), 6.97 (d, *J* = 8.4 Hz, 1H), 3.72 (t, *J* = 4.4 Hz, 4H), 3.67 (s, 2H), 2.72 (s, 3H), 2.62-2.54 (m, 7H), 2.37-2.29 (m, 1H), 1.91 (s, 3H), 1.86 (s, 3H), 1.17-1.10 (m, 2H), 1.09-1.03 (m, 2H)	565.4
282		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.78 (s, 1H), 7.60 (d, *J* = 7.2 Hz, 1H), 7.26 (d, *J* = 7.2 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.93 (s, 2H), 3.74-3.72 (m, 4H), 2.58-2.56 (m, 4H), 1.94 (s, 3H), 1.89 (s, 3H).	565.4
283		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.78 (s, 1H), 7.60 (d, *J* = 7.2 Hz, 1H), 7.26 (d, *J* = 7.2 Hz, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.99 (d, *J* = 8.0 Hz, 1H), 3.93 (s, 2H), 3.74-3.72 (m, 4H), 2.58-2.56 (m, 4H), 1.94 (s, 3H), 1.89 (s, 3H).	565.3
284		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-7-	^{1}H NMR (400 MHz, MeOD): δ 8.42 (s, 1H), 7.43 (s, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 7.05 (s, 1H), 6.96 (d, *J* = 8.4 Hz, 1H), 3.95 (s, 2H), 3.00-2.63 (m, 3H), 2.59 (s, 3H), 2.55 (s, 3H), 2.44 (s, 3H), 2.40 (d, *J* = 4.4 Hz,	578.4

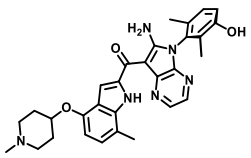
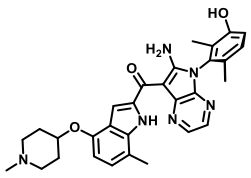
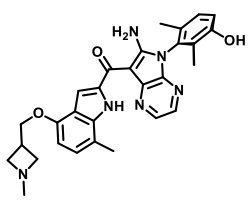
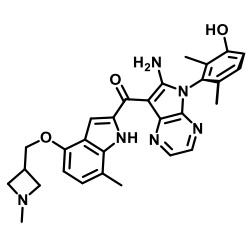
		((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	1H), 2.24 (s, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.18-1.16 (m, 2H), 1.15-1.11 (m, 2H).	
285		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-7-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.46 (s, 1H), 7.43 (s, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 7.05 (s, 1H), 6.96 (d, *J* = 8.4 Hz, 1H), 3.96 (s, 2H), 2.74-2.62 (m, 4H), 2.59 (s, 3H), 2.55-2.47 (m, 3H), 2.44 (s, 3H), 2.40 (s, 1H), 2.33 (s, 3H), 2.30-2.28 (m, 1H), 1.91 (s, 3H), 1.87 (s, 3H), 1.18-1.16 (m, 2H), 1.14-1.11 (m, 2H).	578.4
286		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 2.8 Hz, 1H), 8.01 (d, *J* = 2.8 Hz, 1H), 7.77 (s, 1H), 7.60 (d, *J* = 7.2 Hz, 1H), 7.24 (d, *J* = 7.2 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.95 (s, 2H), 2.75-2.48 (m, 8H), 2.31 (s, 3H), 1.94 (s, 3H), 1.89 (s, 3H).	578.4
287		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.79 (s, 1H), 7.62 (d, *J* = 7.6 Hz, 1H), 7.27 (d, *J* = 7.6 Hz, 1H), 7.19 (d, *J* = 8.8 Hz, 1H), 7.01 (d, *J* = 8.8 Hz, 1H), 3.98 (s, 2H), 2.77-2.45 (m, 8H), 2.34 (s, 3H), 1.96 (s, 3H), 1.91 (s, 3H).	578.4
288		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.99 (s, 1H), 7.57 (s, 1H), 7.28 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.12 (s, 1H), 3.23-3.22 (m, 2H), 2.84-2.81 (m, 2H), 2.78-2.74 (m, 2H), 2.73 (s, 3H), 2.60 (s, 3H), 2.46 (s, 3H), 2.35-2.31 (m, 1H), 1.91 (s, 3H), 1.87 (s, 3H), 1.29 (s, 3H), 1.16-1.11 (m, 2H), 1.07-1.04 (m, 2H).	561.5

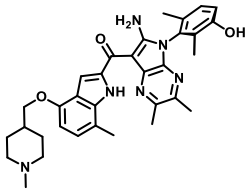
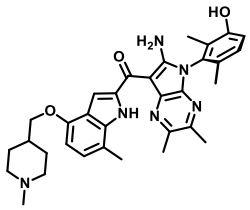
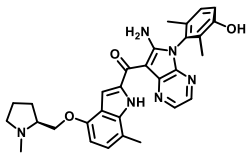
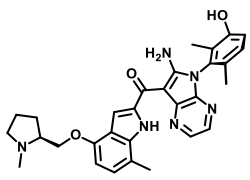
289		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.99 (s, 1H), 7.56 (s, 1H), 7.28 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.11 (s, 1H), 3.23-3.22 (m, 2H), 2.84-2.81 (m, 2H), 2.77-2.74 (m, 2H), 2.72 (s, 3H), 2.60 (s, 3H), 2.46 (s, 3H), 2.36-2.28 (m, 1H), 1.91 (s, 3H), 1.86 (s, 3H), 1.16-1.11 (m, 2H), 1.07-1.04 (m, 2H).	561.5
290		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.03 (s, 1H), 7.49 (s, 1H), 7.17-7.09 (m, 2H), 6.96 (d, *J* = 8.4 Hz, 1H), 3.63 (s, 2H), 2.71 (s, 3H), 2.71-2.35 (m, 11H), 2.32 (t, *J* = 5.2 Hz, 1H), 2.28 (s, 3H), 1.91 (s, 3H), 1.86 (s, 3H), 1.18-1.10 (m, 2H), 1.06 (d, *J* = 3.2 Hz, 2H).	578.4
291		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.03 (s, 1H), 7.49 (s, 1H), 7.17-7.09 (m, 2H), 6.96 (d, *J* = 8.4 Hz, 1H), 3.63 (s, 2H), 2.71 (s, 3H), 2.71-2.35 (m, 11H), 2.32 (t, *J* = 5.2 Hz, 1H), 2.28 (s, 3H), 1.91 (s, 3H), 1.86 (s, 3H), 1.18-1.10 (m, 2H), 1.06 (d, *J* = 3.2 Hz, 2H).	578.4
292		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methylpiperidin-4-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.97 (s, 1H), 7.42 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.04 (s, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 3.39-3.36 (m, 1H), 2.85-2.78 (m, 2H), 2.72 (s, 3H), 2.70 (s, 3H), 2.60 (s, 3H), 2.36-2.29 (m, 1H), 2.09-1.95 (m, 5H), 1.91 (s, 3H), 1.86 (s, 3H), 1.15-1.11 (m, 2H), 1.07-1.03 (m, 2H).	563.3

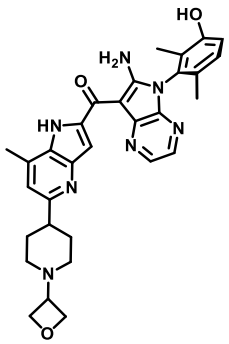
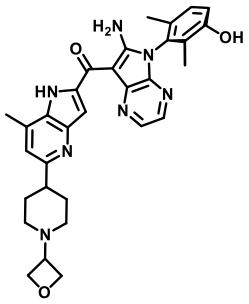
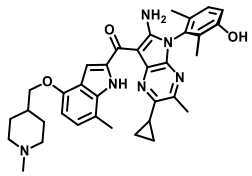
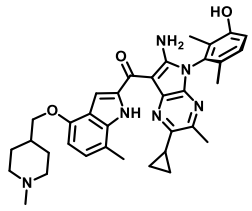
293		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methylpiperidin-4-yl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.97 (s, 1H), 7.42 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.04 (s, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 3.38-3.35 (m, 2H), 2.82-2.77 (m, 2H), 2.72 (s, 3H), 2.69 (s, 3H), 2.60 (s, 3H), 2.36-2.30 (m, 1H), 2.10-1.96 (m, 5H), 1.91 (s, 3H), 1.86 (s, 3H), 1.15-1.11 (m, 2H), 1.07-1.05 (m, 2H).	563.3
294		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.80 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.05 (d, *J* = 2.0 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 1.2 Hz, 1H), 4.40 (d, *J* = 8.0 Hz, 1H), 2.87-2.74 (m, 2H), 2.70 (s, 3H), 2.60 (s, 3H), 2.51-2.39 (m, 2H), 2.35 (s, 3H), 2.33-2.27 (m, 1H), 2.11-2.01 (m, 2H), 1.92-1.84 (m, 7H), 1.17-1.09 (m, 2H), 1.06-0.99 (m, 2H).	579.4
295		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.80 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.05 (d, *J* = 2.0 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 1.2 Hz, 1H), 4.42 (d, *J* = 2.0 Hz, 1H), 2.89-2.78 (m, 2H), 2.70 (s, 3H), 2.60 (s, 3H), 2.53-2.42 (m, 2H), 2.40-2.36 (m, 3H), 2.34-2.29 (m, 1H), 2.06 (d, *J* = 7.2 Hz, 2H), 1.92-1.85 (m, 8H), 1.16-1.09 (m, 2H), 1.05-0.99 (m, 2H).	579.4
296		(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-7-methyl-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 2.4 Hz, 1H), 7.99 (d, *J* = 2.8 Hz, 1H), 7.68 (s, 1H), 7.19-7.16 (m, 1H), 7.15-7.09 (m, 2H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.54 (s, 1H), 4.39-4.21 (m, 2H), 4.16 (d, *J* = 8.8 Hz, 1H), 3.86 (s, 1H), 3.70 (d, *J* = 8.8 Hz, 1H), 3.15-3.07 (m, 1H), 3.04-2.93 (m, 1H), 2.76 (s, 3H), 2.20-2.15 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	523.2

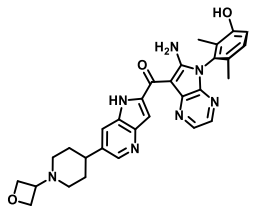
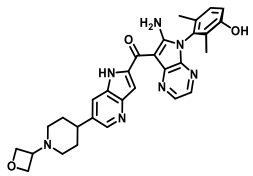
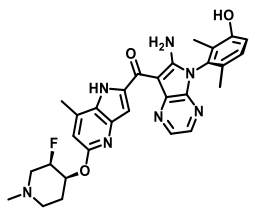
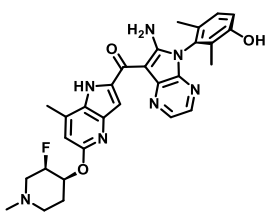
297		(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-7-methyl-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 2.4 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.68 (s, 1H), 7.18 (s, 1H), 7.16 (s, 2H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.60-4.55 (m, 1H), 4.47-4.25 (m, 2H), 4.16 (d, *J* = 8.8 Hz, 1H), 3.94 (s, 1H), 3.72 (d, *J* = 8.0 Hz, 1H), 3.20-3.12 (m, 1H), 3.10-3.01 (m, 1H), 2.77 (s, 3H), 2.27-2.16 (m, 1H), 1.95 (br s, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	523.2
298		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.54 (s, 1H), 7.81 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 2.0 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.80 (d, *J* = 0.8 Hz, 1H), 3.92 (d, *J* = 6.0 Hz, 2H), 3.21 (d, *J* = 11.2 Hz, 2H), 2.69 (s, 3H), 2.60 (s, 3H), 2.56 (s, 3H), 2.53-2.44 (m, 2H), 2.34-2.29 (m, 1H), 2.07-1.95 (m, 3H), 1.91 (s, 3H), 1.86 (s, 3H), 1.66-1.52 (m, 2H), 1.18-1.09 (m, 2H), 1.06-0.99 (m, 1H), 1.07-0.99 (m, 1H).	593.4
299		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.53 (s, 1H), 7.81 (s, 1H), 7.19-7.11 (m, 1H), 6.99 (d, *J* = 2.0 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.81 (s, 1H), 3.92 (d, *J* = 6.0 Hz, 2H), 3.26-3.17 (m, 2H), 2.69 (s, 3H), 2.60 (s, 3H), 2.56 (s, 3H), 2.54-2.45 (m, 2H), 2.37-2.28 (m, 1H), 2.07-1.95 (m, 3H), 1.86 (s, 3H), 1.67-1.49 (m, 2H), 1.17-1.09 (m, 2H), 1.07-0.99 (m, 2H).	593.4
300		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.53 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.05-6.92 (m, 2H), 6.44 (d, *J* = 7.6 Hz, 1H), 3.99 (d, *J* = 6.0 Hz, 2H), 3.05-2.92 (m, 2H), 2.66 (s, 3H), 2.33 (s, 3H), 2.19-2.13 (m, 2H), 2.04-1.95 (m, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.60-1.47 (m, 2H).	539.4

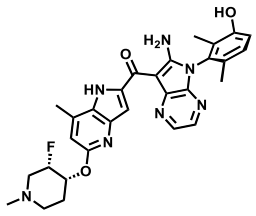
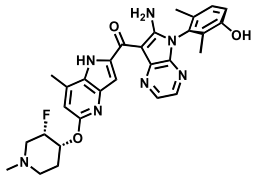
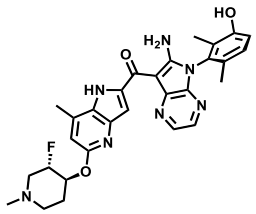
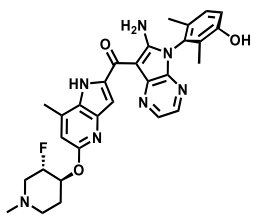
301		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.53 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.05-6.94 (m, 2H), 6.44 (d, *J* = 7.6 Hz, 1H), 3.99 (d, *J* = 6.0 Hz, 2H), 3.05-2.92 (m, 2H), 2.66 (s, 3H), 2.34 (s, 3H), 2.19-2.13 (m, 2H), 2.03-1.95 (m, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.60-1.47 (m, 2H).	539.4
302		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.57 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.06-6.96 (m, 2H), 6.24 (d, *J* = 8.0 Hz, 1H), 5.28-5.26 (m, 1H), 4.77-4.64 (m, 2H), 4.44-4.31 (m, 2H), 3.07 (s, 3H), 2.69 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	497.2
303		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.57 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.06-6.97 (m, 2H), 6.24 (d, *J* = 7.6 Hz, 1H), 5.28-5.26 (m, 1H), 4.77-4.64 (m, 2H), 4.45-4.32 (m, 2H), 3.07 (s, 3H), 2.69 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	497.2
304		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-1-methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.57 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.05-6.98 (m, 2H), 6.54 (d, *J* = 7.6 Hz, 1H), 4.52 (dd, *J* = 3.2, 10.8 Hz, 1H), 4.31 (dd, *J* = 7.6, 10.8 Hz, 1H), 3.88 (d, *J* = 5.6 Hz, 1H), 3.70-3.65 (m, 1H), 3.22-3.17 (m, 1H), 3.12 (s, 3H), 2.67 (s, 3H), 2.45-2.38 (m, 1H), 2.23-2.07 (m, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	525.2
305		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-1-	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.57 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.05-6.98 (m, 2H), 6.54 (d, *J* = 7.6 Hz, 1H), 4.54 (dd, *J* = 3.2, 10.8	525.2

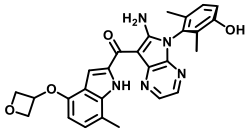
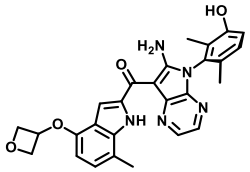
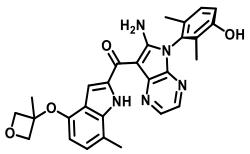
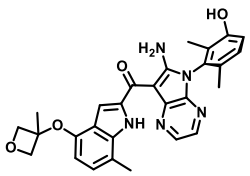
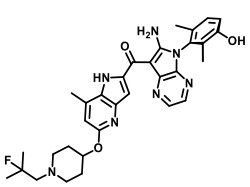
		methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone	Hz, 1H), 4.31 (dd, *J* = 7.6, 10.8 Hz, 1H), 3.92 (d, *J* = 5.6 Hz, 1H), 3.72-3.67 (m, 1H), 3.25-3.20 (m, 1H), 3.14 (s, 3H), 2.67 (s, 3H), 2.46-2.39 (m, 1H), 2.25-2.07 (m, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	
306		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.53 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.01 (t, *J* = 7.2 Hz, 2H), 6.50 (d, *J* = 7.6 Hz, 1H), 4.61 (s, 1H), 2.82 (s, 2H), 2.66 (s, 3H), 2.56-2.45 (m, 2H), 2.37 (s, 3H), 2.08 (s, 2H), 1.99 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	525.4
307		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 2.8 Hz, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.53 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.99 (t, *J* = 7.2 Hz, 2H), 6.51 (d, *J* = 7.6 Hz, 1H), 4.66 (s, 1H), 2.93 (s, 2H), 2.72 (s, 3H), 2.56-2.45 (m, 2H), 2.37 (s, 3H), 2.08 (s, 2H), 2.08 (s, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	525.3
308		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.54 (s, 1H), 7.11 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 6.94 (d, *J* = 8.4 Hz, 1H), 6.46 (d, *J* = 7.6 Hz, 1H), 4.21 (d, *J* = 6.0 Hz, 2H), 3.56 (t, *J* = 8.0 Hz, 2H), 3.30-3.25 (m, 2H), 3.08-2.97 (m, 1H), 2.66 (s, 3H), 2.41 (s, 3H), 1.91 (s, 3H), 1.87 (s, 6H).	511.1
309		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.55 (s, 1H), 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.60 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.04 (d, *J* = 7.6 Hz, 1H), 6.99 (d, *J* = 8.8 Hz, 1H), 6.53 (d, *J* = 7.6 Hz, 1H), 4.25 (d, *J* = 4.8 Hz, 2H), 4.12-4.04 (m, 2H), 3.99-3.90 (m, 2H), 3.34-3.33 (m, 1H), 2.83 (s, 3H), 2.68 (s,	511.1

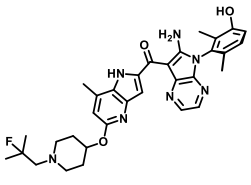
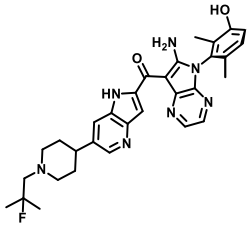
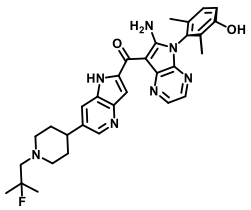
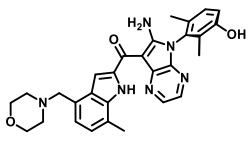
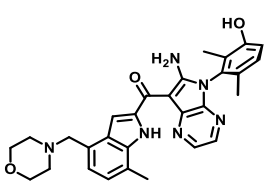
			3H), 1.93 (s, 3H), 1.88 (s, 3H)	
310		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.56 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.03 - 6.92 (m, 2H), 6.43 (d, *J* = 7.6 Hz, 1H), 3.98 (d, *J* = 6.0 Hz, 2H), 3.02-2.91 (m, 2H), 2.76 (s, 3H), 2.70 (s, 3H), 2.49 (s, 3H), 2.31 (s, 3H), 2.15-2.10 (m, 2H), 2.03-1.96 (m, 3H), 1.92 (s, 3H), 1.87 (s, 3H), 1.57-1.50 (m, 2H).	567.4
311		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 7.55 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.04 - 6.91 (m, 2H), 6.45 (d, *J* = 7.6 Hz, 1H), 4.02 (d, *J* = 6.0 Hz, 2H), 3.19-3.16 (m, 2H), 2.76 (s, 3H), 2.71 (s, 3H), 2.51 (s, 3H), 2.49 (s, 3H), 2.46-2.42 (m, 1H), 2.10-2.00 (m, 4H), 1.92 (s, 3H), 1.87 (s, 3H), 1.67-1.60 (m, 2H).	567.4
312		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-1-methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.56 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 7.04-6.96 (m, 2H), 6.47 (d, *J* = 7.6 Hz, 1H), 4.21-4.09 (m, 2H), 3.17-3.11 (m, 1H), 2.98-2.89 (m, 1H), 2.66 (s, 3H), 2.65 (s, 3H), 2.44 (q, *J* = 8.8 Hz, 1H), 2.24-2.12 (m, 1H), 1.93 (s, 3H), 1.91-1.84 (m, 5H), 1.83-1.73 (m, 1H).	525.5
313		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-1-methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.56 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.05-6.95 (m, 2H), 6.47 (d, *J* = 7.6 Hz, 1H), 4.23-4.09 (m, 2H), 3.19-3.13 (m, 1H), 3.01-2.91 (m, 1H), 2.67 (s, 6H), 2.47 (q, *J* = 8.8 Hz, 1H), 2.22-2.11 (m, 1H), 1.93 (s, 3H), 1.92-1.85 (m, 5H), 1.84-1.74 (m, 1H).	525.4

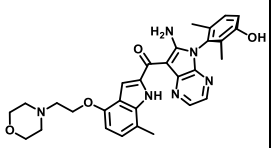
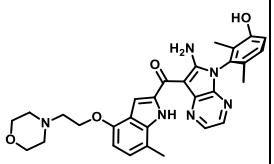
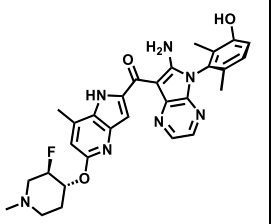
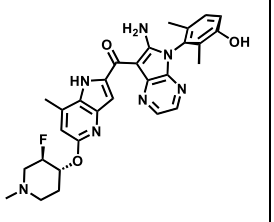
314		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.52 (s, 1H), 7.19-7.14 (m, 2H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.75-4.72 (m, 2H), 4.69-4.65 (m, 2H), 3.58 (t, *J* = 6.8 Hz, 1H), 2.97 (d, *J* = 10.8 Hz, 2H), 2.88-2.83 (m, 1H), 2.80 (s, 3H), 2.10-2.06 (m, 2H), 2.02 - 1.96 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	552.3
315		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 2.8 Hz, 1H), 7.53 (s, 1H), 7.33 (s, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 4.85-4.83 (m, 2H), 4.79-4.75 (m, 2H), 4.05-4.12 (m, 1H), 3.33 (s, 2H), 3.14-3.08 (m, 1H), 2.87 (s, 3H), 2.61-2.55 (m, 2H), 2.19 - 2.10 (m, 4H), 1.94 (s, 3H), 1.89 (s, 3H).	552.3
316		(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.24 (s, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 7.03 - 6.86 (m, 2H), 6.43 (d, *J* = 7.6 Hz, 1H), 3.98 (d, *J* = 6.0 Hz, 2H), 3.05-2.91 (m, 2H), 2.59 (s, 6H), 2.32 (s, 3H), 2.30-2.26 (m, 1H), 2.17-2.12 (m, 2H), 2.07-1.98 (m, 3H), 1.91 (s, 3H), 1.86 (s, 3H), 1.55-.42 (m, 2H), 1.18-1.06 (m, 4H).	593.4
317		(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.24 (s, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 7.02-6.90 (m, 2H), 6.43 (d, *J* = 7.6 Hz, 1H), 3.98 (d, *J* = 6.0 Hz, 2H), 3.05-2.92 (m, 2H), 2.59 (s, 6H), 2.33 (s, 3H), 2.31-2.26 (m, 1H), 2.19-2.13 (m, 2H), 2.08-1.96 (m, 3H), 1.91 (s, 3H), 1.86 (s, 3H), 1.55-1.45 (m, 2H), 1.18-1.06 (m, 4H).	593.4

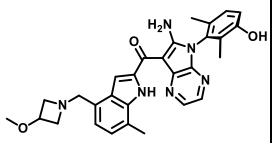
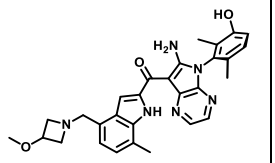
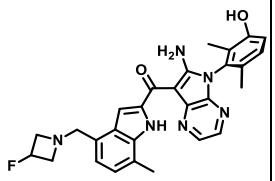
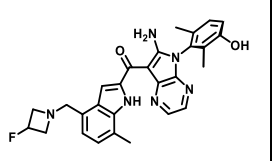
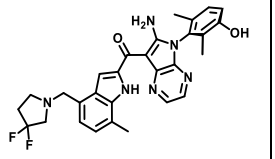
318		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (d, *J* = 3.2 Hz, 1H), 8.40 (s, 1H), 8.08 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.68 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.77-4.74 (m, 2H), 4.70-4.66 (m, 2H), 3.61-3.57 (m, 1H), 3.02-2.97 (m, 2H), 2.85 (s, 1H), 2.08 (m, 2H), 2.04-1.96 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	538.2
319		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.45 (d, *J* = 3.2 Hz, 1H), 8.40 (d, *J* = 1.6 Hz, 1H), 8.08 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.69 (s, 1H), 7.17 (d, *J* = 8.8 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.76 (s, 2H), 4.70-4.66 (m, 2H), 3.60 (m, 1H), 3.00 (m, 2H), 2.91-2.81 (m, 1H), 2.13-2.07 (m, 2H), 2.04-1.96 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	538.2
320		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.69 (d, *J* = 0.8 Hz, 1H), 5.35-5.03 (m, 1H), 4.91 (s, 1H), 3.26-3.14 (m, 1H), 2.93-2.82 (m, 1H), 2.74 (s, 3H), 2.63-2.50 (m, 1H), 2.40 (s, 1H), 2.35 (s, 3H), 2.23-2.16 (m, 1H), 2.04 -1.98 (m, 1H), 1.93 (s, 3H), 1.89 (s, 3H).	544.2
321		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.69 (d, *J* = 0.8 Hz, 1H), 5.25-5.04(m, 1H), 4.95 (s, 1H), 3.21-3.14 (m, 1H), 2.94-2.81 (m, 1H), 2.74 (s, 3H), 2.62-2.49 (m, 1H), 2.41 (s, 1H), 2.36 (s, 3H), 2.22-2.14 (m, 1H), 2.01 -1.98 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	544.2

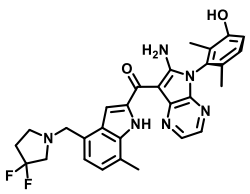
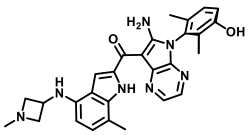
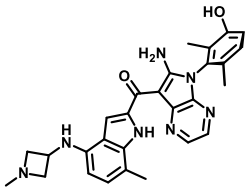
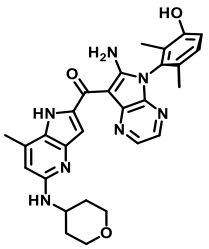
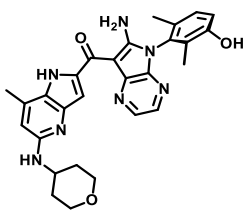
322		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.39 (s, 1H), 7.20 (d, *J* = 8.4 Hz, 1H), 7.02 (d, *J* = 8.4 Hz, 1H), 6.72 (s, 1H), 5.39-5.26 (m, 1H), 5.18-5.02 (m, 1H), 3.31-2.99 (m, 2H), 2.92-2.80 (m, 1H), 2.77 (s, 3H), 2.70-2.60 (m, 1H), 2.52 (s, 3H), 2.30-2.21 (m, 1H), 2.15-2.08 (m, 1H), 1.96 (s, 3H), 1.92 (s, 3H).	544.2
323		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.35 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 5.34-5.16 (m, 1H), 5.07-5.03 (m, 1H), 3.18-3.07 (m, 2H), 2.92-2.80 (m, 1H), 2.72 (s, 3H), 2.62-2.47 (m, 1H), 2.35 (s, 3H), 2.24-2.14 (m, 1H), 2.05-1.97 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	544.2
324		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 5.32-5.15 (m, 1H), 4.84-4.64 (m, 2H), 3.07-2.92 (m, 1H), 2.73 (s, 4H), 2.63-2.51 (m, 1H), 2.49-2.40 (m, 1H), 2.40-2.28 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H), 1.84-1.72 (m, 1H).	544.3
325		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.35 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.65 (s, 1H), 5.33-5.12 (m, 1H), 4.85-4.65 (m, 2H), 3.03-2.96 (m, 1H), 2.79-2.67 (m, 4H), 2.64-2.52 (m, 1H), 2.50-2.41 (m, 1H), 2.40-2.28 (m, 4H), 1.93 (s, 3H), 1.89 (s, 3H), 1.85-1.72 (m, 1H).	544.3

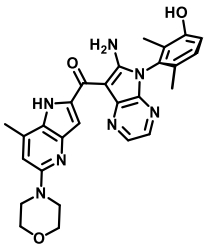
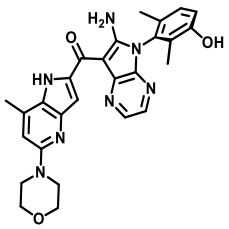
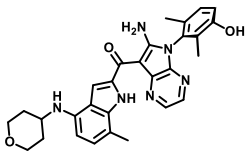
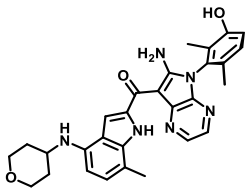
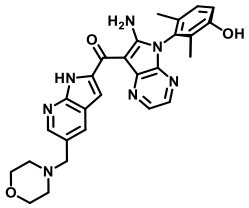
326		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(oxetan-3-yloxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.00-6.95 (m, 2H), 6.07 (d, *J* = 7.6 Hz, 1H), 5.44-5.38 (m, 1H), 5.09 (t, *J* = 6.4 Hz, 2H), 4.83-4.80 (m, 2H), 2.66 (s, 3H), 1.93 (s, 3H), 1.89 (s, 3H).	484.2
327		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(oxetan-3-yloxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.55 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.99-6.96 (m, 2H), 6.07 (d, *J* = 8.0 Hz, 1H), 5.44-5.38 (m, 1H), 5.09 (t, *J* = 6.8 Hz, 2H), 4.83-4.80 (m, 2H), 2.66 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	484.2
328		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.03-6.93 (m, 2H), 6.02 (d, *J* = 7.6 Hz, 1H), 5.02 (d, *J* = 6.8 Hz, 2H), 4.68 (d, *J* = 6.8 Hz, 2H), 2.66 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.82 (s, 3H).	498.2
329		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 2.4 Hz, 1H), 7.97 (d, *J* = 2.4 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.06-6.90 (m, 2H), 6.02 (d, *J* = 7.6 Hz, 1H), 5.02 (d, *J* = 6.8 Hz, 2H), 4.68 (d, *J* = 6.8 Hz, 2H), 2.65 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H), 1.82 (s, 3H).	498.2
330		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((1-(2-fluoro-2-methylpropyl)piperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 2.8 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.65 (s, 1H), 5.11 (s, 1H), 3.11-2.99 (m, 2H), 2.78-2.63 (m, 7H), 2.16-2.09 (m, 2H), 1.88 (s, 3H), 1.93 (s, 4H), 1.44-1.37 (m, 6H).	586.4

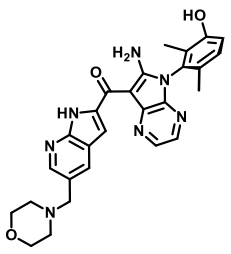
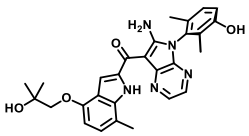
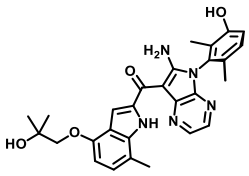
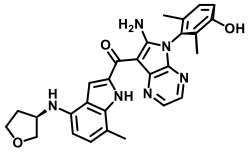
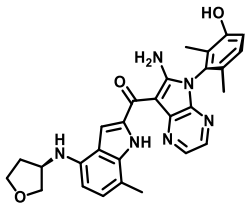
331		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((1-(2-fluoro-2-methylpropyl)piperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 2.4 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.62 (s, 1H), 5.05 (td, *J* = 4.0, 8.0 Hz, 1H), 2.97-2.87 (m, 2H), 2.71 (s, 3H), 2.59-2.45 (m, 4H), 2.11-2.04 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.87-1.78 (m, 2H), 1.43-1.32 (m, 6H).	586.4
332		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(2-fluoro-2-methylpropyl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 3.2 Hz, 1H), 8.38 (d, *J* = 1.2 Hz, 1H), 8.06 (s, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.67 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 3.22 (d, *J* = 11.6 Hz, 2H), 2.79 (t, *J* = 4.0 Hz, 1H), 2.69-2.59 (m, 2H), 2.43 (t, *J* = 10.8 Hz, 2H), 2.08-1.94 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H), 1.44 (s, 3H).	556.4
333		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(2-fluoro-2-methylpropyl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 3.2 Hz, 1H), 8.38 (d, *J* = 1.2 Hz, 1H), 8.06 (s, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.67 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.18 (d, *J* = 11.6 Hz, 2H), 2.83-2.71 (m, 1H), 2.66-2.52 (m, 2H), 2.37 (t, *J* = 10.8 Hz, 2H), 2.05-1.90 (m, 7H), 1.88 (s, 3H), 1.43 (s, 3H), 1.38 (s, 3H).	556.4
334		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(morpholinomethyl)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.68 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 7.2 Hz, 1H), 7.03 (d, *J* = 7.2 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.89 (s, 2H), 3.72 (t, *J* = 4.4 Hz, 4H), 2.74 (s, 3H), 2.61 (s, 4H), 1.93 (s, 3H), 1.89 (s, 3H).	511.2
335		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(morpholinomethyl	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.68 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.14 (s, 1H), 7.10-7.06 (m, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.08 (s,	511.2

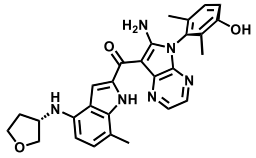
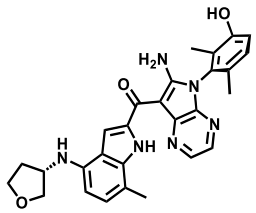
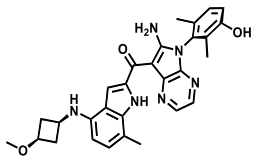
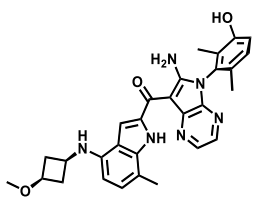
		)-1H-indol-2-yl)methanone	2H), 3.79-3.72 (m, 4H), 2.80 (s, 4H), 2.76 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	
336		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(2-morpholinoethoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.03-6.97 (m, 2H), 6.47 (d, *J* = 8.0 Hz, 1H), 4.31 (t, *J* = 5.6 Hz, 2H), 3.77-3.73 (m, 4H), 2.95 (t, *J* = 5.6 Hz, 2H), 2.75-2.71 (m, 4H), 2.67 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	541.3
337		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(2-morpholinoethoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 7.03-6.97 (m, 2H), 6.48 (d, *J* = 8.0 Hz, 1H), 4.31 (t, *J* = 5.4 Hz, 2H), 3.77-3.74 (m, 4H), 2.94 (t, *J* = 5.2 Hz, 2H), 2.74-2.70 (m, 4H), 2.67 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	541.3
338		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 5.24-5.21 (m, 1H), 4.83-4.66 (m, 2H), 3.03-2.96 (m, 1H), 2.81-2.74 (m, 1H), 2.72 (s, 3H), 2.63-2.52 (m, 1H), 2.50-2.41 (m, 1H), 2.37 (s, 3H), 2.35-2.30 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.84-1.77 (m, 1H).	544.3
339		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 5.30-5.18 (m, 1H), 4.82-4.68 (m, 2H), 3.08-2.92 (m, 1H), 2.79-2.75 (m, 1H), 2.73 (s, 3H), 2.63-2.52 (m, 1H), 2.50-2.41 (m, 1H), 2.38 (s, 3H), 2.34-2.31 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.85-1.73 (m, 1H).	544.3

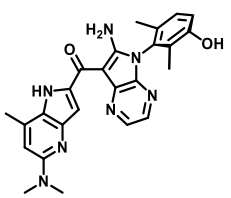
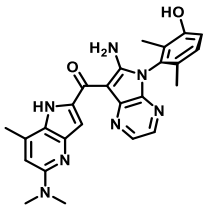
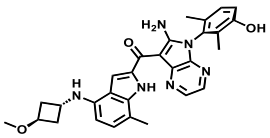
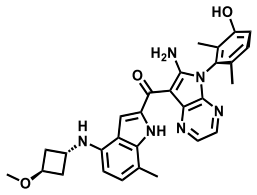
340		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (dd, *J* = 1.2, 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.60 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.11 (d, *J* = 7.2 Hz, 1H), 7.00-6.95 (m, 2H), 4.05 (t, *J* = 6.0 Hz, 1H), 3.99 (s, 2H), 3.64 (t, *J* = 6.8 Hz, 2H), 3.25 (s, 3H), 3.16-3.12 (m, 2H), 2.74 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	511.2
341		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (dd, *J* = 1.2, 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.16 (t, *J* = 8.8 Hz, 2H), 7.04 (d, *J* = 7.2 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.25 (s, 2H), 4.18-4.10 (m, 1H), 3.94-3.86 (m, 2H), 3.52-3.43 (m, 2H), 3.28 (s, 3H), 2.75 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	511.2
342		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-fluoroazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.12 (d, *J* = 6.8 Hz, 1H), 7.03-6.95 (m, 2H), 5.27-5.07 (m, 1H), 4.11 (s, 2H), 3.86-3.74 (m, 2H), 3.54-3.44 (m, 2H), 2.75 (s, 3H), 1.93 (s, 3H), 1.89 (s, 3H).	499.2
343		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-fluoroazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 7.12 (d, *J* = 7.6 Hz, 1H), 6.99 (dd, *J* = 5.2, 7.6 Hz, 2H), 5.26 - 5.06 (m, 1H), 4.10 (s, 2H), 3.85-3.72 (m, 2H), 3.50-3.43 (m, 2H), 2.75 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	499.2
344		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.02 (br s, 1H), 8.39-8.24 (m, 1H), 7.96 (br s, 1H), 7.53 (s, 1H), 7.09 (dd, *J* = 7.6, 16.8 Hz, 2H), 6.96 (dd, *J* = 8.0, 10.4 Hz, 2H), 3.92 (s, 2H), 2.91 (t, *J* = 13.6 Hz, 2H), 2.75 (t, J = 6.8 Hz, 2H), 2.68 (s, 3H), 2.30 -2.20 (m, 2H), 1.83 (s, 3H), 1.76 (s, 3H).	531.1

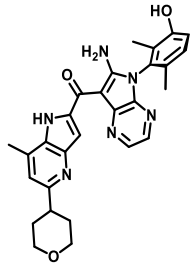
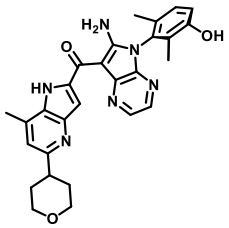
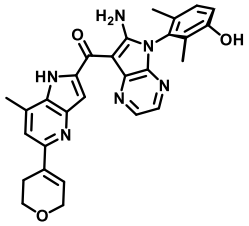
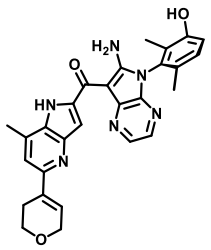
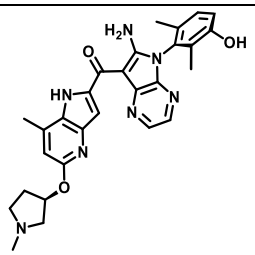
345		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.91 (s, 1H), 9.69 (s, 1H), 8.38 (d, J = 2.8 Hz, 1H), 8.02 (d, J = 2.8 Hz, 1H), 7.57 (br s, 1H), 7.15-7.07 (m, 2H), 7.02-6.93 (m, 2H), 3.92 (br s, 2H), 3.00-2.83 (m, 2H), 2.80-2.66 (m, 5H), 2.32-2.20 (m, 2H), 1.83 (s, 3H), 1.76 (s, 3H).	531.1
346		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, J = 2.4 Hz, 1H), 7.97 (d, J = 2.4 Hz, 1H), 7.58 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.93 (d, J = 7.2 Hz, 1H), 5.97 (d, J = 7.2 Hz, 1H), 4.42-4.33 (m, 1H), 4.17 (t, J = 7.2 Hz, 2H), 3.62-3.52 (m, 2H), 2.68 (s, 3H), 2.62 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	496.2
347		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, J = 2.8 Hz, 1H), 7.97 (d, J = 2.8 Hz, 1H), 7.58 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.93 (d, J = 7.2 Hz, 1H), 5.98 (d, J = 7.2 Hz, 1H), 4.35-4.27 (m, 1H), 4.10 - 4.00 (m, 2H), 3.41-3.37 (m, 2H), 2.62 (s, 3H), 2.58 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	496.2
348		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((tetrahydro-2H-pyran-4-yl)amino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, J = 3.2 Hz, 1H), 7.97 (d, J = 3.2 Hz, 1H), 7.27 (s, 1H), 7.16 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 6.49 (s, 1H), 4.08-3.97 (m, 3H), 3.66-3.57 (m, 2H), 2.65 (s, 3H), 2.08-2.02 (m, 2H), 1.92 (s, 3H), 1.87 (s, 3H), 1.60-1.49 (m, 2H).	512.3
349		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((tetrahydro-2H-pyran-4-yl)amino)-1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, J = 3.2 Hz, 1H), 7.98 (d, J = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 6.62 (s, 1H), 5.05 (td, J = 4.0, 8.0 Hz, 1H), 2.97-2.87 (m, 2H), 2.71 (s, 3H), 2.59-2.45 (m, 4H), 2.11-2.04 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H),	512.2

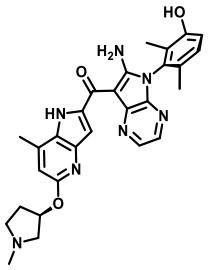
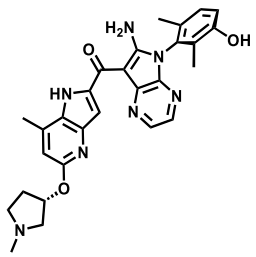
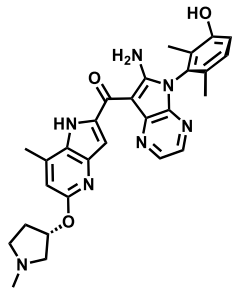
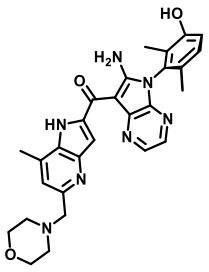
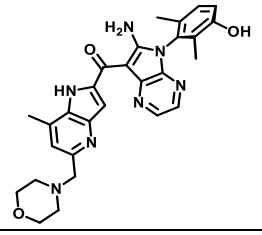
		b]pyridin-2-yl)methanone	1.87-1.78 (m, 2H), 1.43-1.32 (m, 6H).	
350		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-morpholino-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 8.32 (s, 1H), 7.96 (s, 1H), 7.21 (s, 1H), 7.11 (d, J = 8.4 Hz, 1H), 6.97 (d, J = 8.4 Hz, 1H), 6.87 (s, 1H), 3.76-3.72 (m, 4H), 3.47-3.44 (m, 4H), 2.64 (s, 3H), 1.83 (s, 3H), 1.75 (s, 3H).	498.2
351		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-morpholino-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 8.36 (d, J = 2.0 Hz, 1H), 7.99 (d, J = 2.4 Hz, 1H), 7.23 (d, J = 1.2 Hz, 1H), 7.12 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 6.88 (s, 1H), 3.76-3.72 (m, 4H), 3.47-3.44 (m, 4H), 2.65 (s, 3H), 1.83 (s, 3H), 1.75 (s, 3H).	498.2
352		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((tetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, J = 3.2 Hz, 1H), 7.97 (d, J = 3.2 Hz, 1H), 7.58 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.96 (dd, J = 8.0, 16.4 Hz, 2H), 6.26 (d, J = 7.6 Hz, 1H), 4.06-4.00 (m, 2H), 3.73-3.66 (m, 1H), 3.63-3.55 (m, 2H), 2.62 (s, 3H), 2.11 (d, J = 11.6 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.69-1.58 (m, 2H).	511.1
353		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((tetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, J = 3.2 Hz, 1H), 7.97 (d, J = 3.2 Hz, 1H), 7.58 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.96 (dd, J = 8.0, 16.4 Hz, 2H), 6.26 (d, J = 7.6 Hz, 1H), 4.03 (d, J = 10.8 Hz, 2H), 3.73-3.66 (m, 1H), 3.59 (t, J = 11.2 Hz, 2H), 2.62 (s, 3H), 2.10 (d, J = 12.0 Hz, 2H), 1.93 (s, 3H), 1.88 (s, 3H), 1.68-1.58 (m, 2H).	511.1
354		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.76 (s, 1H), 9.67 (s, 1H), 8.41 (d, J = 3.2 Hz, 1H), 8.39 (d, J = 2.0 Hz, 1H), 8.06 (d, J = 1.6 Hz, 1H), 8.02 (d, J = 3.2 Hz, 1H), 7.51 (d, J = 2.0 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 3.66-3.52 (m, 6H),	498.2

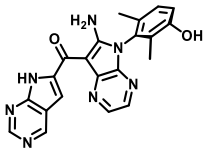
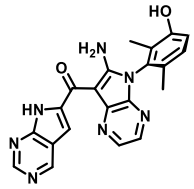
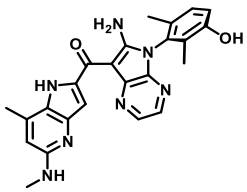
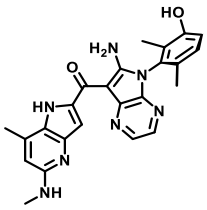
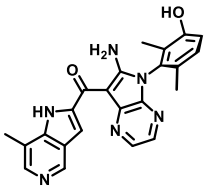
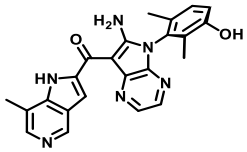
			2.40 (s, 4H), 1.83 (s, 3H), 1.76 (s, 3H).	
355		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.77 (s, 1H), 9.68 (s, 1H), 8.41 (d, J = 3.2 Hz, 1H), 8.39 (s, 1H), 8.06 (s, 1H), 8.01 (d, J = 3.2 Hz, 1H), 7.51 (s, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 3.59 (d, J = 6.8 Hz, 6H), 2.40 (s, 4H), 1.83 (s, 3H), 1.76 (s, 3H).	498.2
356		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(2-hydroxy-2-methylpropoxy)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.89 (s, 1H), 9.67 (s, 1H), 8.36 (d, J = 3.2 Hz, 1H), 8.01 (d, J = 3.2 Hz, 1H), 7.49 (d, J = 2.0 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.0 Hz, 2H), 6.44 (d, J = 8.0 Hz, 1H), 4.71 (s, 1H), 3.82 (s, 2H), 2.61 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.29 (s, 6H).	500.2
357		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(2-hydroxy-2-methylpropoxy)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.89 (s, 1H), 9.68 (s, 1H), 8.36 (d, J = 3.2 Hz, 1H), 8.01 (d, J = 3.2 Hz, 1H), 7.49 (d, J = 2.0 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 7.01-6.96 (m, 2H), 6.44 (d, J = 8.0 Hz, 1H), 4.72 (s, 1H), 3.82 (s, 2H), 2.61 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.29 (s, 6H).	500.2
358		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-tetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, J = 3.2 Hz, 1H), 7.96 (d, J = 3.2 Hz, 1H), 7.58 (s, 1H), 7.16 (d, J = 8.4 Hz, 1H), 7.03-6.90 (m, 2H), 6.13 (d, J = 7.6 Hz, 1H), 4.30-4.20 (m, 1H), 4.09-3.98 (m, 2H), 3.92-3.78 (m, 2H), 2.61 (s, 3H), 2.40-2.28 (m, 1H), 2.12-2.03 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	497.1
359		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-tetrahydrofuran-	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, J = 3.2 Hz, 1H), 7.96 (d, J = 3.2 Hz, 1H), 7.57 (s, 1H), 7.16 (d, J = 8.4 Hz, 1H), 7.05-6.88 (m, 2H), 6.13 (d, J = 7.5 Hz, 1H), 4.35-4.17 (m, 1H), 4.09-3.98 (m, 2H), 3.92-	497.1

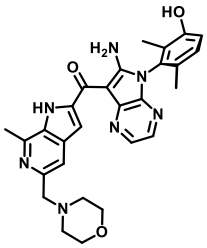
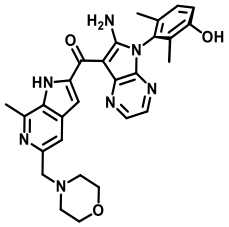
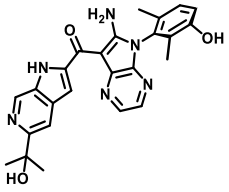
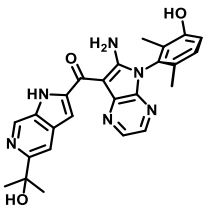
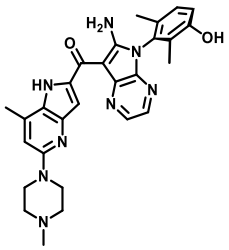
		3-yl)amino)-1H-indol-2-yl)methanone	3.78 (m, 2H), 2.61 (s, 3H), 2.40-2.29 (m, 1H), 2.10-2.02 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	
360		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-tetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.01-6.90 (m, 2H), 6.14 (d, *J* = 7.6 Hz, 1H), 4.29-4.19 (m, 1H), 4.08-3.99 (m, 2H), 3.92-3.80 (m, 2H), 2.62 (s, 3H), 2.41-2.28 (m, 1H), 2.09-2.02 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	497.2
361		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-tetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.57 (d, *J* = 1.2 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.00-6.93 (m, 2H), 6.14 (d, J = 7.6 Hz, 1H), 4.31-4.22 (m, 1H), 4.08 - 4.01 (m, 2H), 3.91-3.80 (m, 2H), 2.62 (s, 3H), 2.39-2.29 (m, 1H), 2.10-2.03 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H).	497.2
362		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1s,3S)-3-methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.76 (s, 1H), 9.67 (s, 1H), 8.34 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.68 (d, *J* = 2.0 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.86 (d, *J* = 7.6 Hz, 1H), 6.07 (d, *J* = 4.4 Hz, 1H), 5.92 (d, *J* = 7.6 Hz, 1H), 3.68 (q, *J* = 7.2 Hz, 1H), 3.61-3.49 (m, 1H), 3.16 (s, 3H), 2.81-2.71 (m, 2H), 2.53 (s, 3H), 1.91-1.80 (m, 5H), 1.76 (s, 3H).	511.2
363		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1s,3S)-3-methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.77 (s, 1H), 9.69 (s, 1H), 8.34 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.68 (d, *J* = 2.0 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 6.86 (d, *J* = 7.6 Hz, 1H), 6.07 (d, *J* = 6.4 Hz, 1H), 5.92 (d, *J* = 7.6 Hz, 1H), 3.68 (t, *J* = 6.8 Hz, 1H), 3.61-3.51 (m, 1H), 3.17 (s, 3H), 2.81-2.71 (m,	511.2

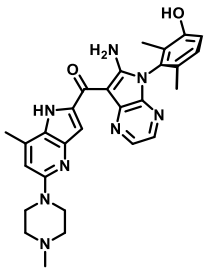
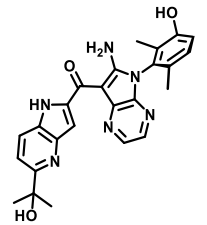
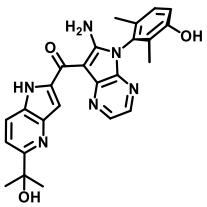
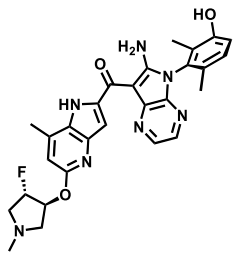
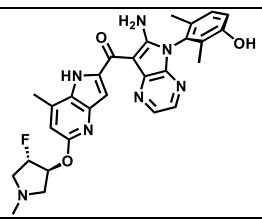
			2H), 2.53 (s, 3H), 1.91-1.81 (m, 5H), 1.76 (s, 3H).	
364		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylamino)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.51 (s, 1H), 8.36 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.32 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.84 (s, 1H), 3.25 (s, 6H), 2.79 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	456.2
365		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylamino)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.31 (s, 1H), 7.17 (d, *J* = 8.8 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.84 (s, 1H), 3.25 (s, 6H), 2.78 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	456.2
366		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1r,3R)-3-methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.92 (d, *J* = 7.6 Hz, 1H), 5.99 (d, *J* = 7.6 Hz, 1H), 4.21-4.09 (m, 2H), 3.30 (s, 3H), 2.61 (s, 3H), 2.50-2.39 (m, 2H), 2.37-2.27 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	511.4
367		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1r,3R)-3-methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 2.8 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.58 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.92 (d, *J* = 7.2 Hz, 1H), 5.99 (d, *J* = 7.6 Hz, 1H), 4.22-4.07 (m, 2H), 3.30 (s, 3H), 2.61 (s, 3H), 2.48-2.39 (m, 2H), 2.37-2.29 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	511.4

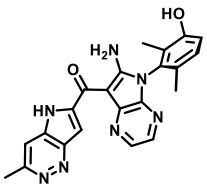
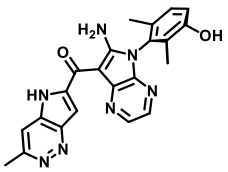
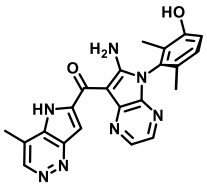
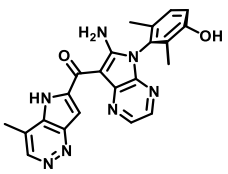
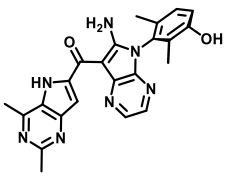
368		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(tetrahydro-2H-pyran-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.80 (s, 1H), 9.70 (s, 1H), 8.39 (d, J = 3.2 Hz, 1H), 8.02 (d, J = 3.2 Hz, 1H), 7.51 (d, J = 2.0 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 7.10 (s, 1H), 6.99 (d, J = 8.4 Hz, 1H), 3.98 (dd, J = 3.2, 9.6 Hz, 2H), 3.50-3.45 (m, 2H), 3.02-2.95 (m, 1H), 2.69 (s, 3H), 1.91-1.80 (m, 7H), 1.76 (s, 3H).	497.3
369		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(tetrahydro-2H-pyran-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.80 (s, 1H), 9.70 (s, 1H), 8.39 (d, J = 3.2 Hz, 1H), 8.02 (d, J = 3.2 Hz, 1H), 7.51 (d, J = 2.0 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 7.10 (s, 1H), 6.99 (d, J = 8.4 Hz, 1H), 3.98 (dd, J = 2.8, 10.0 Hz, 2H), 3.51-3.46 (m, 2H), 3.00 (dd, J = 4.8, 10.8 Hz, 1H), 2.69 (s, 3H), 1.92-1.79 (m, 7H), 1.76 (s, 3H).	497.3
370		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(3,6-dihydro-2H-pyran-4-yl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.86 (s, 1H), 9.69 (s, 1H), 8.40 (d, J = 3.2 Hz, 1H), 8.02 (d, J = 3.2 Hz, 1H), 7.55 (d, J = 2.0 Hz, 1H), 7.46 (s, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.3 Hz, 1H), 6.67 (s, 1H), 4.29 (d, J = 2.4 Hz, 2H), 3.85 (t, J = 5.4 Hz, 2H), 2.72 (s, 3H), 2.67 (s, 2H), 1.83 (s, 3H), 1.76 (s, 3H).	495.2
371		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(3,6-dihydro-2H-pyran-4-yl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.86 (s, 1H), 9.69 (s, 1H), 8.40 (d, J = 3.2 Hz, 1H), 8.02 (d, J = 3.2 Hz, 1H), 7.55 (d, J = 2.0 Hz, 1H), 7.46 (s, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.66 (s, 1H), 4.29 (d, J = 2.8 Hz, 2H), 3.85 (t, J = 5.6 Hz, 2H), 2.72 (s, 3H), 2.67 (s, 2H), 1.83 (s, 3H), 1.76 (s, 3H).	495.2
372		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((R)-1-methylpyrrolidin-	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, J = 2.8 Hz, 1H), 7.99 (d, J = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 6.65 (s, 1H), 5.55-5.49 (m, 1H), 2.93-2.92 (m, 3H), 2.72 (s, 3H),	512.2

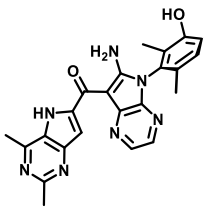
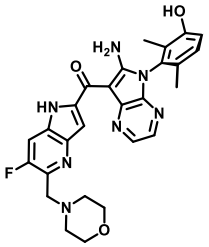
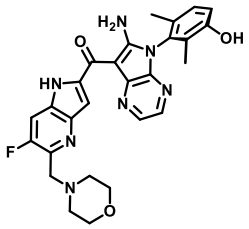
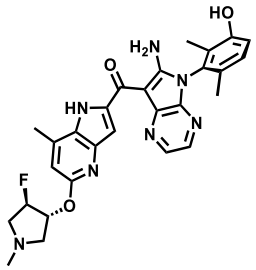
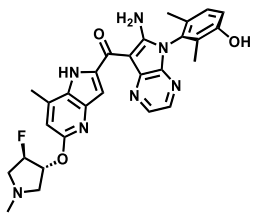
		3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	2.55-2.43 (m, 2H), 2.42 (s, 3H), 2.07-2.00 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	
373		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((R)-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 2.8 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.65 (s, 1H), 5.57-5.53 (m, 1H), 3.04 (d, *J* = 4.4 Hz, 3H), 2.72 (s, 3H), 2.68-2.62 (m, 1H), 2.50 (s, 3H), 2.48-2.44 (m, 1H), 2.13-2.05 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	512.2
374		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((S)-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40-8.24 (m, 1H), 8.03-7.89 (m, 1H), 7.41-7.29 (m, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.0 Hz, 1H), 6.62 (d, *J* = 9.6 Hz, 1H), 5.55-5.45 (m, 1H), 2.92 (s, 3H), 2.74-2.64 (m, 3H), 2.55-2.45 (m, 2H), 2.42 (s, 3H), 2.11-1.98 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	512.2
375		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((S)-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (s, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.64 (s, 1H), 5.55-5.45 (m, 1H), 2.98-2.85 (m, 3H), 2.71 (s, 3H), 2.54-2.42 (m, 2H), 2.41 (s, 3H), 2.07-1.98 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	512.2
376		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 2.8 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.53 (s, 1H), 7.36 (d, *J* = 0.8 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.76 - 3.68 (m, 6H), 2.80 (s, 3H), 2.60-2.48 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	512.2
377		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.53 (s, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.78-3.69 (m, 6H), 2.80 (s,	512.2

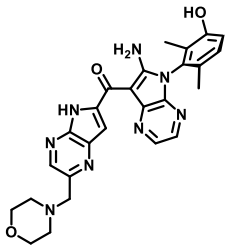
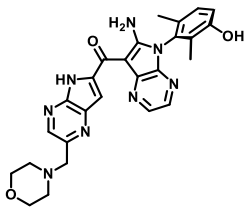
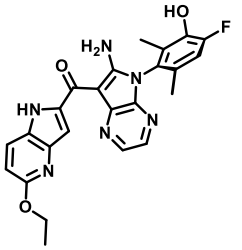
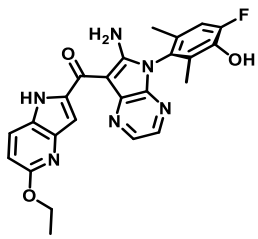
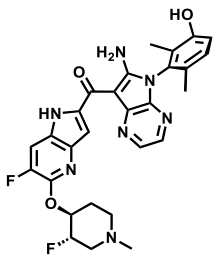
		)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	3H), 2.56 (br s, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	
378		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7H-pyrrolo[2,3-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.91 (br s, 1H), 9.72 (br s, 1H), 9.25 (s, 1H), 8.93 (s, 1H), 8.41 (d, J = 2.8 Hz, 1H), 8.02 (d, J = 2.8 Hz, 1H), 7.80 (s, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 1.83 (s, 3H), 1.76 (s, 3H).	400.0
379		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7H-pyrrolo[2,3-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.91 (br s, 1H), 9.72 (br s, 1H), 9.25 (s, 1H), 8.93 (s, 1H), 8.41 (d, J = 2.8 Hz, 1H), 8.02 (d, J = 2.8 Hz, 1H), 7.80 (s, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.3 Hz, 1H), 1.83 (s, 3H), 1.76 (s, 3H).	400.0
380		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(methylamino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 8.28 (d, J = 3.2 Hz, 1H), 8.05 (d, J = 2.8 Hz, 1H), 7.26 (s, 1H), 7.10 (s, 2H), 6.41 (s, 1H), 3.08 (s, 3H), 2.71 (s, 3H), 1.98 (s, 3H), 1.95 (s, 3H).	442.2
381		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(methylamino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 8.25 (s, 1H), 8.05 (s, 1H), 7.16 (s, 3H), 6.47-6.37 (m, 1H), 3.06 (s, 3H), 2.75 (s, 3H), 1.97 (s, 3H), 1.92 (s, 3H).	442.2
382		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-pyrrolo[3,2-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.01 (br s, 1H), 9.71 (br s, 1H), 8.88 (s, 1H), 8.39 (d, J = 2.8 Hz, 1H), 8.15 (s, 1H), 8.02 (d, J = 2.8 Hz, 1H), 7.65 (s, 1H), 7.13 (d, J = 8.0 Hz, 1H), 6.99 (d, J = 8.0 Hz, 1H), 2.65 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H).	413.1
383		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.25 (br s, 1H), 9.77 (br s, 1H), 9.01 (br s, 1H), 8.39 (d, J = 2.8 Hz, 1H), 8.23 (br s, 1H), 8.14 (s, 1H), 8.04 (d, J = 2.8 Hz,	413.1

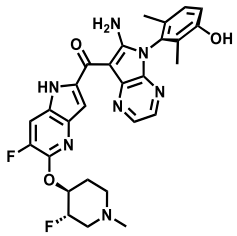
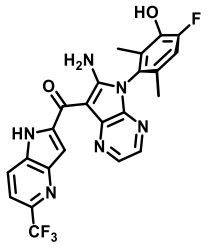
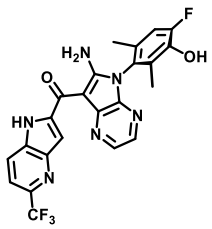
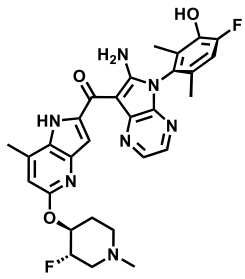
		pyrrolo[3,2-c]pyridin-2-yl)methanone	1H), 7.75 (s, 1H), 7.13 (d, *J* = 8.0 Hz, 1H), 7.02 (d, *J* = 8.0 Hz, 1H), 2.69 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H).	
384		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.62 (s, 1H), 7.42 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.79-3.68 (m, 6H), 2.99 (s, 3H), 2.59 (s, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	512.2
385		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.42 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.78-3.70 (m, 6H), 2.99 (s, 3H), 2.59 (s, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	512.2
386		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.15 (s, 1H), 9.68 (s, 1H), 8.99 (s, 1H), 8.43 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.89 (s, 1H), 7.79 (d, *J* = 0.8 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.13 (s, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.51 (s, 6H).	457.2
387		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.15 (s, 1H), 9.68 (s, 1H), 8.99 (s, 1H), 8.43 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 2.8 Hz, 1H), 7.89 (s, 1H), 7.79 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.13 (s, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.51 (s, 6H).	457.2
388		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(4-methylpiperazin-1-yl)-1H-pyrrolo[2,3-	^{1}H NMR (400 MHz, MeOD): δ 8.36 (t, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.34 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.89 (s, 1H), 3.64-3.54 (m, 4H), 2.73 (s, 3H), 2.63 (t, *J* = 4.8 Hz, 4H), 2.37 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	511.3

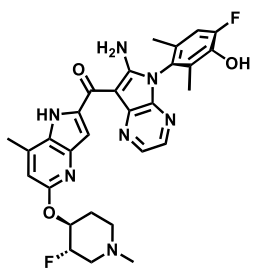
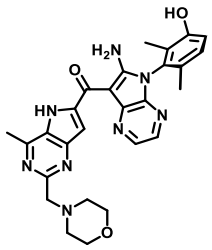
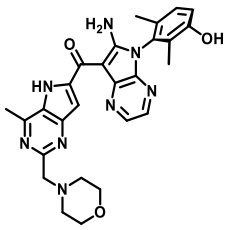
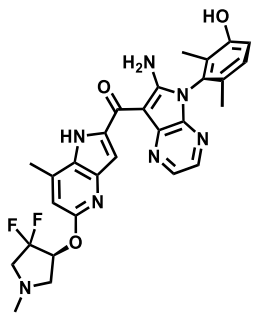
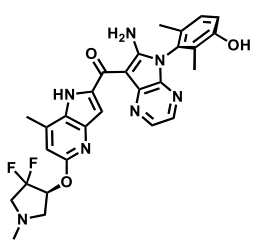
		b]pyridin-2-yl)methanone		
389		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(4-methylpiperazin-1-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.34 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.88 (s, 1H), 3.64-3.54 (m, 4H), 2.73 (s, 3H), 2.63 (t, *J* = 4.8 Hz, 4H), 2.37 (s, 3H), 1.92 (s, 3H), 1.88 (s, 3H).	511.3
390		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.88 (d, *J* = 3.2 Hz, 1H), 7.62 (s, 1H), 7.59 (d, *J* = 8.8 Hz, 1H), 7.07 (d, *J* = 8.4 Hz, 1H), 6.89 (d, *J* = 8.4 Hz, 1H), 1.83 (s, 3H), 1.78 (s, 3H), 1.55 (s, 6H).	457.2
391		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 2.8 Hz, 1H), 8.15 (d, *J* = 8.0 Hz, 1H), 8.01 (s, 1H), 7.74 (s, 1H), 7.70 (d, *J* = 8.4 Hz, 1H), 7.19 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 8.4 Hz, 1H), 1.95 (s, 3H), 1.90 (s, 3H), 1.67 (s, 6H).	457.2
392		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 2.8 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.39 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.69 (s, 1H), 5.62-5.46 (m, 1H), 5.31-5.11 (m, 1H), 3.49-3.40 (m, 1H), 3.03-2.90 (m, 2H), 2.74 (s, 3H), 2.63 (dd, *J* = 4.4, 10.9 Hz, 1H), 2.43 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	530.2
393		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 2.8 Hz, 1H), 7.99 (d, *J* = 2.8 Hz, 1H), 7.39 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.69 (s, 1H),	530.2

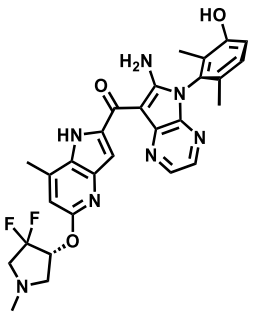
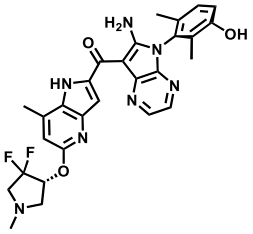
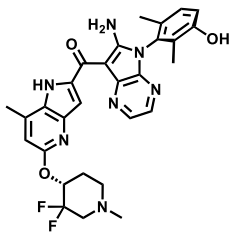
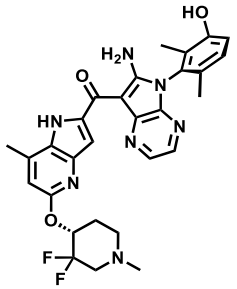
		4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	5.60-5.45 (m, 1H), 5.28-5.13 (m, 1H), 3.47-3.40 (m, 1H), 3.04-2.91 (m, 2H), 2.74 (s, 3H), 2.66-2.59 (m, 1H), 2.43 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	
394		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.87 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.85 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	414.1
395		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.02 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.88 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.85 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	414.1
396		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.93 (br s, 1H), 8.40 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.89 (s, 1H), 7.18 (d, *J* = 8.0 Hz, 1H), 7.00 (d, *J* = 8.0 Hz, 1H), 2.85 (s, 3H), 1.94 (s, 3H), 1.89 (s, 3H).	414.1
397		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.90 (s, 1H), 8.40 (d, *J* = 2.4 Hz, 1H), 8.03 (d, *J* = 2.4 Hz, 1H), 7.87 (s, 1H), 7.17 (d, *J* = 7.6 Hz, 1H), 7.00 (d, *J* = 7.6 Hz, 1H), 2.83 (s, 3H), 1.94 (s, 3H), 1.89 (s, 3H).	414.1
398		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2,4-dimethyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.00 (s, 1H), 9.69 (s, 1H), 8.41 (d, *J* = 2.8 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.49 (s, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.83 (s, 3H), 2.64 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H).	428.2

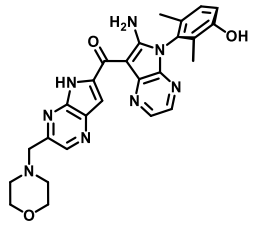
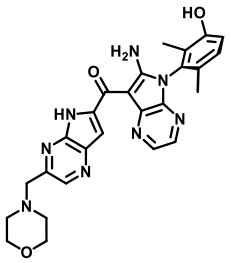
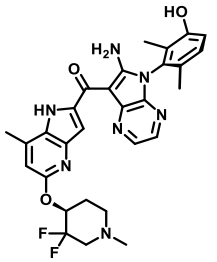
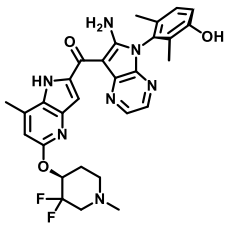
399		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2,4-dimethyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.01 (s, 1H), 9.70 (s, 1H), 8.41 (d, J = 2.4 Hz, 1H), 8.04 (d, J = 2.8 Hz, 1H), 7.49 (s, 1H), 7.13 (br d, J = 8.0 Hz, 1H), 7.00 (d, J = 8.0 Hz, 1H), 2.83 (s, 3H), 2.64 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H).	428.2
400		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.80 (s, 1H), 9.68 (s, 1H), 8.41 (d, J = 3.2 Hz, 1H), 8.14 (s, 1H), 8.00 (d, J = 3.2 Hz, 1H), 7.94 (d, J = 10.8 Hz, 1H), 7.13 (d, J = 8.0 Hz, 1H), 6.98 (d, J = 8.4 Hz, 1H), 3.73 (d, J = 2.4 Hz, 2H), 3.57-3.53 (m, 4H), 3.40-3.37 (m, 2H), 3.30-3.29 (m, 2H), 1.83 (s, 3H), 1.75 (s, 3H).	516.2
401		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 13.87 - 13.72 (m, 1H), 9.68 (s, 1H), 8.41 (d, J = 3.2 Hz, 1H), 8.14 (s, 1H), 8.00 (d, J = 2.8 Hz, 1H), 7.94 (d, J = 10.8 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.0 Hz, 1H), 3.73 (s, 2H), 3.57-3.53 (m, 4H), 3.38 (s, 2H), 3.27 (s, 2H), 1.83 (s, 3H), 1.75 (s, 3H).	516.2
402		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, J = 3.5 Hz, 1H), 7.99 (d, J = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.69 (d, J = 0.8 Hz, 1H), 5.57 (dd, J = 4.4, 19.6 Hz, 1H), 5.34-5.18 (m, 1H), 3.54 (dd, J = 6.4, 11.2 Hz, 1H), 3.18-3.11 (m, 1H), 3.11-3.05 (m, 1H), 2.83-2.76 (m, 1H), 2.74 (s, 3H), 2.52 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	529.6
403		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, J = 3.2 Hz, 1H), 7.98 (d, J = 3.2 Hz, 1H), 7.37 (d, J = 1.2 Hz, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.67 (s, 1H), 5.58-5.47 (m, 1H), 5.30-5.13 (m, 1H), 3.46 (dd, J = 6.0, 10.8 Hz, 1H), 3.06-2.99 (m, 1H), 2.96 (s, 1H), 2.72 (s, 3H),	529.6

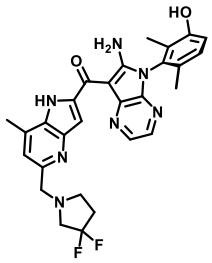
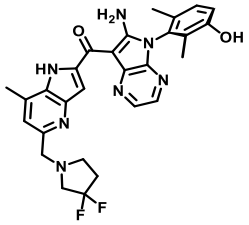
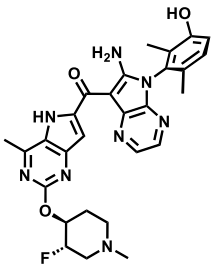
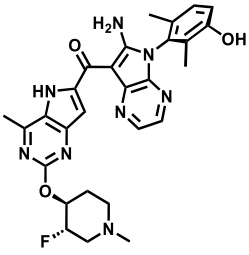
		b]pyridin-2-yl)methanone	2.65 (dd, J = 4.0, 11.2 Hz, 1H), 2.44 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	
404		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.89 (s, 1H), 9.69 (s, 1H), 8.53 (s, 1H), 8.42 (d, J = 2.8 Hz, 1H), 8.03 (d, J = 2.8 Hz, 1H), 7.74 (d, J = 1.2 Hz, 1H), 7.14 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 3.76 (s, 2H), 3.62-3.57 (m, 4H), 2.48-2.47 (m, 4H), 1.84 (s, 3H), 1.76 (s, 3H).	499.3
405		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.91 (s, 1H), 9.71 (s, 1H), 8.53 (s, 1H), 8.41 (d, J = 2.8 Hz, 1H), 8.03 (d, J = 2.8 Hz, 1H), 7.73 (d, J = 1.6 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 3.76 (s, 2H), 3.61-3.57 (m, 4H), 2.48-2.47 (m, 4H), 1.83 (s, 3H), 1.76 (s, 3H).	499.3
406		(S)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}HNMR (400 MHz, MeOD): δ 8.41 (d, J = 3.2 Hz, 1H), 8.03 (d, J = 8.8 Hz, 1H), 7.99 (d, J = 3.2 Hz, 1H), 7.51 (s, 1H), 7.10 (d, J = 11.2 Hz, 1H), 6.81 (d, J = 8.8 Hz, 1H), 4.40 (d, J = 7.2 Hz, 2H), 1.94 (s, 3H), 1.92 (s, 3H), 1.44 (t, J = 7.2 Hz, 3H).	461.1
407		(R)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, J = 3.2 Hz, 1H), 8.01 (d, J = 8.8 Hz, 1H), 7.97 (d, J = 3.2 Hz, 1H), 7.50 (s, 1H), 7.09 (d, J = 11.2 Hz, 1H), 6.79 (d, J = 8.8 Hz, 1H), 4.39 (d, J = 7.2 Hz, 2H), 1.93 (s, 3H), 1.91 (s, 3H), 1.43 (t, J = 7.2 Hz, 3H).	461.1
408		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, J = 2.8 Hz, 1H), 7.96 (d, J = 2.8 Hz, 1H), 7.89 (d, J = 10.4 Hz, 1H), 7.48 (s, 1H), 7.16 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 5.43-5.30 (m, 1H), 4.81-4.71 (m, 1H), 3.13-2.89 (m, 1H), 2.81-2.71 (m, 1H), 2.67-2.54 (m, 1H), 2.53-2.43 (m, 1H),	548.2

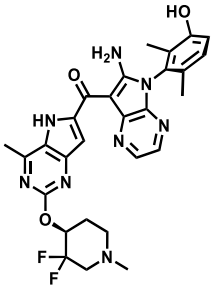
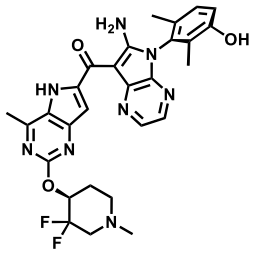
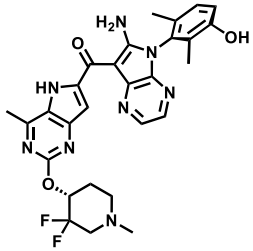
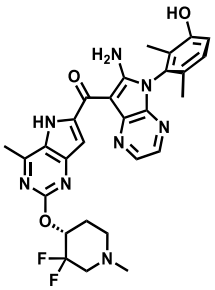
		b]pyridin-2-yl)methanone	2.38 (s, 4H), 1.93 (s, 3H), 1.88 (s, 3H), 1.87-1.75 (m, 1H).	
409		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 2.0 Hz, 1H), 7.95 (d, *J* = 2.4 Hz, 1H), 7.87 (d, *J* = 10.4 Hz, 1H), 7.46 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.41-5.30 (m, 1H), 4.74 (dd, *J* = 6.8, 10.8 Hz, 1H), 3.08-2.92 (m, 1H), 2.80-2.69 (m, 1H), 2.65-2.52 (m, 1H), 2.49-2.41 (m, 1H), 2.37 (s, 4H), 1.92 (s, 3H), 1.88 (s, 3H), 1.87-1.79 (m, 1H).	548.3
410		(S)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 3.2 Hz, 1H), 8.36 (d, *J* = 8.4 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.86 (s, 1H), 7.73 (d, *J* = 8.8 Hz, 1H), 7.10 (d, *J* = 10.8 Hz, 1H), 1.94 (s, 3H), 1.92 (s, 3H).	485.2
411		(R)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 3.2 Hz, 1H), 8.35 (d, *J* = 8.4 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.85 (s, 1H), 7.73 (d, *J* = 8.8 Hz, 1H), 7.10 (d, *J* = 11.2 Hz, 1H), 1.94 (s, 3H), 1.92 (s, 3H).	485.2
412		(6-amino-5-((S)-4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.10 (d, *J* = 11.2 Hz, 1H), 6.68 (s, 1H), 5.28-5.20 (m, 1H), 4.82-4.61 (m, 1H), 3.08-2.96 (m, 1H), 2.83-2.74 (m, 1H), 2.73 (s, 3H), 2.65-2.54 (m, 1H), 2.51-2.43 (m, 1H), 2.38 (s, 3H), 2.37-2.28 (m, 1H), 1.94 (s, 3H), 1.92 (s, 3H), 1.87-1.73 (m, 1H).	562.2

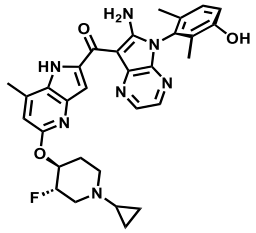
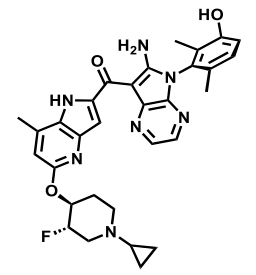
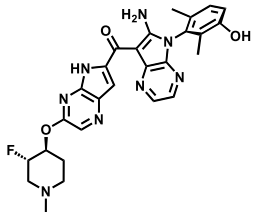
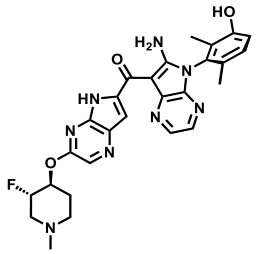
413		(6-amino-5-((R)-4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.10 (d, *J* = 11.2 Hz, 1H), 6.68 (d, *J* = 0.8 Hz, 1H), 5.30-5.20 (m, 1H), 4.78-4.64 (m, 1H), 3.10-2.94 (m, 1H), 2.80-2.74 (m, 1H), 2.73 (s, 3H), 2.69-2.55 (m, 1H), 2.53-2.43 (m, 1H), 2.39 (s, 3H), 2.34 (dd, *J* = 6.4, 8.4 Hz, 1H), 1.94 (s, 3H), 1.92 (s, 3H), 1.87-1.74 (m, 1H).	562.2
414		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-2-(morpholinomethyl)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.04 (d, *J* = 0.8 Hz, 1H), 9.87 - 9.53 (m, 1H), 8.41 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.59 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.71 (s, 2H), 3.61-3.54 (m, 4H), 2.87 (s, 3H), 2.55-2.52 (m, 4H), 1.84 (s, 3H), 1.76 (s, 3H).	513.2
415		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-2-(morpholinomethyl)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.50 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 4.09 (s, 2H), 3.85-3.79 (m, 4H), 3.01 (s, 3H), 2.98-2.80 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H).	513.2
416		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.72 (s, 1H), 5.71-5.56 (m, 1H), 3.40 (dd, *J* = 6.4, 10.4 Hz, 1H), 3.16-2.94 (m, 2H), 2.78 (dd, *J* = 4.8, 11.2 Hz, 1H), 2.74 (s, 3H), 2.42 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	548.2
417		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.72 (s, 1H), 5.72-5.58 (m, 1H), 3.44 (dd, *J* = 6.4, 10.8 Hz, 1H), 3.20-3.01 (m, 2H), 2.88-	548.2

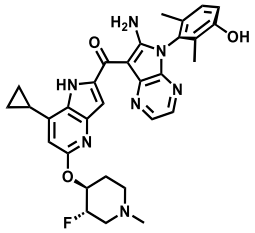
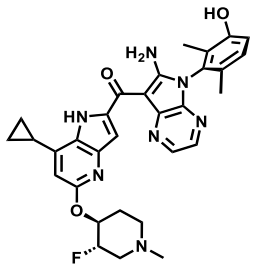
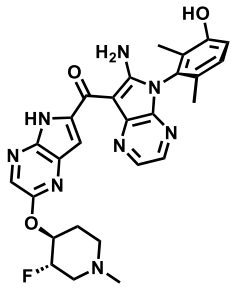
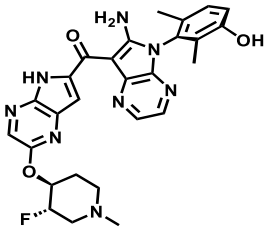
		methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	2.81 (m, 1H), 2.75 (s, 3H), 2.46 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	
418		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 3.2 Hz, 1H), 7.98 (d, J = 3.2 Hz, 1H), 7.34 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.70 (s, 1H), 5.71-5.55 (m, 1H), 3.42 (dd, J = 6.4, 10.8 Hz, 1H), 3.20-3.09 (m, 1H), 3.08-2.95 (m, 1H), 2.82 (dd, *J* = 4.8, 9.6 Hz, 1H), 2.71 (s, 3H), 2.44 (s, 3H), 1.93 (s, 3H), 1.89 (s, 3H).	548.3
419		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.30 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.30 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.71 (s, 1H), 5.79-5.68 (m, 1H), 3.70-3.58 (m, 1H), 3.48-3.33 (m, 2H), 3.18 (dd, *J* = 2.4, 11.6 Hz, 1H), 2.69 (s, 3H), 2.65 (s, 3H), 1.93 (s, 3H), 1.89 (s, 3H).	548.3
420		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.71 (s, 1H), 5.56-5.44 (m, 1H), 3.09-2.96 (m, 1H), 2.92-2.81 (m, 1H), 2.80-2.74 (m, 1H), 2.73 (s, 3H), 2.67-2.54 (m, 1H), 2.44 (s, 3H), 2.29-2.17 (m, 1H), 2.13-2.04 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	562.2
421		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.72 (s, 1H), 5.57-5.46 (m, 1H), 3.15-3.01 (m, 1H), 2.98-2.85 (m, 1H), 2.84-2.77 (m, 1H), 2.74 (s, 3H), 2.71-2.60 (m, 1H), 2.47 (s, 3H), 2.29-2.19 (m, 1H), 2.16-2.05 (m,	562.2

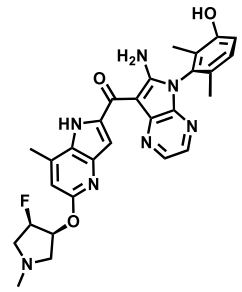
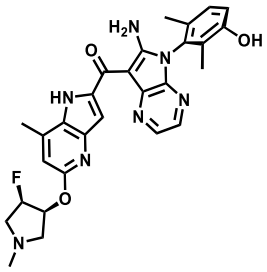
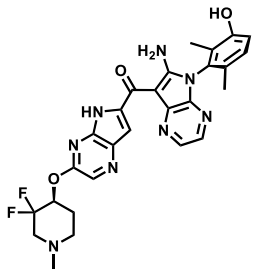
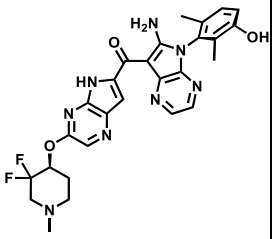
			1H), 1.93 (s, 3H), 1.88 (s, 3H).	
422		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.64 (s, 1H), 8.41 (s, 1H), 8.02 (d, *J* = 2.8 Hz, 1H), 7.58 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 3.87 (s, 2H), 3.78-3.71 (m, 4H), 2.62 (d, *J* = 4.4 Hz, 4H), 1.93 (s, 3H), 1.89 (s, 3H).	499.3
423		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.65 (s, 1H), 8.41 (d, *J* = 2.0 Hz, 1H), 8.03 (d, *J* = 2.8 Hz, 1H), 7.60 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.99 (s, 2H), 3.78 (t, *J* = 4.4 Hz, 4H), 2.73 (s, 4H), 1.94 (s, 3H), 1.89 (s, 3H).	499.3
424		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.71 (d, *J* = 0.8 Hz, 1H), 5.53-5.44 (m, 1H), 3.03-2.92 (m, 1H), 2.83-2.76 (m, 1H), 2.74 (s, 1H), 2.71-2.65 (m, 1H), 2.59-2.52 (m, 1H), 2.39 (s, 3H), 2.25-2.18 (m, 1H), 2.11-2.04 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	562.2
425		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (s, 1H), 7.99 (s, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.71 (s, 1H), 5.52-5.43 (m, 1H), 3.05-2.91 (m, 1H), 2.86-2.76(m, 1H), 2.73 (s, 3H), 2.70-2.61 (m, 1H), 2.59-2.50 (m, 1H), 2.39 (s, 3H), 2.26-2.17 (m, 1H), 2.11-2.01 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	562.2

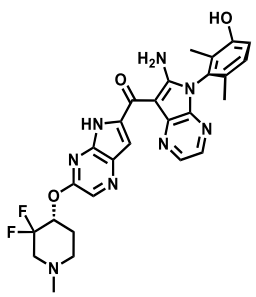
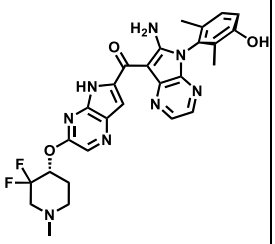
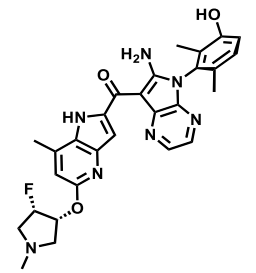
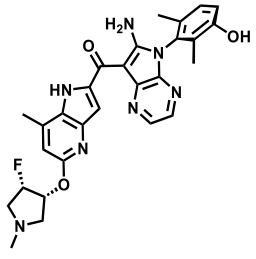
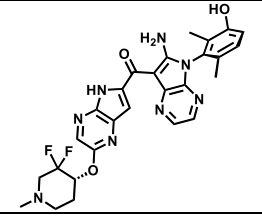
426		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.35 (s, 1H), 7.23 (s, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 3.87 (s, 2H), 2.97 (t, *J* = 13.2 Hz, 2H), 2.87-2.84 (m, 2H), 2.82 (s, 3H), 2.40-2.20 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	532.2
427		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.55 (s, 1H), 7.35 (s, 1H), 7.17 (s, 1H), 7.05 - 6.99 (m, 1H), 3.88 (s, 2H), 2.98 (t, *J* = 13.2 Hz, 2H), 2.87-2.83 (m, 2H), 2.83 (s, 3H), 2.40-2.20 (m, 2H), 1.94 (s, 3H), 1.89 (s, 3H).	532.2
428		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.23 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.31-5.20 (m, 1H), 4.80-4.69 (m, 1H), 3.07-2.94 (m, 1H), 2.86 (s, 3H), 2.80-2.70 (m, 1H), 2.64-2.52 (m, 1H), 2.50-2.40 (m, 1H), 2.37 (s, 4H), 1.94 (s, 3H), 1.89 (s, 3H), 1.88-1.79 (m, 1H).	545.2
429		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ = 8.36 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.25 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.33-5.21 (m, 1H), 4.80 - 4.69 (m, 1H), 3.08-2.94 (m, 1H), 2.87 (s, 3H), 2.81-2.70 (m, 1H), 2.64-2.53 (m, 1H), 2.50-2.41 (m, 1H), 2.37 (s, 4H), 1.93 (s, 3H), 1.89 (s, 3H), 1.87-1.77 (m, 1H).	545.2

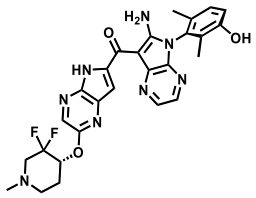
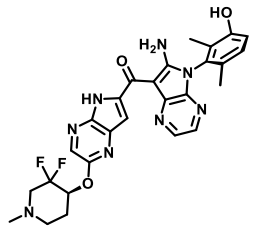
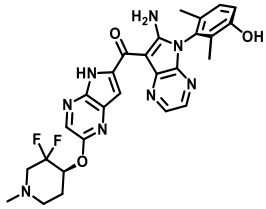
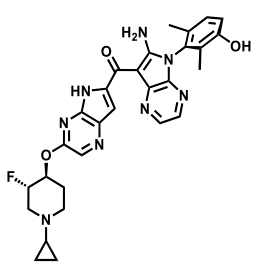
430		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.31 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.57-5.51 (m, 1H), 3.11-2.96 (m, 1H), 2.92 (s, 3H), 2.89-2.78 (m, 1H), 2.75-2.46 (m, 2H), 2.40 (s, 3H), 2.28-2.09 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	563.2
431		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.28 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.58 - 5.48 (m, 1H), 3.05-2.95 (m, 1H), 2.90 (s, 3H), 2.87-2.76 (m, 1H), 2.74-2.53 (m, 2H), 2.40 (s, 3H), 2.28-2.06 (m, 2H), 1.93 (s, 3H), 1.89 (s, 3H).	563.2
432		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 15.43 (s, 1H), 8.34 (d, *J* = 3.2 Hz, 1H), 8.10 (d, *J* = 3.2 Hz, 1H), 7.38 (d, *J* = 2.0 Hz, 1H), 7.19 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 5.67-5.61 (m, 1H), 3.08-2.96 (m, 1H), 2.93 (s, 3H), 2.90-2.78 (m, 1H), 2.76-2.68 (m, 1H), 2.64-2.56 (m, 1H), 2.42 (s, 3H), 2.39-2.00 (m, 3H), 1.97 (d, *J* = 11.2 Hz, 6H).	563.2
433		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, $CDCl_3$): δ 15.44 (s, 1H), 8.37 - 8.32 (m, 1H), 8.10 (d, *J* = 3.2 Hz, 1H), 7.37 (d, *J* = 1.6 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 5.68-5.59 (m, 1H), 3.09-2.97 (m, 1H), 2.94 (s, 3H), 2.90-2.78 (m, 1H), 2.77-2.66 (m, 1H), 2.63-2.54 (m, 1H), 2.42 (s, 3H), 2.39-2.00 (m, 3H), 1.96 (d, *J* = 11.2 Hz, 6H).	563.2

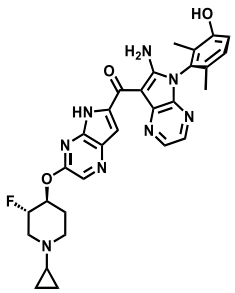
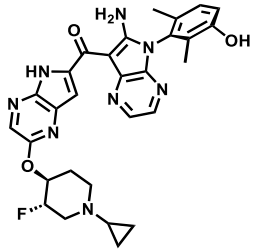
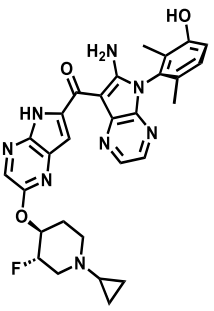
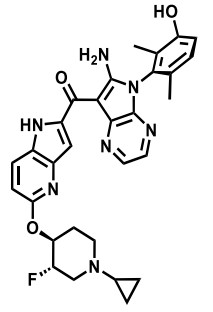
434		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.40-7.34 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 5.31-5.16 (m, 1H), 4.74-4.62 (m, 1H), 3.29-3.19 (m, 1H), 3.03-2.91 (m, 1H), 2.72 (s, 3H), 2.72-2.58 (m, 2H), 2.38-2.24 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.86 (d, *J* = 4.0 Hz, 1H), 1.79-1.62 (m, 1H), 0.64-0.40 (m, 4H).	570.2
435		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.40-7.33 (m, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 5.33-5.19 (m, 1H), 4.72-4.62 (m, 1H), 3.27 (d, *J* = 8.0 Hz, 1H), 3.10-2.95 (m, 1H), 2.90-2.75 (m, 1H), 2.72 (s, 4H), 2.38-2.26 (m, 1H), 1.98-1.90 (m, 4H), 1.88 (s, 3H), 1.83-1.68 (m, 1H), 0.67-0.43 (m, 4H).	570.2
436		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.24 (s, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.62 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.0 Hz, 1H), 5.64 (s, 1H), 5.28-5.13 (m, 1H), 3.66-3.47 (m, 2H), 3.41-3.32 (m, 2H), 2.89 (s, 3H), 2.53-2.46 (m, 1H), 2.33-2.30 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	531.2
437		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 2.0 Hz, 1H), 8.20 (s, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.61 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.63-5.49 (m, 1H), 5.11-4.96 (m, 1H), 3.49-3.32 (m, 1H), 3.22-3.03 (m, 2H), 2.99-2.84 (m, 1H), 2.67 (s, 3H), 2.51-2.37 (m, 1H), 2.19-2.04 (m, 1H), 1.93 (s, 3H), 1.89 (s, 3H).	531.2

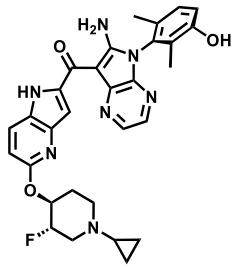
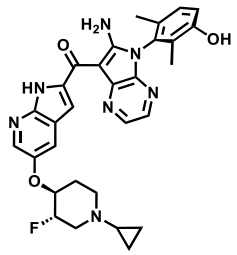
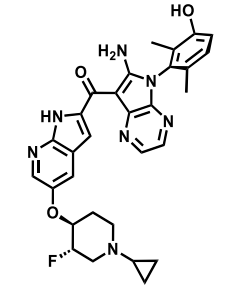
438		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.47 (s, 1H), 5.27-5.20 (m, 1H), 4.82-4.67 (m, 1H), 3.12-2.96 (m, 1H), 2.83-2.73 (m, 1H), 2.71-2.57 (m, 1H), 2.56-2.45 (m, 1H), 2.44-2.29 (m, 5H), 1.93 (s, 3H), 1.89 (s, 3H), 1.85-1.72 (m, 1H), 1.35-1.30 (m, 2H), 1.15-1.07 (m, 2H).	570.3
439		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 3.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.46 (s, 1H), 5.27-5.20 (m, 1H), 4.80-4.66 (m, 1H), 3.07-2.92 (m, 1H), 2.79-2.67 (m, 1H), 2.66-2.53 (m, 1H), 2.50-2.41 (m, 1H), 2.41-2.27 (m, 5H), 1.93 (s, 3H), 1.89 (s, 3H), 1.84-1.72 (m, 1H), 1.34-1.28 (m, 2H), 1.14-1.06 (m, 2H).	570.3
440		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.09 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.35-5.26 (m, 1H), 4.84-4.68 (m, 1H), 3.12-2.97 (m, 1H), 2.84-2.69 (m, 1H), 2.62-2.50 (m, 1H), 2.48-2.41 (m, 1H), 2.38 (s, 3H), 2.38-2.31 (m, 1H), 1.93 (s, 3H), 1.89 (s, 3H), 1.86-1.77 (m, 1H).	531.3
441		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.10 (s, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.39 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.37-5.28 (m, 1H), 4.81-4.76 (m, 1H), 3.14-3.04 (m, 1H), 2.85-2.78 (m, 1H), 2.70-2.60 (m, 1H), 2.56-2.48 (m, 1H), 2.43 (s, 3H), 2.41-2.35 (m, 1H), 1.93 (s, 3H), 1.89 (s, 3H), 1.88-	531.3

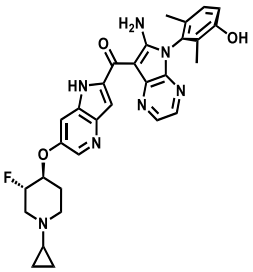
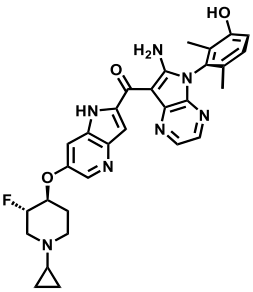
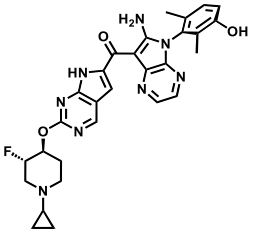
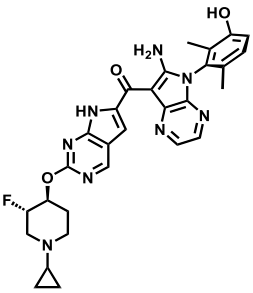
			1.83 (m, 1H).	
442		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 2.8 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.34 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.68 (s, 1H), 5.57-5.48 (m, 1H), 5.48-5.30 (m, 1H), 3.09-2.88 (m, 4H), 2.71 (s, 3H), 2.44 (s, 3H), 1.93 (s, 3H), 1.89 (s, 3H).	530.2
443		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.37-7.30 (m, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.67 (s, 1H), 5.56-5.48 (m, 1H), 5.47-5.31 (m, 1H), 3.09-2.89 (m, 4H), 2.70 (s, 3H), 2.44 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	530.2
444		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.20 (s, 1H), 7.98 (d, *J* = 2.8 Hz, 1H), 7.61 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.72-5.60 (m, 1H), 3.06-2.93 (m, 1H), 2.91-2.79 (m, 1H), 2.79-2.68 (m, 1H), 2.67-2.55 (m, 1H), 2.42 (s, 3H), 2.34-2.24 (m, 1H), 2.21-2.09 (m, 1H), 1.93 (s, 3H), 1.89 (s, 3H).	549.3
445		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.21 (s, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.74-5.59 (m, 1H), 3.06-2.98 (m, 1H), 2.94-2.81 (m, 1H), 2.80-2.71 (m, 1H), 2.69-2.58 (m, 1H), 2.43 (s, 3H), 2.35-2.24 (m, 1H), 2.16 (dt, *J* = 3.2, 6.8 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	549.3

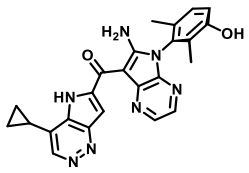
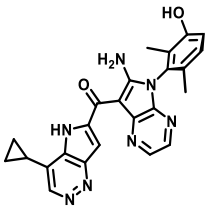
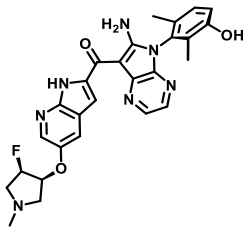
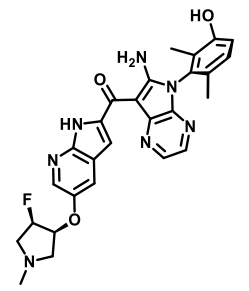
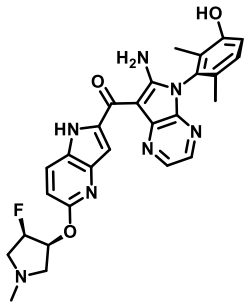
446		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 2.4 Hz, 1H), 8.23 (s, 1H), 7.99 (d, *J* = 2.4 Hz, 1H), 7.62 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.0 Hz, 1H), 5.76 (d, *J* = 5.6 Hz, 1H), 3.30-3.11 (m, 2H), 3.05-2.82 (m, 2H), 2.62 (s, 3H), 2.38-2.18 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	549.2
447		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 2.0 Hz, 1H), 8.26 (s, 1H), 8.02 (d, *J* = 2.4 Hz, 1H), 7.65 (s, 1H), 7.19 (d, *J* = 8.0 Hz, 1H), 7.01 (d, *J* = 8.0 Hz, 1H), 5.80-5.77 (m, 1H) , 3.30-3.09 (m, 2H), 3.03-2.83 (m, 2H), 2.63 (s, 3H), 2.41-2.24 (m, 2H), 1.95 (s, 3H), 1.90 (s, 3H).	549.2
448		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.97 (d, *J* = 1.2 Hz, 1H), 9.67 (s, 1H), 8.39 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.35 (d, *J* = 2.0 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.69 (d, *J* = 0.8 Hz, 1H), 5.49-5.23 (m, 2H), 3.08-2.93 (m, 2H), 2.85-2.71 (m, 2H), 2.67 (s, 3H), 2.34 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H).	530.2
449		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.96 (s, 1H), 9.67 (s, 1H), 8.39 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.35 (d, *J* = 1.6 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.69 (s, 1H), 5.50-5.23 (m, 2H), 3.07-2.93 (m, 2H), 2.83-2.71 (m, 2H), 2.67 (s, 3H), 2.34 (s, 3H), 1.83 (s, 3H), 1.75 (s, 3H).	530.2
450		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.17 (s, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.40 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.74-5.56 (m, 1H), 3.47-	549.2

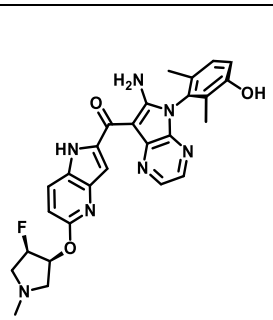
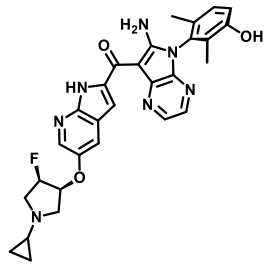
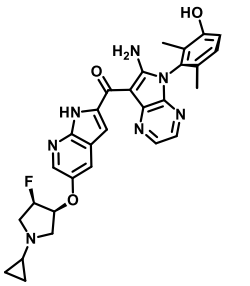
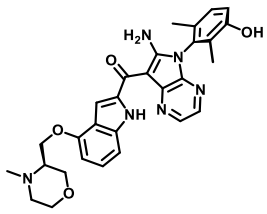
		methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	3.34 (m, 1H), 3.29-3.16 (m, 1H), 3.09-2.85 (m, 2H), 2.66 (s, 3H), 2.40-2.15 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	
451		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.14 (s, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.40 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.63-5.47 (m, 1H), 3.10-2.94 (m, 1H), 2.86-2.69 (m, 2H), 2.62-2.52 (m, 1H), 2.41 (s, 3H), 2.33-2.03 (m, 2H), 1.93 (s, 3H), 1.89 (s, 3H).	549.2
452		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.11 (s, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.35 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.58-5.51 (m, 1H), 3.04-2.96 (m, 1H), 2.83-2.71 (m, 2H), 2.61-2.53 (m, 1H), 2.40 (s, 3H), 2.29-2.22 (m, 1H), 2.14-2.08 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H).	549.2
453		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.15 (s, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.41 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.59-5.54 (m, 1H), 3.06-2.94 (m, 1H), 2.82-2.70 (m, 2H), 2.61-2.53 (m, 1H), 2.41 (s, 3H), 2.29-2.23 (m, 1H), 2.15-2.09 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	549.2
454		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 2.8 Hz, 1H), 8.16 (s, 1H), 7.99 (d, *J* = 2.8 Hz, 1H), 7.62 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.49-5.35 (m, 1H), 4.80-4.65 (m, 1H), 3.26 (d, *J* = 3.2 Hz, 1H), 3.05-2.95 (m, 1H), 2.75-2.61 (m, 2H), 2.41-2.29 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.87-1.82 (m, 1H), 1.81-1.72 (m, 1H), 0.58-0.52 (m, 2H), 0.49-0.46 (m, 2H).	557.2

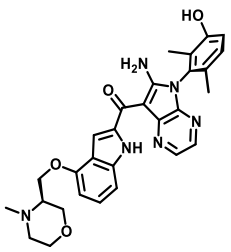
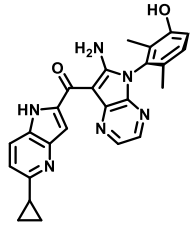
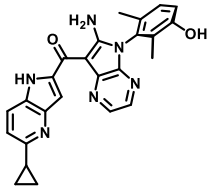
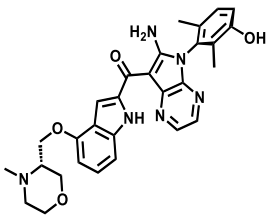
455		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 8.15 (s, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.49-5.37 (m, 1H), 4.80-4.64 (m, 1H), 3.26 (d, *J* = 4.4 Hz, 1H), 3.07-2.94 (m, 1H), 2.75-2.60 (m, 2H), 2.41-2.32 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.86-1.83 (m, 1H), 1.82-1.73 (m, 1H), 0.60-0.52 (m, 2H), 0.49-0.46 (m, 2H).	557.2
456		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.09 (s, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.40 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.38-5.20 (m, 1H), 4.69-4.60 (m, 1H), 3.28-3.22 (m, 1H), 3.06-2.90 (m, 1H), 2.78-2.53 (m, 2H), 2.42-2.28 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.86-1.80 (m, 1H), 1.79-1.66 (m, 1H), 0.59-0.51 (m, 2H), 0.51-0.39 (m, 2H).	557.3
457		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.09 (s, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.40 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.38-5.20 (m, 1H), 4.69-4.60 (m, 1H), 3.28-3.22 (m, 1H), 3.06-2.90 (m, 1H), 2.78-2.53 (m, 2H), 2.42-2.28 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.86-1.80 (m, 1H), 1.79-1.66 (m, 1H), 0.59-0.51 (m, 2H), 0.51-0.39 (m, 2H).	557.3
458		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.49 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.81 (d, *J* = 8.8 Hz, 1H), 5.25 (tt, *J* = 4.4, 11.6 Hz, 1H), 4.61 (dt, *J* = 4.4, 7.6 Hz, 1H), 3.29-3.17 (m, 1H), 3.00-2.89 (m, 1H), 2.72-2.53 (m,	556.3

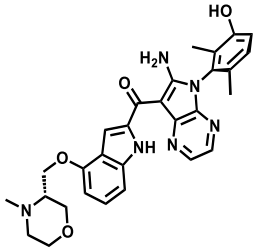
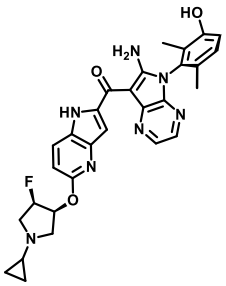
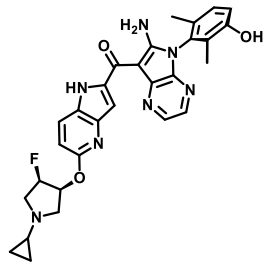
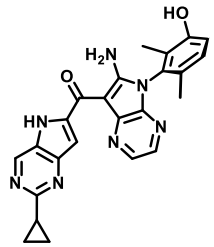
			2H), 2.38-2.27 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.85-1.77 (m, 1H), 1.75-1.63 (m, 1H), 0.58-0.38 (m, 4H).	
459		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.50 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.82 (d, *J* = 8.8 Hz, 1H), 5.37-5.21 (m, 1H), 4.70-4.64 (m, 1H), 3.30-3.23 (m, 1H), 3.08-2.96 (m, 1H), 2.86-2.62 (m, 2H), 2.42-2.27 (m, 1H), 1.95-1.89 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.83-1.66 (m, 1H), 0.65-0.41 (m, 4H).	556.3
460		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 2.8 Hz, 1H), 8.24 (d, *J* = 2.4 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.85 (d, *J* = 2.4 Hz, 1H), 7.41 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.80-4.65 (m, 1H), 4.47-4.35 (m, 1H), 3.29-3.22 (m, 1H), 3.03-2.89 (m, 1H), 2.66-2.47 (m, 2H), 2.26-2.16 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.82-1.69 (m, 2H), 0.57-0.50 (m, 2H), 0.49-0.39 (m, 2H).	556.3
461		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.44 (d, *J* = 2.8 Hz, 1H), 8.24 (d, *J* = 2.4 Hz, 1H), 8.01 (d, *J* = 2.8 Hz, 1H), 7.86 (d, *J* = 2.4 Hz, 1H), 7.42 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.83-4.68 (m, 1H), 4.52-4.33 (m, 1H), 3.30-3.22 (m, 1H), 3.02-2.90 (m, 1H), 2.70-2.40 (m, 2H), 2.27-2.14 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.84-1.73 (m, 2H), 0.58-0.51 (m, 2H), 0.50-0.40 (m, 2H).	556.3

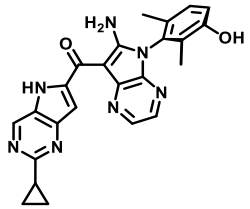
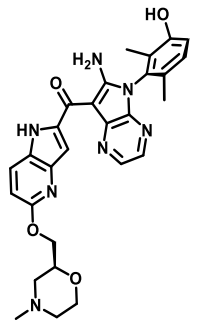
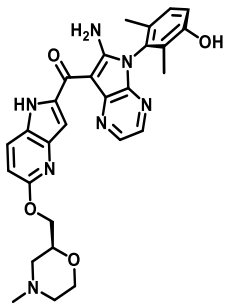
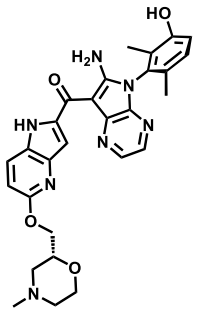
462		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 8.23 (d, *J* = 2.4 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.84 (d, *J* = 2.0 Hz, 1H), 7.66 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.83-4.71 (m, 1H), 4.65-4.59 (m, 1H), 3.30-3.23 (m, 1H), 3.03-2.91 (m, 1H), 2.65 (td, *J* = 8.0, 11.2 Hz, 1H), 2.59-2.49 (m, 1H), 2.26 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.83-1.71 (m, 2H), 0.58-0.51 (m, 2H), 0.51-0.41 (m, 2H).	556.3
463		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.42 (d, *J* = 3.2 Hz, 1H), 8.23 (d, *J* = 2.4 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.84 (d, *J* = 2.0 Hz, 1H), 7.66 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.84-4.71 (m, 1H), 4.66-4.59 (m, 1H), 3.30-3.24 (m, 1H), 3.02-2.93 (m, 1H), 2.65 (td, *J* = 7.6, 11.2 Hz, 1H), 2.59-2.50 (m, 1H), 2.31-2.20 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.83-1.72 (m, 2H), 0.57-0.50 (m, 2H), 0.50-0.41 (m, 2H).	556.3
464		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7H-pyrrolo[2,3-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.95 (s, 1H), 8.40 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.61 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.43-5.29 (m, 1H), 4.82-4.62 (m, 1H), 3.29-3.20 (m, 1H), 3.04-2.93 (m, 1H), 2.77-2.57 (m, 2H), 2.40-2.28 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.85-1.73 (m, 2H), 0.62-0.38 (m, 4H).	557.3
465		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7H-pyrrolo[2,3-	^{1}H NMR (400 MHz, MeOD): δ 8.96 (s, 1H), 8.41 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.62 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.45-5.32 (m, 1H), 4.82-4.63 (m, 1H), 3.29-3.20 (m, 1H), 3.06-2.95 (m, 1H), 2.83-2.59 (m, 2H), 2.41-	557.3

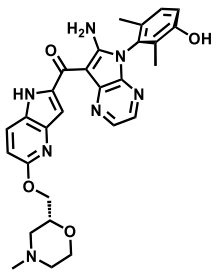
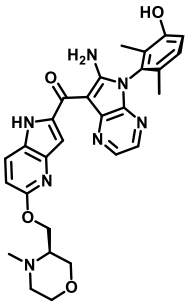
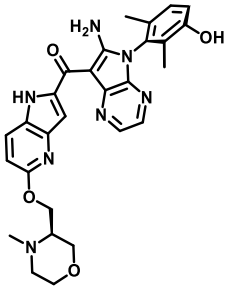
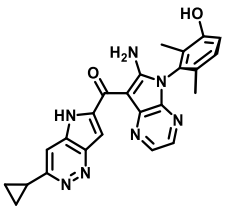
		d]pyrimidin-6-yl)methanone	2.28 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.86-1.76 (m, 2H), 0.58-0.44 (m, 4H).	
466		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.81 (s, 1H), 8.41 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.78 (s, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 2.50-2.42 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.49-1.43 (m, 2H), 1.41-1.37 (m, 2H).	440.2
467		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.81 (s, 1H), 8.41 (d, *J* = 3.2 Hz, 1H), 8.05 (d, *J* = 3.2 Hz, 1H), 7.78 (s, 1H), 7.18 (d, *J* = 8.4 Hz, 1H), 7.00 (d, *J* = 8.4 Hz, 1H), 2.53-2.40 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.49-1.43 (m, 2H), 1.42-1.37 (m, 2H).	440.2
468		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 2.8 Hz, 1H), 8.26 (d, *J* = 2.8 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.84 (d, *J* = 2.8 Hz, 1H), 7.41 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.45-5.27 (m, 1H), 4.99-4.92 (m, 1H) , 3.02-2.89 (m, 1H), 3.08-2.89 (m, 3H), 2.45 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	516.2
469		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 3.2 Hz, 1H), 8.26 (d, *J* = 2.8 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.84 (d, *J* = 2.8 Hz, 1H), 7.41 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.45-5.27 (m, 1H), 5.01-4.92 (m, 1H) , 3.02-2.89 (m, 1H), 3.08-2.89 (m, 3H), 2.45 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	516.2
470		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.85 (d, *J* = 8.8 Hz, 1H), 5.62-5.51 (m, 1H), 5.51-5.33 (m, 1H), 3.12-2.92 (m, 4H), 2.45 (s,	516.3

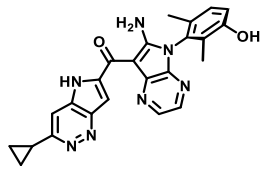
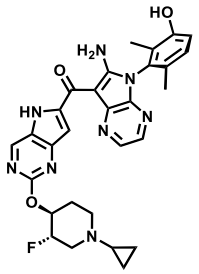
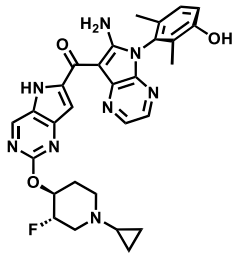
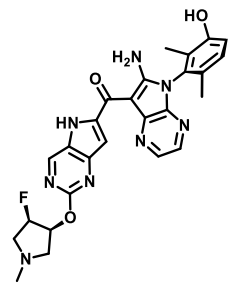
		b]pyridin-2-yl)methanone	3H), 1.92 (s, 3H), 1.88 (s, 3H).	
471		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.84 (d, *J* = 8.8 Hz, 1H), 5.61-5.51 (m, 1H), 5.50-5.33 (m, 1H), 3.16-2.91 (m, 4H), 2.46 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	516.3
472		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.43 (d, *J* = 2.8 Hz, 1H), 8.26 (d, *J* = 2.8 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.84 (d, *J* = 2.4 Hz, 1H), 7.41 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.43-5.22 (m, 1H), 4.97-4.91 (m, 1H), 3.29-3.18 (m, 2H), 3.15-3.09 (m, 2H), 1.98-1.94 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 0.55-0.45 (m, 4H).	542.2
473		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (d, *J* = 2.8 Hz, 1H), 8.15 (d, *J* = 2.8 Hz, 1H), 7.90 (d, *J* = 3.2 Hz, 1H), 7.74 (d, *J* = 2.4 Hz, 1H), 7.31 (s, 1H), 7.06 (d, *J* = 8.4 Hz, 1H), 6.88 (d, *J* = 8.4 Hz, 1H), 5.32-5.09 (m, 1H), 4.84 (d, *J* = 4.8 Hz, 1H), 3.18-3.09 (m, 2H), 3.06-3.00 (m, 2H), 1.88-1.81 (m, 4H), 1.78 (s, 3H), 0.43-0.35 (m, 4H).	542.2
474		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.67 (s, 1H), 7.29-7.21 (m, 2H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.56 (dd, *J* = 1.6, 6.4 Hz, 1H), 4.30 (dd, *J* = 4.8, 10.4 Hz, 1H), 4.15 (dd, *J* = 5.6, 10.0 Hz, 1H), 4.08 (dd, *J* = 3.2, 11.2 Hz, 1H), 3.89-3.81 (m, 1H), 3.76-3.66 (m, 1H), 3.60 (dd, *J* = 10., 11.2 Hz, 1H), 2.84-2.78 (m, 1H), 2.78-2.69 (m, 1H), 2.51 (s, 3H), 2.49-2.42 (m, 1H), 1.92 (s, 3H),	527.3

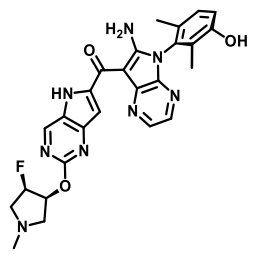
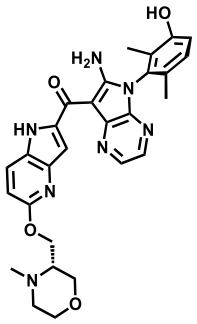
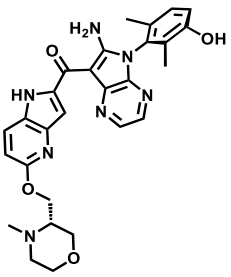
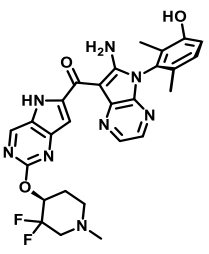
			1.88 (s, 3H).	
475		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 7.95 (d, *J* = 3.2 Hz, 1H), 7.66 (s, 1H), 7.28-7.20 (m, 2H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 6.63-6.48 (m, 1H), 4.29 (dd, *J* = 4.8, 10.4 Hz, 1H), 4.14 (dd, *J* = 5.6, 10.4 Hz, 1H), 4.07 (dd, *J* = 3.2, 11.6 Hz, 1H), 3.84 (d, *J* = 11.6 Hz, 1H), 3.70 (dt, *J* = 2.4, 11.2 Hz, 1H), 3.59 (dd, *J* = 10.0, 11.2 Hz, 1H), 2.84-2.77 (m, 1H), 2.73 (dt, *J* = 4.8, 9.2 Hz, 1H), 2.50 (s, 3H), 2.49-2.42 (m, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	527.3
476		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.01 (dd, *J* = 0.8, 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.61 (d, *J* = 0.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.13 (d, *J* = 8.8 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.25-2.18 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.09 - 1.00 (m, 4H).	439.2
477		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.01 (dd, *J* = 0.8, 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.61 (d, *J* = 0.8 Hz, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 7.13 (d, *J* = 8.8 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 2.25-2.18 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 1.09 - 0.99 (m, 4H).	439.2
478		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.29 (d, *J* = 3.2 Hz, 1H), 7.85 (d, *J* = 3.2 Hz, 1H), 7.57 (s, 1H), 7.19-7.11 (m, 2H), 7.06 (d, *J* = 8.4 Hz, 1H), 6.88 (d, *J* = 8.4 Hz, 1H), 6.46 (dd, *J* = 1.2, 6.8 Hz, 1H), 4.20 (dd, *J* = 4.8, 10.4 Hz, 1H), 4.06 (dd, *J* = 5.6, 10.4 Hz, 1H), 3.98 (dd, *J* = 3.2, 11.6 Hz, 1H), 3.80-3.71 (m, 1H), 3.61 (dt, *J* = 2.4, 11.2 Hz, 1H), 3.50 (dd, *J* = 9.6, 11.2 Hz, 1H), 2.76-2.70 (m, 1H),	527.3

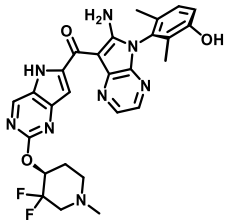
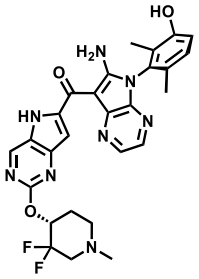
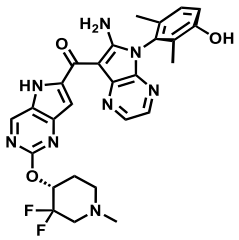
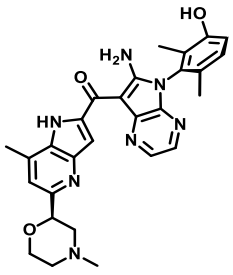
			2.66 (td, *J* = 4.4, 8.8 Hz, 1H), 2.47-2.32 (m, 4H), 1.82 (s, 3H), 1.77 (s, 3H).	
479		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.29 (d, *J* = 3.2 Hz, 1H), 7.85 (d, *J* = 3.2 Hz, 1H), 7.57 (s, 1H), 7.19-7.11 (m, 2H), 7.06 (d, *J* = 8.4 Hz, 1H), 6.88 (d, *J* = 8.4 Hz, 1H), 6.46 (dd, *J* = 1.2, 6.8 Hz, 1H), 4.20 (dd, *J* = 4.4, 10.4 Hz, 1H), 4.06 (dd, *J* = 5.6, 10.4 Hz, 1H), 3.98 (dd, *J* = 3.2, 11.6 Hz, 1H), 3.80-3.71 (m, 1H), 3.61 (dt, *J* = 2.4, 11.2 Hz, 1H), 3.50 (dd, *J* = 9.6, 11.2 Hz, 1H), 2.76-2.70 (m, 1H), 2.66 (td, *J* = 4.4, 8.8 Hz, 1H), 2.47-2.32 (m, 4H), 1.82 (s, 3H), 1.77 (s, 3H).	527.3
480		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.06-8.00 (m, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.84 (d, *J* = 8.8 Hz, 1H), 5.58-5.48 (m, 1H), 5.47-5.31 (m, 1H), 3.30-3.06 (m, 4H), 2.00-1.94 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H), 0.55-0.45 (m, 4H).	542.2
481		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 9.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.84 (d, *J* = 8.8 Hz, 1H), 5.57-5.47 (m, 1H), 5.47-5.30 (m, 1H), 3.30-3.03 (m, 4H), 1.99-1.94 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 0.57-0.42 (m, 4H).	542.2
482		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.14 (s, 1H), 8.43 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.52 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.35-2.27 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.19-1.13 (m, 2H), 1.11-1.05 (m, 2H).	440.1

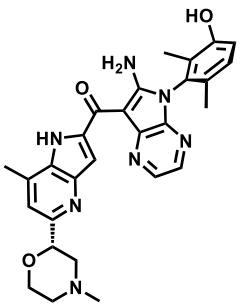
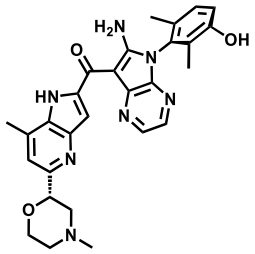
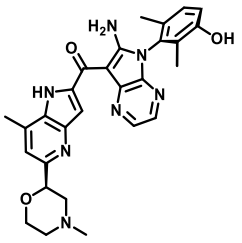
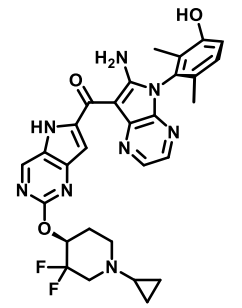
483		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.14 (s, 1H), 8.43 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.53 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.36-2.26 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.19-1.13 (m, 2H), 1.11-1.04 (m, 2H).	440.1
484		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.49 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.84 (d, *J* = 8.8 Hz, 1H), 4.44-4.37 (m, 2H), 4.07-3.95 (m, 2H), 3.80-3.68 (m, 1H), 3.15-3.06 (m, 1H), 2.88 (d, *J* = 13.2 Hz, 1H), 2.46 (s, 3H), 2.43-2.35 (m, 1H), 2.34-2.25 (m, 1H), 1.92 (s, 3H), 1.88 (s, 3H).	528.2
485		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.40 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.49 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 4.42-4.34 (m, 2H), 4.01-3.97 (m, 1H), 3.96-3.93 (m, 1H), 3.72 (dt, *J* = 2.4, 11.6 Hz, 1H), 2.97 (d, *J* = 11.6 Hz, 1H), 2.74 (d, *J* = 11.6 Hz, 1H), 2.34 (s, 3H), 2.22 (dt, *J* = 3.2, 11.6 Hz, 1H), 2.10 (t, *J* = 11.6 Hz, 1H), 1.92 (s, 3H), 1.88 (s, 3H).	528.2
486		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 9.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.49 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 4.38 (t, *J* = 4.8 Hz, 2H), 4.07-3.92 (m, 2H), 3.78-3.64 (m, 1H), 3.02 (d, *J* = 11.6 Hz, 1H), 2.80 (d, *J* = 11.6 Hz, 1H), 2.39 (s, 3H), 2.30 (d, *J* = 3.2 Hz, 1H), 2.18 (s, 1H), 1.92 (s, 3H), 1.87 (s, 3H).	528.2

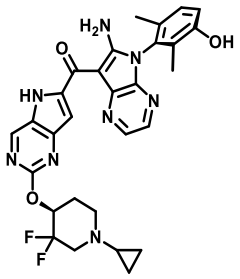
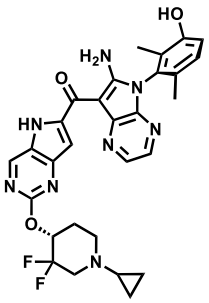
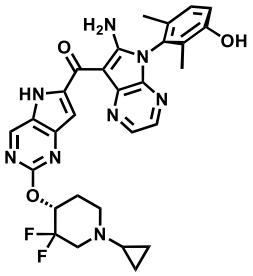
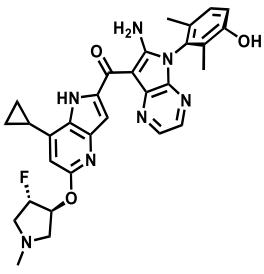
487		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 9.2 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.48 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 4.44 (t, *J* = 4.8 Hz, 2H), 4.07-3.92 (m, 2H), 3.78-3.64 (m, 1H), 2.99 (d, *J* = 11.6 Hz, 1H), 2.77 (d, *J* = 11.6 Hz, 1H), 2.37 (s, 3H), 2.30 (d, *J* = 3.2 Hz, 1H), 2.14 (s, 1H), 1.92 (s, 3H), 1.88 (s, 3H).	528.2
488		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.30 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 9.2 Hz, 1H), 7.89 (d, *J* = 3.6 Hz, 1H), 7.41 (s, 1H), 7.07 (d, *J* = 8.8 Hz, 1H), 6.89 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 4.51 (d, *J* = 3.6 Hz, 1H), 4.48 (d, *J* = 3.6 Hz, 1H), 4.12 (d, *J* = 11.2 Hz, 1H), 4.01-3.91 (m, 1H), 3.82-3.69 (m, 2H), 3.61-3.46 (m, 1H), 2.93 (s, 3H), 1.83 (s, 3H), 1.78 (s, 3H).	528.3
489		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.30 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 9.2 Hz, 1H), 7.89 (d, *J* = 3.6 Hz, 1H), 7.41 (s, 1H), 7.07 (d, *J* = 8.8 Hz, 1H), 6.89 (d, *J* = 8.4 Hz, 1H), 6.83 (d, *J* = 8.8 Hz, 1H), 4.51 (d, *J* = 3.6 Hz, 1H), 4.48 (d, *J* = 3.6 Hz, 1H), 4.12 (d, *J* = 11.2 Hz, 1H), 4.01-3.91 (m, 1H), 3.82-3.69 (m, 2H), 3.61-3.46 (m, 1H), 2.93 (s, 3H), 1.83 (s, 3H), 1.78 (s, 3H).	528.3
490		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 2.8 Hz, 1H), 8.03-7.97 (m, 2H), 7.71 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.49-2.41 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.23-1.12 (m, 4H).	440.3

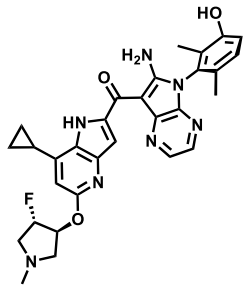
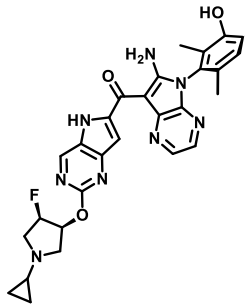
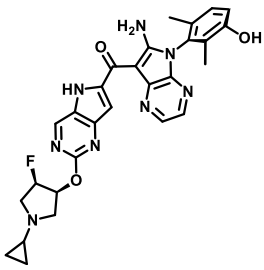
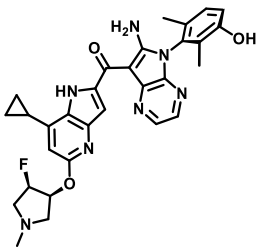
491		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.41 (d, *J* = 3.2 Hz, 1H), 8.04-7.96 (m, 2H), 7.71 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.49-2.41 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.23-1.12 (m, 4H).	440.3
492		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.42 (s, 1H), 9.70 (s, 1H), 9.10 (s, 1H), 8.40 (s, 1H), 8.01 (s, 1H), 7.67 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.25-5.14 (m, 1H), 4.78-4.53 (m, 1H), 3.21 (dd, *J* = 4.4, 11.6 Hz, 1H), 2.93-2.81 (m, 1H), 2.60-2.54 (m, 1H), 2.42-2.36 (m, 1H), 2.25-2.18 (m, 1H), 1.83 (s, 3H), 1.81-1.77 (m, 1H), 1.76 (s, 3H), 1.57 (q, *J* = 9.6 Hz, 1H), 0.47 (d, *J* = 6.4 Hz, 2H), 0.40-0.30 (m, 2H).	557.2
493		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.39 (s, 1H), 9.69 (s, 1H), 9.11 (s, 1H), 8.41 (d, *J* = 2.8 Hz, 1H), 8.02 (d, *J* = 2.8 Hz, 1H), 7.69 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.27-5.12 (m, 1H), 4.78-4.55 (m, 1H), 3.22-3.14 (m, 1H), 2.88-2.85 (m, 1H), 2.60-2.55 (m, 1H), 2.43-2.40 (m, 1H), 2.24-2.19 (m, 1H), 1.83 (s, 3H), 1.82-1.77 (m, 1H), 1.76 (s, 3H), 1.62-1.52 (m, 1H), 0.52-0.42 (m, 2H), 0.40-0.28 (m, 2H).	557.2
494		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.09 (s, 1H), 8.43 (d, *J* = 2.8 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.43 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.53-5.37 (m, 2H), 3.17-3.12 (m, 1H), 3.09-2.96 (m, 3H), 2.46 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	517.2

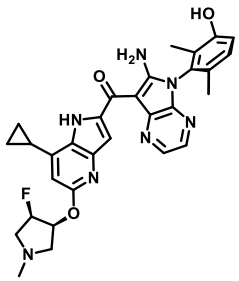
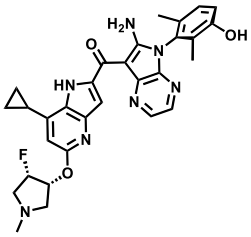
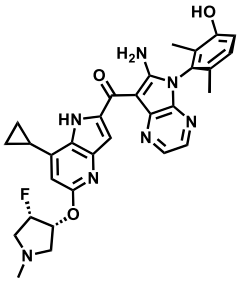
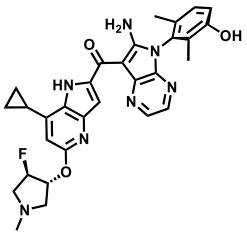
495		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.09 (s, 1H), 8.43 (d, *J* = 2.8 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.42 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.54-5.37 (m, 1H), 3.18-3.13 (m, 1H), 3.10-2.98 (m, 3H), 2.47 (s, 3H), 1.93 (s, 3H), 1.88 (s, 3H).	517.2
496		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 9.2 Hz, 1H), 7.96 (d, *J* = 3.2 Hz, 1H), 7.49 (s, 1H), 7.16 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.84 (d, *J* = 8.8 Hz, 1H), 4.51 (dd, *J* = 4.0, 11.6 Hz, 1H), 4.39 (dd, *J* = 5.6, 11.6 Hz, 1H), 4.00 (dd, *J* = 3.2, 11.6 Hz, 1H), 3.83 (m, 1H), 3.68 (dt, *J* = 2.4, 11.2 Hz, 1H), 3.57 (dd, *J* = 10.0, 11.6 Hz, 1H), 2.80 (m, 1H), 2.66-2.58 (m, 1H), 2.50-2.40 (m, 4H), 1.92 (s, 3H), 1.88 (s, 3H).	528.3
497		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.39 (d, *J* = 2.8 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.49 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 6.84 (d, *J* = 8.8 Hz, 1H), 4.55-4.48 (m, 1H), 4.44-4.35 (m, 1H), 4.00 (dd, *J* = 3.2, 11.6 Hz, 1H), 3.83 (m, 1H), 3.74-3.64 (m, 1H), 3.57 (t, *J* = 10.8 Hz, 1H), 2.80 (m, 1H), 2.66-2.57 (m, 1H), 2.50-2.41 (m, 4H), 1.92 (s, 3H), 1.88 (s, 3H).	528.2
498		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-	^{1}H NMR (400 MHz, MeOD): δ 9.11 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.43 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.62-5.50 (m, 1H), 3.05-2.95 (m, 1H), 2.90-2.79 (m, 1H), 2.76-2.68 (m, 1H), 2.63-2.55 (m, 1H), 2.41 (s, 3H), 2.28-2.20 (m, 1H),	549.2

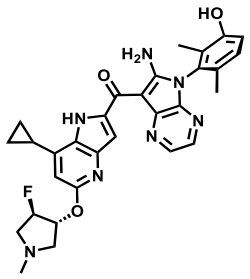
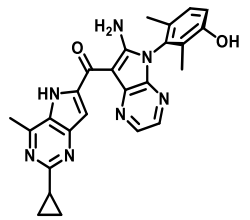
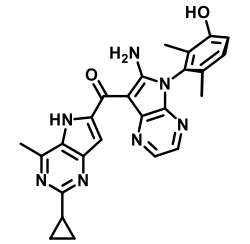
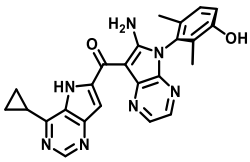
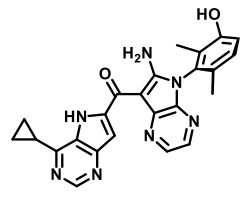
		yl)methanone	2.17-2.09 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	
499		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.11 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.43 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.65-5.51 (m, 1H), 3.13-3.03 (m, 1H), 3.02-2.87 (m, 1H), 2.85-2.74 (m, 1H), 2.73-2.61 (m, 1H), 2.47 (s, 3H), 2.31-2.22 (m, 1H), 2.21-2.11 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	549.2
500		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.11 (s, 1H), 8.43 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.44 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.66-5.47 (m, 1H), 3.06-2.79 (m, 2H), 2.77-2.56 (m, 2H), 2.41 (s, 3H), 2.28-2.10 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	549.2
501		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.10 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.43 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.55-5.47 (m, 1H), 3.06-2.80 (m, 2H), 2.75-2.55 (m, 2H), 2.41 (s, 3H), 2.27-2.11 (m, 2H), 1.93 (s, 3H), 1.88 (s, 3H).	549.2
502		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((R)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 2.8 Hz, 1H), 7.54 (s, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.76 (dd, *J* = 2.4, 10.4 Hz, 1H), 4.11 (dd, *J* = 2.4, 11.6 Hz, 1H), 3.89 (dt, *J* = 2.4, 11.6 Hz, 1H), 3.19 (d, *J* = 11.6 Hz, 1H), 2.87 (d, *J* = 11.2 Hz, 1H), 2.81 (s, 3H), 2.41 (s, 3H), 2.39-2.35 (m, 1H), 2.28 (t, *J* = 10.8 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	512.3

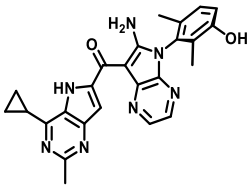
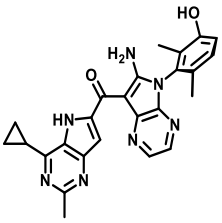
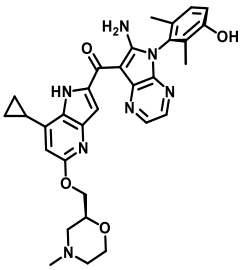
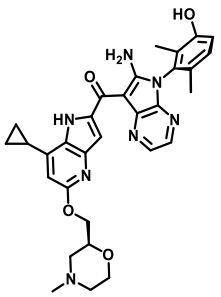
503		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((S)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.54 (s, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.74 (dd, *J* = 2.8, 10.8 Hz, 1H), 4.10 (dd, *J* = 2.0, 11.6 Hz, 1H), 3.88 (dt, *J* = 2.0, 11.2 Hz, 1H), 3.17-3.12 (m, 1H), 2.88-2.82 (m, 1H), 2.82 (s, 3H), 2.37 (s, 3H), 2.35-2.29 (m, 1H), 2.20 (t, *J* = 10.8 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	512.3
504		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((S)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 2.8 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.54 (s, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 4.74 (dd, *J* = 2.4, 10.4 Hz, 1H), 4.10 (dd, *J* = 2.0, 11.6 Hz, 1H), 3.88 (dt, *J* = 2.0, 11.6 Hz, 1H), 3.15 (d, *J* = 11.6 Hz, 1H), 2.88-2.82 (m, 1H), 2.81 (s, 3H), 2.37 (s, 3H), 2.33 (dt, *J* = 3.6, 12.0 Hz, 1H), 2.20 (t, *J* = 10.8 Hz, 1H), 1.93 (s, 3H), 1.88 (s, 3H).	512.2
505		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((R)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 8.00 (d, *J* = 3.2 Hz, 1H), 7.54 (s, 1H), 7.36 (s, 1H), 7.15 (d, *J* = 8.4 Hz, 1H), 6.97 (d, *J* = 8.4 Hz, 1H), 4.74 (dd, *J* = 2.4, 10.4 Hz, 1H), 4.10 (dd, *J* = 2.0, 11.6 Hz, 1H), 3.88 (dt, *J* = 2.4, 11.6 Hz, 1H), 3.14 (d, *J* = 12.4 Hz, 1H), 2.88-2.82 (m, 1H), 2.81 (s, 3H), 2.37 (s, 3H), 2.32 (dt, *J* = 3.6, 12.0 Hz, 1H), 2.20 (t, *J* = 10.8 Hz, 1H), 1.92 (s, 3H), 1.88 (s, 3H).	512.2
506		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-1-cyclopropyl-3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.45 (s, 1H), 9.68 (d, *J* = 3.2 Hz, 1H), 9.12 (s, 1H), 8.40 (d, *J* = 2.4 Hz, 1H), 8.02 (d, *J* = 2.4 Hz, 1H), 7.69 (s, 1H), 7.13 (d, *J* = 8.0 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.55-5.41 (m, 1H), 3.16-3.04 (m, 1H), 2.97-2.83 (m, 2H), 2.71-	575.3

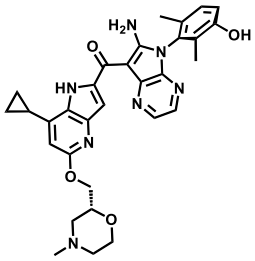
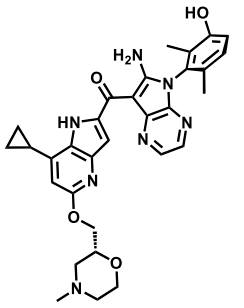
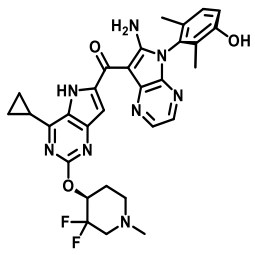
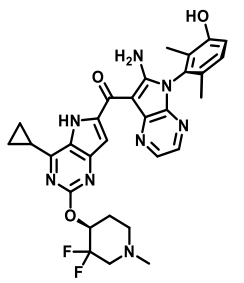
		d]pyrimidin-6-yl)methanone	2.67 (m, 1H), 2.15-2.05 (m, 1H), 1.86 (d, *J* = 2.8 Hz, 2H), 1.83 (s, 3H), 1.76 (s, 3H), 0.48 (d, *J* = 6.4 Hz, 2H), 0.42-0.30 (m, 2H).	
507		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-1-cyclopropyl-3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.42 (s, 1H), 9.67 (s, 1H), 9.13 (s, 1H), 8.41 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.71 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.57-5.38 (m, 1H), 3.15-3.05 (m, 1H), 2.98-2.84 (m, 2H), 2.72-2.68 (m, 1H), 2.18-2.04 (m, 1H), 1.93-1.84 (m, 2H), 1.83 (s, 3H), 1.76 (s, 3H), 0.53-0.44 (m, 2H), 0.42-0.30 (m, 2H).	575.3
508		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-1-cyclopropyl-3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.86 (s, 1H), 9.68 (s, 1H), 9.12 (s, 1H), 8.40 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.70 (s, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.66-5.35 (m, 1H), 3.18-3.06 (m, 1H), 2.98-2.84 (m, 2H), 2.67 (s, 1H), 2.15-2.02 (m, 1H), 1.89-1.82 (m, 5H), 1.76 (s, 3H), 0.49 (d, *J* = 6.8 Hz, 2H), 0.40-0.34 (m, 2H).	575.2
509		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-1-cyclopropyl-3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.43 (s, 1H), 9.68 (s, 1H), 9.13 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.71 (s, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.54-5.42 (m, 1H), 3.17-3.00 (m, 1H), 2.99-2.82 (m, 2H), 2.73 (s, 1H), 2.13-2.08 (m, 1H), 1.89-1.83 (m, 5H), 1.76 (s, 3H), 0.49 (d, *J* = 6.8 Hz, 2H), 0.40-0.34 (m, 2H).	575.2
510		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-4-fluoro-1-methylpyrrolidin-	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.39 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.51 (s, 1H), 5.68-5.50 (m, 1H), 5.40-5.17 (m, 1H), 3.64-3.54 (m, 1H), 3.20-3.11 (m, 2H), 2.94-2.86 (m, 1H), 2.59 (s,	556.2

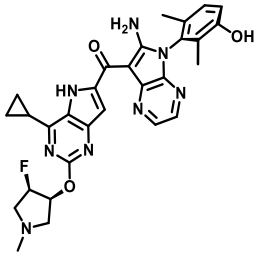
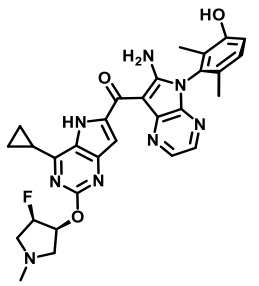
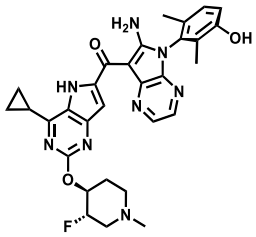
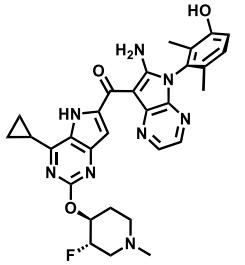
		3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	3H), 2.44-2.41 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.35-1.32 (m, 2H), 1.14-1.09 (m, 2H).	
511		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.49 (s, 1H), 5.61-5.46 (m, 1H), 5.29-5.13 (m, 1H), 3.52-3.43 (m, 1H), 3.12-2.95 (m, 2H), 2.70 (dd, *J* = 3.6, 11.6 Hz, 1H), 2.47 (s, 3H), 2.44-2.37 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.39-1.30 (m, 2H), 1.16-1.07 (m, 2H).	556.2
512		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.09 (s, 1H), 8.43 (d, *J* = 2.8 Hz, 1H), 8.01 (d, *J* = 2.8 Hz, 1H), 7.42 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.51-5.34 (m, 2H), 3.27-3.04 (m, 4H), 2.00-1.95 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 0.53-0.47 (m, 4H).	543.2
513		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 9.09 (s, 1H), 8.43 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.43 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.50-5.33 (m, 1H), 5.40-5.30 (m, 1H), 3.27-3.04 (m, 4H), 2.00-1.95 (m, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 0.53-0.47 (m, 4H).	543.2
514		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.34 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.35 (s, 1H), 7.10 (d, *J* = 8.4 Hz, 1H), 6.93 (d, *J* = 8.4 Hz, 1H), 6.51 (s, 1H), 5.56-5.29 (m, 2H), 3.07-2.89 (m, 4H), 2.47-2.37 (m, 4H), 1.90 (s, 3H), 1.87 (s, 3H), 1.35-1.30 (m, 2H), 1.16-1.05 (m, 2H).	556.3

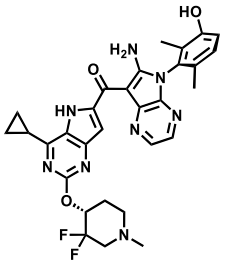
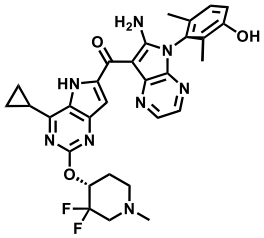
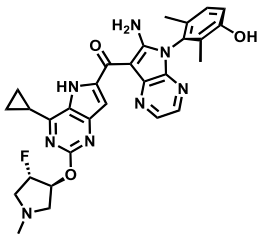
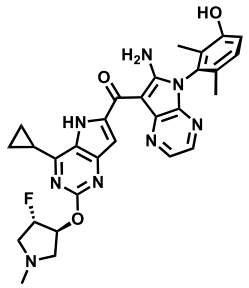
515		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.33 (s, 1H), 7.97 (d, *J* = 3.2 Hz, 1H), 7.34 (s, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.96 (d, *J* = 8.4 Hz, 1H), 6.49 (s, 1H), 5.54-5.27 (m, 2H), 3.07-2.87 (m, 4H), 2.46-2.32 (m, 4H), 1.91 (s, 3H), 1.87 (s, 3H), 1.34-1.26 (m, 2H), 1.10 (d, *J* = 5.2 Hz, 2H).	556.3
516		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.51 (s, 1H), 5.55-5.32 (m, 2H), 3.11-2.95 (m, 4H), 2.47 (s, 3H), 2.47-2.43 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.36-1.30 (m, 2H), 1.14-1.09 (m, 2H).	556.2
517		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.36 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.51 (s, 1H), 5.55-5.32 (m, 2H), 3.11-2.95 (m, 4H), 2.47 (s, 3H), 2.47-2.43 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.36-1.30 (m, 2H), 1.14-1.09 (m, 2H).	556.2
518		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.40 (s, 1H), 7.19 (d, *J* = 8.4 Hz, 1H), 7.01 (d, *J* = 8.4 Hz, 1H), 6.52 (s, 1H), 5.60-5.50 (m, 1H), 5.30-5.15 (m, 1H), 3.49-3.44 (m, 1H), 3.13-2.94 (m, 2H), 2.68 (dd, *J* = 3.6, 10.4 Hz, 1H), 2.50-2.39 (m, 4H), 1.95 (s, 3H), 1.90 (s, 3H), 1.38-1.32 (m, 2H), 1.16-1.10 (m, 2H).	556.2

519		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, *J* = 8.0 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.49 (s, 1H), 5.60-5.42 (m, 1H), 5.28-5.11 (m, 1H), 3.49-3.44 (m, 1H), 3.06-2.88 (m, 2H), 2.62 (dd, *J* = 4.0, 10.8 Hz, 1H), 2.47-2.37 (m, 4H), 1.93 (s, 3H), 1.88 (s, 3H), 1.37-1.31 (m, 2H), 1.15-1.07 (m, 2H).	556.2
520		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.98 (s, 1H), 9.69 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.47 (d, *J* = 1.6 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.82 (s, 3H), 2.26-2.19 (m, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.03-0.99 (m, 2H), 0.98-0.94 (m, 2H).	454.3
521		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 14.97 (s, 1H), 9.69 (s, 1H), 8.42 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.46 (d, *J* = 2.0 Hz, 1H), 7.13 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.81 (s, 3H), 2.26-2.19 (m, 1H), 1.83 (s, 3H), 1.76 (s, 3H), 1.03-0.99 (m, 2H), 0.98-0.93 (m, 2H).	454.3
522		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.69 (s, 1H), 8.39 (d, *J* = 3.2 Hz, 1H), 8.03 (d, *J* = 3.2 Hz, 1H), 7.47 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 2.73-2.61 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.53-1.47 (m, 2H), 1.47-1.41 (m, 2H).	440.2
523		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.69 (s, 1H), 8.55 (s, 1H), 8.37 (d, *J* = 3.2 Hz, 1H), 8.02 (d, *J* = 3.2 Hz, 1H), 7.47 (s, 1H), 7.09 (d, *J* = 8.4 Hz, 1H), 6.92 (d, *J* = 8.4 Hz, 1H), 2.72-2.66 (m, 1H), 1.92-1.89 (m, 3H), 1.87 (s, 3H), 1.53-1.47 (m, 2H), 1.47-1.41 (m, 2H).	440.2

524		(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.13 (s, 1H), 9.80 (s, 1H), 8.45 (d, J = 2.8 Hz, 1H), 8.04 (d, J = 2.8 Hz, 1H), 7.48 (d, J = 2.0 Hz, 1H), 7.13 (d, J = 8.4 Hz, 1H), 7.00 (d, J = 8.4 Hz, 1H), 2.67-2.66 (m, 1H), 2.58 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.32-1.26 (m, 4H).	454.2
525		(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.13 (s, 1H), 9.74 (s, 1H), 8.45 (d, J = 3.2 Hz, 1H), 8.04 (d, J = 2.8 Hz, 1H), 7.48 (d, J = 1.6 Hz, 1H), 7.13 (d, J = 8.0 Hz, 1H), 7.00 (d, J = 8.4 Hz, 1H), 2.68-2.65 (m, 1H), 2.58 (s, 3H), 1.83 (s, 3H), 1.76 (s, 3H), 1.31-1.25 (m, 4H).	454.2
526		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((S)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38 – 8.32 (m, 1H), 7.98 (d, J = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.49 (s, 1H), 4.36 (t, J = 5.2 Hz, 2H), 3.99 (dd, J = 2.8, 11.6 Hz, 2H), 3.74 (dt, J = 2.4, 11.6 Hz, 1H), 3.09 (d, J = 11.6 Hz, 1H), 2.88 (d, J = 11.6 Hz, 1H), 2.46 (s, 3H), 2.44-2.35 (m, 2H), 2.34-2.23 (m, 1H), 1.93 (s, 3H), 1.89 (s, 3H), 1.36-1.31 (m, 2H), 1.14-1.09 (m, 2H).	568.3
527		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((S)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.38-8.32 (m, 1H), 7.98 (d, J = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, J = 8.4 Hz, 1H), 6.99 (d, J = 8.4 Hz, 1H), 6.49 (s, 1H), 4.36 (t, J = 5.2 Hz, 2H), 3.99 (dd, J = 2.8, 11.6 Hz, 2H), 3.74 (dt, J = 2.4, 11.6 Hz, 1H), 3.09 (d, J = 11.6 Hz, 1H), 2.88 (d, J = 11.6 Hz, 1H), 2.46 (s, 3H), 2.44-2.35 (m, 2H), 2.34-2.23 (m, 1H), 1.93 (s, 3H), 1.89 (s, 3H), 1.36-1.31 (m, 2H), 1.14-1.09 (m, 2H).	568.3

528		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.99 (d, *J* = 3.2 Hz, 1H), 7.38 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.49 (s, 1H), 4.34 (t, *J* = 4.4 Hz, 2H), 4.01-3.88 (m, 2H), 3.79-3.64 (m, 1H), 2.97 (d, *J* = 11.2 Hz, 1H), 2.76 (d, *J* = 11.2 Hz, 1H), 2.41 (s, 1H), 2.36 (s, 3H), 2.31-2.24 (m, 1H), 2.11 (s, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.37-1.30 (m, 2H), 1.12 (d, *J* = 5.6 Hz, 2H).	568.4
529		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.35 (d, *J* = 3.2 Hz, 1H), 7.98 (d, *J* = 3.2 Hz, 1H), 7.37 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 6.49 (s, 1H), 4.34 (t, *J* = 4.4 Hz, 2H), 4.06 - 3.85 (m, 2H), 3.79-3.64 (m, 1H), 2.99 (d, *J* = 11.2 Hz, 1H), 2.77 (d, *J* = 11.2 Hz, 1H), 2.40 (s, 1H), 2.37 (s, 3H), 2.31-2.21 (m, 1H), 2.08 (s, 1H), 1.93 (s, 3H), 1.88 (s, 3H), 1.35-1.30 (m, 2H), 1.11 (d, *J* = 5.6 Hz, 2H).	568.4
530		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.26 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.54-5.38 (m, 1H), 3.04-2.92 (m, 1H), 2.88-2.77 (m, 1H), 2.75-2.70 (m, 1H), 2.65-2.54 (m, 2H), 2.40 (s, 3H), 2.24-2.14 (m, 1H), 2.10-2.05 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.54-1.46 (m, 2H), 1.45-1.39 (m, 2H).	589.4
531		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-	^{1}H NMR (400 MHz, MeOD): δ 8.38 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.27 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.54-5.37 (m, 1H), 3.05-2.92 (m, 1H), 2.89-2.77 (m, 1H), 2.75-2.67 (m, 1H), 2.66-2.55 (m, 2H), 2.40 (s, 3H), 2.25-2.16 (m, 1H), 2.14-2.05 (m,	589.4

		pyrrolo[3,2-d]pyrimidin-6-yl)methanone	1H), 1.93 (s, 3H), 1.89 (s, 3H), 1.54-1.46 (m, 2H), 1.45-1.38 (m, 2H).	
532		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (t, *J* = 3.6 Hz, 1H), 8.06-7.87 (m, 1H), 7.25-7.13 (m, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 5.49-5.26 (m, 2H), 3.18-2.95 (m, 4H), 2.59-2.51 (m, 1H), 2.47 (s, 3H), 1.94 (s, 3H), 1.89 (s, 3H), 1.45 (d, *J* = 2.8 Hz, 2H), 1.41-1.34 (m, 2H).	557.3
533		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.32 (d, *J* = 9.6 Hz, 1H), 8.06-7.87 (m, 1H), 7.24-7.15 (m, 2H), 7.00 (d, *J* = 8.4 Hz, 1H), 5.59-5.31 (m, 2H), 3.30-3.08 (m, 4H), 2.61-2.50 (m, 4H), 1.95 (s, 3H), 1.91 (s, 3H), 1.49-1.43 (m, 2H), 1.43-1.37 (m, 2H).	557.3
534		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.25 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.29-5.20 (m, 1H), 4.94-4.76 (m, 1H), 3.18-3.05 (m, 1H), 2.93-2.70 (m, 2H), 2.67-2.55 (m, 2H), 2.46 (s, 3H), 2.39-2.28 (m, 1H), 1.98-1.94 (m, 1H), 1.94 (s, 3H), 1.89 (s, 3H), 1.51-1.44 (m, 2H), 1.43-1.35 (m, 2H).	571.3
535		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-	^{1}H NMR (400 MHz, MeOD): δ 8.36 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.25 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.31-5.22 (m, 1H), 4.97-4.80 (m, 1H), 3.24-3.09 (m, 1H), 3.02-2.78 (m, 2H), 2.77-2.64 (m, 1H), 2.63-2.57 (m, 1H), 2.52 (s, 3H), 2.40-2.28 (m, 1H), 2.03-1.94 (m, 1H),	571.3

		d]pyrimidin-6-yl)methanone	1.94 (s, 3H), 1.89 (s, 3H), 1.50-1.44 (m, 2H), 1.44-1.37 (m, 2H).	
536		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 3.2 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.27 (s, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.53-5.40 (m, 1H), 3.09-2.93 (m, 1H), 2.91-2.67 (m, 2H), 2.66-2.51 (m, 2H), 2.41 (s, 3H), 2.27-2.03 (m, 2H), 1.94 (s, 3H), 1.89 (s, 3H), 1.54-1.45 (m, 2H), 1.45-1.37 (m, 2H).	589.3
537		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, MeOD): δ 8.37 (d, *J* = 2.8 Hz, 1H), 8.01 (d, *J* = 3.2 Hz, 1H), 7.26 (d, *J* = 2.0 Hz, 1H), 7.17 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.54-5.38 (m, 1H), 3.10-2.94 (m, 1H), 2.92-2.67 (m, 2H), 2.66-2.53 (m, 2H), 2.42 (s, 3H), 2.27-2.03 (m, 2H), 1.93 (s, 3H), 1.89 (s, 3H), 1.55-1.46 (m, 2H), 1.45-1.35 (m, 2H).	589.3
538		(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.21 (s, 1H), 9.69 (s, 1H), 8.47 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.40 (d, *J* = 2.0 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.37-5.28 (m, 1H), 5.24-5.08 (m, 1H), 3.31-3.28 (m, 1H), 2.87-2.82 (m, 1H), 2.80-2.73 (m, 1H), 2.71-2.68 (m, 1H), 2.41-2.36 (m, 1H), 2.30 (s, 3H), 1.84 (s, 3H), 1.77 (s, 3H), 1.35-1.28 (m, 4H).	557.2
539		(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-	^{1}H NMR (400 MHz, DMSO-d_6): δ 15.21 (s, 1H), 9.69 (s, 1H), 8.47 (d, *J* = 3.2 Hz, 1H), 8.04 (d, *J* = 3.2 Hz, 1H), 7.40 (d, *J* = 2.0 Hz, 1H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.99 (d, *J* = 8.4 Hz, 1H), 5.40-5.27 (m, 1H), 5.25-5.07 (m, 1H), 3.32-3.26 (m, 1H), 2.87-2.81 (m, 1H), 2.80-2.72 (m, 1H),	557.2

		pyrrolo[3,2-d]pyrimidin-6-yl)methanone	2.70-2.66 (m, 1H), 2.41-2.36 (m, 1H), 2.30 (s, 3H), 1.84 (s, 3H), 1.77 (s, 3H), 1.35-1.28 (m, 4H).	

Experimental Example 1: Evaluation of PKMYT1 Thermal Shift Assay of Example Compounds

The extent to which the compounds according to Examples of the present invention bind to the PKMYT1 kinase domain was evaluated through a thermal shift assay. Each 100 μM compound was diluted in 50 mM Tris (pH 7.5) at a concentration of 2 μM for each protein. SYPRO™ Orange dye was added to the solution and the plate was transferred to a QuantStudio3 real-time PCR system (Applied Biosystems by Thermo Fisher Scientific). The temperature shift (Tm) was calculated using Protein Thermal Shift software (version 1.3) (Applied Biosystems, Grand Island, NY) by increasing the temperature from 25℃ to 99℃ by 0.1℃ per second. The degree of temperature at which the protein is modified in the presence of the compound compared to DMSO was calculated according to Equation 1 below:

[Equation 1]

ΔTm = Tm (temperature of compounds according to Examples) - Tm (temperature of DMSO)

The above ΔTm values have a significant correlation with cell activity, and results thereof are shown in Table 2 below.

[Table 2]

Example Compound	ΔTm (℃)	Example Compound	ΔTm (℃)	Example Compound	ΔTm (℃)	Example Compound	ΔTm (℃)	Example Compound	ΔTm (℃)
1	A	**109**	B	**217**	B	**325**	B	**433**	A
2	B	**110**	B	**218**	B	**326**	B	**434**	B
3	A	**111**	A	**219**	A	**327**	A	**435**	A
4	B	**112**	A	**220**	B	**328**	B	**436**	B
5	A	**113**	B	**221**	A	**329**	A	**437**	A
6	B	**114**	A	**222**	A	**330**	B	**438**	B
7	A	**115**	B	**223**	B	**331**	A	**439**	A
8	B	**116**	A	**224**	B	**332**	A	**440**	A
9	A	**117**	B	**225**	A	**333**	B	**441**	B
10	B	**118**	B	**226**	B	**334**	B	**442**	A
11	A	**119**	A	**227**	A	**335**	A	**443**	B
12	B	**120**	B	**228**	A	**336**	B	**444**	A
13	A	**121**	A	**229**	B	**337**	A	**445**	B
14	B	**122**	A	**230**	B	**338**	A	**446**	A
15	A	**123**	B	**231**	A	**339**	B	**447**	B
16	B	**124**	B	**232**	B	**340**	B	**448**	A
17	B	**125**	A	**233**	A	**341**	A	**449**	B
18	A	**126**	A	**234**	A	**342**	A	**450**	A
19	A	**127**	B	**235**	B	**343**	B	**451**	B
20	B	**128**	A	**236**	B	**344**	B	**452**	A
21	B	**129**	B	**237**	A	**345**	A	**453**	B
22	A	**130**	B	**238**	A	**346**	B	**454**	B
23	B	**131**	A	**239**	B	**347**	A	**455**	A
24	A	**132**	B	**240**	B	**348**	A	**456**	B
25	A	**133**	A	**241**	A	**349**	A	**457**	A
26	B	**134**	A	**242**	B	**350**	A	**458**	A
27	A	**135**	B	**243**	A	**351**	B	**459**	B
28	B	**136**	B	**244**	B	**352**	B	**460**	B
29	B	**137**	A	**245**	A	**353**	A	**461**	A
30	A	**138**	A	**246**	A	**354**	B	**462**	B
31	A	**139**	B	**247**	B	**355**	A	**463**	A
32	A	**140**	A	**248**	A	**356**	B	**464**	B
33	A	**141**	B	**249**	B	**357**	A	**465**	A

34	B	**142**	B	**250**	B	**358**	B	**466**	B
35	A	**143**	A	**251**	A	**359**	A	**467**	A
36	B	**144**	A	**252**	A	**360**	B	**468**	B
37	A	**145**	B	**253**	B	**361**	A	**469**	A
38	A	**146**	A	**254**	B	**362**	B	**470**	A
39	A	**147**	B	**255**	A	**363**	A	**471**	B
40	A	**148**	A	**256**	A	**364**	B	**472**	B
41	A	**149**	B	**257**	B	**365**	A	**473**	A
42	B	**150**	B	**258**	A	**366**	B	**474**	B
43	A	**151**	A	**259**	B	**367**	A	**475**	A
44	B	**152**	A	**260**	A	**368**	A	**476**	A
45	B	**153**	B	**261**	B	**369**	B	**477**	B
46	A	**154**	B	**262**	A	**370**	B	**478**	B
47	B	**155**	A	**263**	A	**371**	A	**479**	A
48	A	**156**	B	**264**	A	**372**	B	**480**	A
49	A	**157**	A	**265**	A	**373**	A	**481**	B
50	B	**158**	A	**266**	B	**374**	B	**482**	A
51	B	**159**	B	**267**	A	**375**	A	**483**	B
52	A	**160**	B	**268**	B	**376**	A	**484**	A
53	A	**161**	A	**269**	A	**377**	B	**485**	B
54	B	**162**	A	**270**	B	**378**	B	**486**	A
55	A	**163**	B	**271**	A	**379**	A	**487**	B
56	B	**164**	A	**272**	A	**380**	B	**488**	A
57	A	**165**	B	**273**	A	**381**	A	**489**	B
58	B	**166**	A	**274**	B	**382**	A	**490**	A
59	A	**167**	B	**275**	A	**383**	B	**491**	B
60	B	**168**	A	**276**	A	**384**	A	**492**	A
61	A	**169**	B	**277**	A	**385**	B	**493**	B
62	B	**170**	A	**278**	B	**386**	B	**494**	A
63	A	**171**	B	**279**	A	**387**	A	**495**	B
64	B	**172**	A	**280**	B	**388**	B	**496**	A
65	A	**173**	B	**281**	A	**389**	A	**497**	B
66	B	**174**	B	**282**	B	**390**	A	**498**	A
67	A	**175**	A	**283**	A	**391**	B	**499**	B
68	B	**176**	B	**284**	B	**392**	A	**500**	A
69	A	**177**	A	**285**	A	**393**	B	**501**	B

70	B	**178**	A	**286**	B	**394**	A	**502**	A
71	A	**179**	B	**287**	A	**395**	B	**503**	A
72	A	**180**	B	**288**	B	**396**	A	**504**	B
73	B	**181**	A	**289**	A	**397**	B	**505**	B
74	B	**182**	A	**290**	B	**398**	B	**506**	A
75	A	**183**	B	**291**	A	**399**	A	**507**	B
76	B	**184**	A	**292**	B	**400**	A	**508**	A
77	A	**185**	B	**293**	A	**401**	B	**509**	B
78	A	**186**	B	**294**	B	**402**	A	**510**	B
79	B	**187**	A	**295**	A	**403**	B	**511**	A
80	A	**188**	B	**296**	B	**404**	A	**512**	A
81	B	**189**	A	**297**	A	**405**	B	**513**	B
82	B	**190**	B	**298**	B	**406**	A	**514**	B
83	A	**191**	A	**299**	A	**407**	B	**515**	A
84	A	**192**	B	**300**	B	**408**	A	**516**	B
85	B	**193**	A	**301**	A	**409**	B	**517**	A
86	B	**194**	B	**302**	B	**410**	A	**518**	B
87	A	**195**	A	**303**	A	**411**	B	**519**	A
88	B	**196**	B	**304**	B	**412**	A	**520**	B
89	A	**197**	A	**305**	A	**413**	B	**521**	A
90	A	**198**	B	**306**	B	**414**	A	**522**	B
91	B	**199**	A	**307**	A	**415**	B	**523**	A
92	A	**200**	B	**308**	B	**416**	A	**524**	B
93	B	**201**	A	**309**	A	**417**	B	**525**	A
94	A	**202**	B	**310**	B	**418**	A	**526**	B
95	B	**203**	A	**311**	A	**419**	B	**527**	A
96	A	**204**	A	**312**	B	**420**	B	**528**	B
97	B	**205**	B	**313**	A	**421**	A	**529**	A
98	B	**206**	B	**314**	A	**422**	B	**530**	B
99	A	**207**	A	**315**	B	**423**	A	**531**	A
100	A	**208**	B	**316**	B	**424**	A	**532**	B
101	B	**209**	A	**317**	A	**425**	B	**533**	A
102	A	**210**	B	**318**	A	**426**	A	**534**	B
103	B	**211**	A	**319**	B	**427**	B	**535**	A
104	A	**212**	B	**320**	A	**428**	A	**536**	A
105	B	**213**	A	**321**	B	**429**	B	**537**	B

106	A	**214**	A	**322**	A	**430**	A	**538**	B
107	B	**215**	B	**323**	B	**431**	B	**539**	A
108	A	**216**	A	**324**	A	**432**	B		
A: ΔTm (℃) ≥ 5℃; B: 5℃ > ΔTm (℃)									

Experimental Example 2: Evaluation of Inhibitory Activity of Example Compounds against PKMYT1 Kinase

To evaluate the inhibitory activity of the compounds according to Examples against PKMYT1 kinase, the compounds of Examples were reacted with purified human PKMYT1 enzyme and evaluated by the following method.

The reaction buffer was composed of 200 mM Tris-HCl pH 7.4, 100 mM $MgCl_2$, 0.5 mg/mL BSA, and 0.25 mM DTT was used, and all reactions of the test substances were performed in the reaction buffer. Each compound was diluted using a 12-step serial dilution from a 10 mM DMSO stock, and the enzyme activity was measured at the final compound concentration of 10 to 0.00005645 μM. In the assay, the appropriate concentration of PKMYT1 enzyme, purified ATP, and enzyme substrate (CDK1) were reacted at 25℃ for 1 hour, and the enzyme activity was determined using the in vitro ADP-Glo™ kinase assay (Promega). The enzyme activity inhibition was measured via luminescence by reacting to the enzyme activity reaction solution, ADP-Glo reaction solution, and enzyme activity detection solution in a 2:2:1 ratio. Based on the luminescence of the enzyme activity of the solvent control

group that was not treated with the compound, the degree of the enzyme activity inhibition depending on the treatment concentration of each compound was calculated, wherein the concentration of each compound that inhibited the enzyme activity by 50% was determined as the IC_{50} (nM) value, which was obtained using GraphPad Prism 8.3.0 (GraphPad software Inc., San Diego). The results thereof are shown in Table 3 below.

[Table 3]

Example Compound	IC_{50} (nM)	Example Compound	IC_{50} (nM)	Example Compound	IC_{50} (nM)	Example Compound	IC_{50} (nM)	Example Compound	IC_{50} (nM)
1	A	**104**	A	**211**	A	**332**	A	**439**	A
3	A	**106**	A	**213**	A	**335**	A	**440**	A
5	A	**108**	A	**214**	A	**337**	A	**442**	A
7	A	**111**	A	**216**	A	**338**	A	**444**	A
9	B	**112**	A	**219**	A	**341**	A	**447**	A
13	A	**114**	A	**221**	A	**342**	A	**449**	A
15	A	**116**	A	**222**	A	**345**	A	**451**	A
18	A	**119**	A	**225**	A	**347**	A	**453**	A
19	A	**121**	A	**237**	B	**348**	A	**455**	A
22	A	**122**	A	**238**	A	**349**	B	**457**	A
24	A	**125**	A	**241**	A	**350**	A	**458**	A
25	A	**126**	A	**243**	A	**353**	B	**461**	A
27	A	**128**	A	**245**	A	**355**	A	**463**	A
28	B	**131**	A	**246**	A	**357**	A	**465**	A
30	A	**133**	A	**248**	A	**359**	A	**467**	A
31	A	**134**	A	**251**	A	**361**	A	**469**	A
32	A	**137**	A	**252**	A	**363**	A	**470**	A
33	A	**138**	A	**255**	A	**365**	A	**473**	A
35	A	**140**	A	**256**	A	**367**	A	**475**	A
37	A	**143**	A	**258**	A	**368**	A	**476**	A
38	A	**144**	A	**260**	A	**371**	A	**479**	A

39	B	**146**	A	**263**	A	**373**	A	**480**	A
40	A	**148**	A	**264**	B	**375**	A	**482**	A
41	A	**151**	A	**269**	A	**376**	A	**484**	A
43	A	**152**	A	**271**	A	**379**	A	**486**	A
46	A	**155**	A	**272**	A	**381**	A	**488**	A
48	A	**157**	A	**275**	B	**382**	A	**490**	A
49	A	**158**	A	**281**	A	**384**	A	**492**	A
52	B	**161**	A	**283**	B	**387**	A	**494**	A
53	A	**162**	A	**285**	A	**389**	A	**496**	A
55	A	**164**	A	**287**	A	**390**	A	**498**	A
57	A	**166**	A	**289**	A	**392**	A	**500**	A
59	A	**168**	A	**291**	A	**394**	A	**502**	A
61	A	**170**	A	**293**	A	**396**	A	**503**	A
65	A	**172**	A	**295**	A	**399**	A	**506**	A
67	A	**175**	A	**297**	A	**400**	A	**511**	A
69	A	**177**	A	**299**	A	**402**	A	**512**	A
71	A	**178**	A	**301**	A	**404**	A	**515**	A
75	A	**181**	A	**303**	A	**406**	A	**517**	A
77	A	**182**	A	**305**	A	**408**	A	**519**	A
78	A	**184**	A	**307**	A	**410**	A	**521**	A
80	A	**187**	A	**309**	A	**412**	A	**523**	A
83	A	**189**	A	**311**	A	**414**	A	**525**	A
84	A	**191**	A	**313**	A	**416**	B	**527**	A
87	A	**193**	A	**314**	A	**418**	B	**529**	A
89	A	**195**	A	**317**	A	**421**	B	**531**	A
90	A	**197**	A	**318**	A	**423**	A	**533**	A
92	A	**199**	A	**320**	A	**424**	A	**535**	A
94	A	**201**	A	**322**	A	**426**	A	**536**	A
96	A	**203**	A	**324**	A	**428**	A	**539**	A
99	A	**204**	A	**327**	A	**430**	A		
100	A	**207**	A	**329**	A	**433**	A		
102	A	**209**	A	**331**	A	**437**	A		
A: IC_{50} ≤ 200 nM; B: 200 nM < IC_{50} ≤ 500 nM; C: 500 nM < IC_{50}									

Experimental Example 3: Evaluation of Tumor Cell

Proliferation Inhibition by Example Compounds

The following experiment was performed to evaluate the cell proliferation inhibitory activity of the compounds according to Examples of the present invention. The HCC1569 cell line (Korea Cell Line Bank #9S1569) and MKN1 cell line (Korea Cell Line Bank #80101), which are CCNE1 positive cell lines, were cultured in RPMI1640 medium (Gibco #11875093) containing 10% fetal bovine serum (FBS) and 1% penicillin/streptomycin, respectively, and cell viability was analyzed. When performing the assay, HCC1569 cell line or MKN1 cell line was dispensed into 96-well flat-bottom plates (Corning #3903) at a density of 5,000 cells/well or 3,000 cells/well, respectively, and cultured for 24 hours under conditions of 37℃ and 5% CO_2. The compounds were treated in each well at 11 concentrations, with a maximum concentration of 10 μM and a 3-fold concentration gradient. As a control group, dimethyl sulfoxide (DMSO) was treated at the same concentration of 0.5% (v/v) as when treated with the compound, and the cells after treatment with the compound were cultured for 144 hours or 72 hours. To determine the viability of cells, 100 μL of Cell Titer-Glo (Promega #G7573) was added to the medium of each cultured cell and incubated for 10 minutes at room temperature, and the luminescence value was measured using a microplate reader. Based on the luminescence values of the control group cells that were not

treated with the compound, the degree of cell proliferation inhibitory activity depending on the treatment concentration of each compound was calculated, wherein the concentration of each compound at which the cell proliferation inhibitory activity was 50% was determined as the GI_{50} (μM) value. The GI_{50} (μM) values were calculated using GraphPad Prism software (version 8.4.3), and the results are presented in Table 4 below.

[Table 4]

Example	GI_{50} (μM)		Example	GI_{50} (μM)		Example	GI_{50} (μM)		Example	GI_{50} (μM)	
Compound	HCC1569	MKN1	Compound	HCC1569	MKN1	Compound	HCC1569	MKN1	Compound	HCC1569	MKN1
1	-	B	**144**	B	A	**295**	A	A	**418**	B	A
5	B	B	**146**	A	A	**297**	B	A	**421**	B	B
7	B	B	**148**	A	A	**299**	A	A	**423**	A	A
9	A	B	**151**	A	A	**301**	B	A	**424**	A	A
13	-	A	**152**	A	A	**303**	A	A	**426**	A	A
15	A	A	**155**	B	A	**305**	A	A	**428**	A	A
18	B	A	**158**	B	A	**306**	B	-	**430**	A	A
19	A	A	**161**	B	A	**307**	A	A	**433**	A	A
22	A	A	**162**	A	A	**309**	B	A	**435**	B	A
24	A	A	**164**	A	A	**313**	B	A	**437**	A	A
25	A	A	**168**	A	A	**314**	A	A	**439**	A	A
27	A	A	**172**	-	B	**317**	B	B	**440**	A	A
30	A	A	**175**	A	A	**318**	A	A	**442**	A	A
31	A	A	**177**	B	A	**320**	A	A	**444**	A	A
32	A	A	**178**	B	B	**322**	A	A	**447**	B	A
33	A	A	**184**	B	B	**324**	A	A	**449**	A	A
35	A	A	**189**	A	A	**327**	A	A	**451**	A	A
37	A	A	**191**	A	A	**329**	A	A	**453**	A	A
38	A	A	**193**	A	A	**331**	-	B	**455**	B	B
39	A	A	**195**	B	A	**332**	A	A	**457**	-	B

40	B	A	**199**	A	A	**335**	B	B	**458**	B	B
46	A	A	**200**	A	-	**337**	A	B	**461**	A	A
55	B	A	**201**	A	A	**338**	A	A	**463**	A	A
57	A	A	**204**	B	A	**341**	B	B	**465**	A	A
59	A	A	**207**	A	B	**342**	B	B	**467**	A	A
67	-	B	**209**	A	A	**347**	B	B	**469**	A	A
69	A	A	**214**	B	A	**348**	A	A	**470**	A	A
75	-	B	**216**	A	A	**349**	A	A	**473**	A	A
77	A	A	**219**	A	A	**350**	A	A	**475**	A	A
78	A	A	**221**	A	A	**353**	B	B	**476**	A	A
80	A	A	**222**	A	A	**355**	A	A	**479**	A	A
83	A	A	**225**	A	A	**357**	A	A	**480**	A	A
84	B	A	**227**	A	A	**359**	A	A	**482**	A	A
87	A	A	**228**	A	A	**361**	B	A	**484**	A	A
89	A	A	**231**	A	A	**363**	B	B	**486**	A	A
90	A	A	**233**	A	A	**365**	A	A	**488**	A	A
92	A	A	**234**	A	A	**367**	B	-	**490**	A	A
94	A	A	**238**	A	A	**368**	A	A	**492**	A	A
96	A	A	**241**	A	B	**371**	A	A	**494**	A	A
99	A	A	**243**	A	B	**373**	A	A	**496**	A	A
100	B	A	**245**	A	A	**375**	A	A	**498**	A	A
102	B	-	**246**	A	A	**376**	A	A	**500**	A	A
104	A	A	**248**	B	B	**379**	A	A	**502**	A	A
106	B	A	**251**	B	A	**381**	A	A	**503**	A	A
108	A	A	**252**	B	B	**382**	A	A	**506**	A	A
111	A	A	**255**	A	A	**384**	A	A	**508**	A	A
112	A	A	**256**	A	A	**387**	A	A	**511**	A	A
114	A	A	**258**	A	A	**389**	A	A	**512**	A	A
116	A	A	**260**	A	A	**390**	A	A	**515**	A	A
119	A	A	**263**	A	A	**392**	B	A	**517**	A	A
121	A	A	**264**	A	B	**394**	A	A	**519**	A	A
122	A	A	**267**	A	A	**396**	A	A	**521**	A	A
125	A	A	**268**	-	B	**399**	A	A	**523**	A	A
126	A	A	**269**	A	A	**400**	A	A	**525**	A	A
128	A	A	**271**	A	A	**402**	A	A	**527**	A	A

131	A	A	**272**	A	A	**404**	A	A	**529**	A	A
133	A	A	**275**	A	A	**406**	B	A	**531**	A	A
134	A	A	**281**	A	A	**408**	A	A	**533**	A	A
137	A	A	**289**	A	A	**410**	B	B	**535**	A	A
138	A	A	**291**	A	A	**412**	A	A	**536**	A	A
140	A	A	**292**	B	-	**414**	A	A	**539**	A	A
143	-	B	**293**	A	A	**416**	B	B			
A: GI_{50} ≤ 0.5 μM; B: 0.5 μM < GI_{50} ≤ 1 μM; C: 1 μM < GI_{50}											

The results of the above Experimental Examples demonstrated that the compounds according to Examples of the present invention exhibited high inhibitory activity against PKMYT1 and induced synthetic lethality due to PKMYT1 inhibition in cells with hyperactivation, amplification, or overexpression of CCNE1, thereby exhibiting high inhibitory activity against cell proliferation.

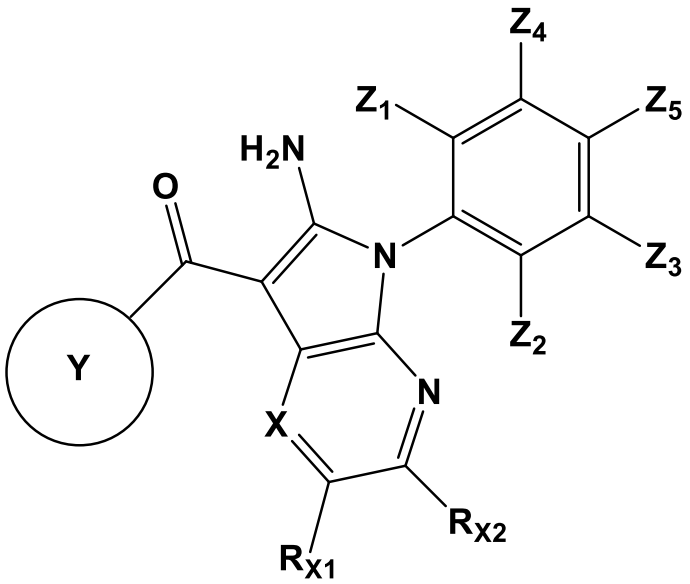
As described above, the present invention has been described in detail through preferred Examples and Experimental Examples, but the scope of the present invention is not limited to the specific compounds according to Examples of the present invention and should be interpreted by the claims. Further, those skilled in the art should understand that many modifications and variations can be made without departing from the scope of the present invention.

【CLAIMS】

【Claim 1】

A compound represented by the following Chemical Formula 1, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof:

[Chemical Formula 1]



in Chemical Formula 1 above,

X is CH or N;

R_{X1} and R_{X2} are each independently -H, -C_{1-6}alkyl, -C_{2-6}alkenyl, -C_{2-6}alkynyl, -C_{1-6}aminoalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}haloalkyl, -CN, -NH(C_{1-6}alkyl), -N(C_{1-6}alkyl)(C_{1-6}alkyl), -O-(C_{1-6}alkyl), -(3-6 membered cycloalkyl), -(4-6 membered heterocycloalkyl), -phenyl, or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered cycloalkyl), -(4-6 membered heterocycloalkyl), -phenyl, or -(5-6 membered heteroaryl) may be substituted with -C_{1-6}alkyl;

or R_{X1} and R_{X2} are linked to each other to form a 12-13 membered aromatic fused ring;

Ring Y is -(5-10 membered heteroaryl), wherein the -(5-10 membered heteroaryl) ring may contain at least one N, O, or S atom on the ring, and at least one H on the ring of the -(5-10 membered heteroaryl) ring may be substituted with -C_{1-6}alkyl, -C_{1-6}aminoalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}haloalkyl, -CN, -(CH_2)m-R_a, -NH-R_b, -O-R_c, -halo, -(3-6 membered cycloalkyl), -C(=O)-(3-6 membered cycloalkyl), -$S(=O)_2$-C_{1-6}alkyl, or -P(=O)-(C_{1-6}alkyl)(C_{1-6}alkyl);

m is 0, 1, 2, 3, or 4;

R_a is -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl) may be substituted with -C_{1-6}alkyl, -C_{1-6}alkyl-O-C_{1-6}alkyl, -O-C_{1-6}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered heterocycloalkyl);

R_b and R_c are each independently -C_{1-6}alkyl, -C_{1-6}haloalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}alkyl-O-C_{1-6}alkyl, -$S(=O)_2$-C_{1-6}alkyl, -$S(=O)_2$-(3-6 membered cycloalkyl), -(CH_2)n-(3-6 membered cycloalkyl), -(CH_2)n-(3-6 membered heterocycloalkyl), or -(CH_2)n-(5-6 membered heteroaryl),

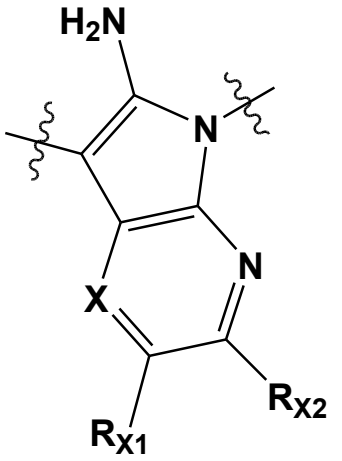
wherein at least one H on the ring of the -(CH_2)n-(3-6 membered cycloalkyl), -(CH_2)n-(3-6 membered heterocycloalkyl), or -(CH_2)n-(5-6 membered heteroaryl) may be substituted with -C_{1-6}alkyl, -O-C_{1-6}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered cycloalkyl);

n is 0, 1, 2, 3, or 4; and

Z_1 to Z_5 are each independently -H, -C_{1-6}alkyl, -OH, or -halo.

【Claim 2】

The compound represented by Chemical Formula 1, the stereoisomer thereof or the pharmaceutically acceptable salt thereof of claim 1, wherein



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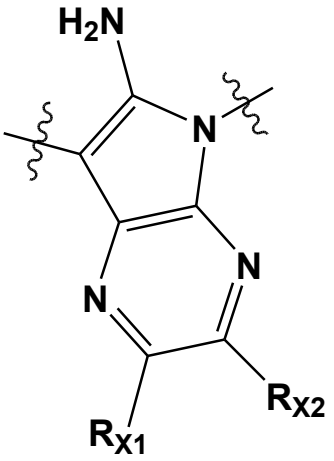

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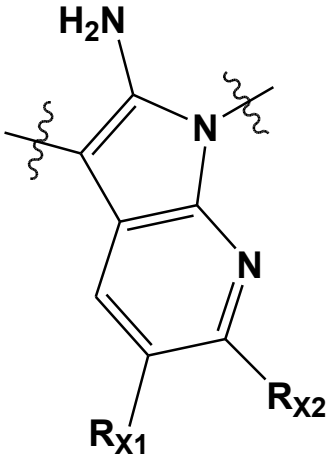
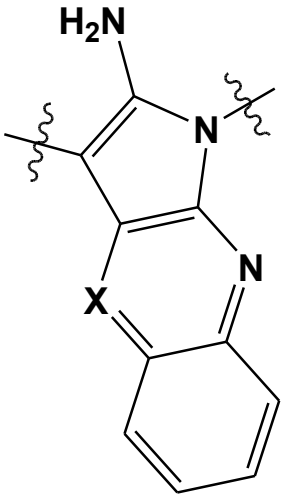


, or 

, and

R_{X1} and R_{X2} are each independently -H, -C_{1-6}alkyl, -(3-6 membered cycloalkyl), or -(4-6 membered heterocycloalkyl), wherein at least one H on the ring of the -(3-6 membered cycloalkyl) or -(4-6 membered heterocycloalkyl) may be substituted with -C_{1-3}alkyl.

【Claim 3】

The compound represented by Chemical Formula 1, the stereoisomer thereof or the pharmaceutically acceptable salt thereof of claim 1, wherein

the Ring Y is -(8-9 membered heteroaryl);

Z_1 and Z_2 are each independently -C_{1-3}alkyl;

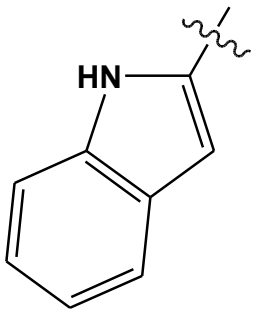
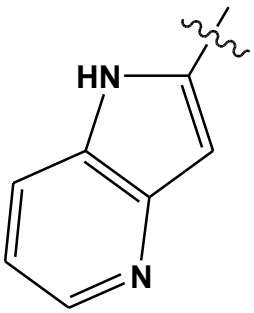
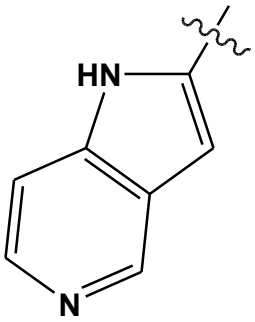
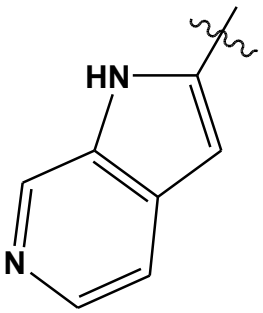
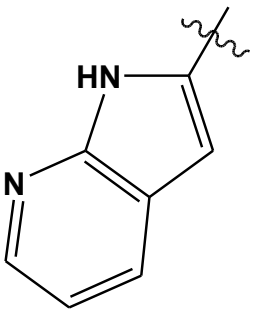
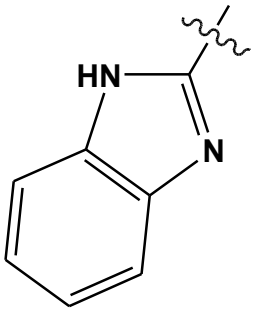
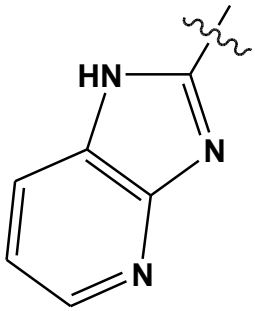
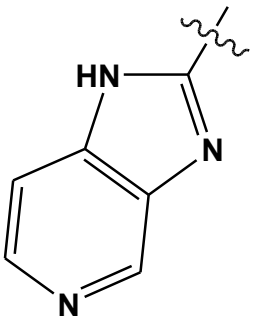
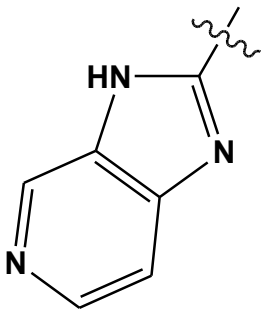
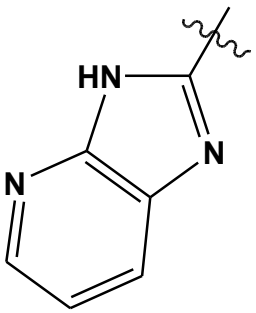
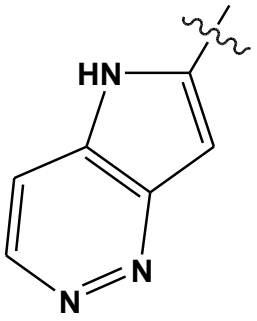
either Z_3 or Z_4 is -OH and the other is -H; and

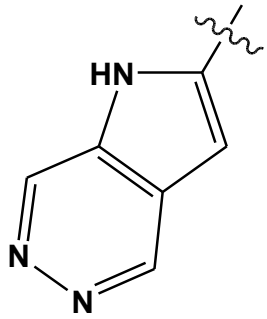
Z_5 is -H or -halo.

【Claim 4】

The compound represented by Chemical Formula 1, the

stereoisomer thereof or the pharmaceutically acceptable salt thereof of claim 1, wherein

the Ring Y is , , , , , , , , , , ,



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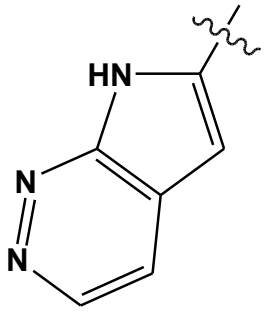

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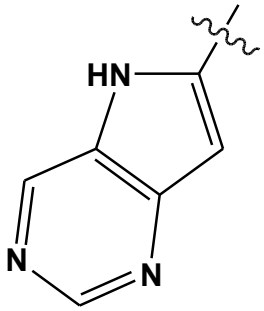

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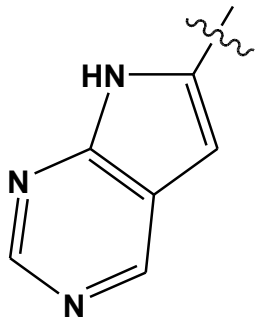

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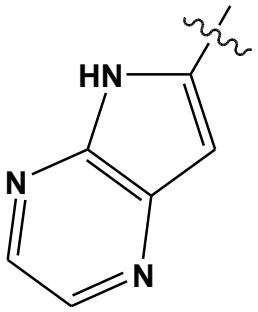

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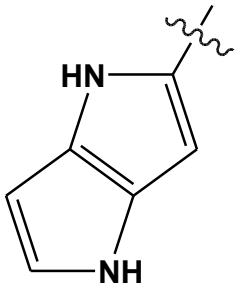

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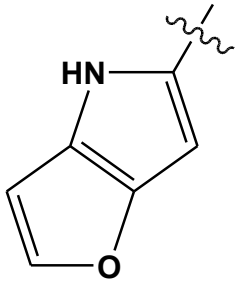

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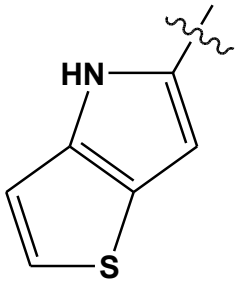

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wherein at least one H on the ring of the Ring Y may be substituted with $-C_{1-3}$alkyl, $-C_{1-3}$aminoalkyl, $-C_{1-3}$hydroxyalkyl, $-C_{1-3}$haloalkyl, -CN, $-(CH_2)m-R_a$, $-NH-R_b$, $-O-R_c$, -halo, -(3-6 membered cycloalkyl), -C(=O)-(3-6 membered cycloalkyl), $-S(=O)_2-C_{1-3}$alkyl, or $-P(=O)-(C_{1-3}alkyl)(C_{1-3}alkyl)$;

m is 0 or 1;

R_a is -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered heterocycloalkyl), -(7-12

membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl) may be substituted with $-C_{1-3}$alkyl, $-C_{1-3}$alkyl-O-C_{1-3}alkyl, -O-C_{1-3}alkyl, $-C_{1-6}$haloalkyl, -halo, or -(3-6 membered heterocycloalkyl);

R_b and R_c are each independently $-C_{1-3}$alkyl, $-C_{1-3}$haloalkyl, $-C_{1-6}$hydroxyalkyl, $-C_{1-6}$alkyl-O-C_{1-3}alkyl, $-S(=O)_2$-(3-6 membered cycloalkyl), $-(CH_2)n$-(3-6 membered cycloalkyl), or $-(CH_2)n$-(3-6 membered heterocycloalkyl), wherein at least one H on the ring of the $-(CH_2)n$-(3-6 membered cycloalkyl), or $-(CH_2)n$-(3-6 membered heterocycloalkyl) may be substituted with $-C_{1-3}$alkyl, -O-C_{1-3}alkyl, $-C_{1-6}$haloalkyl, -halo, or -(3-6 membered cycloalkyl); and

n is 0, 1, or 2.

【Claim 5】

A compound selected from the group consisting of the following compounds, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof:

1	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
2	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
3	(S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone
4	(R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone

5	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone
6	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone
7	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone
8	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone
9	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
10	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
11	(S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone
12	(R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-5,6-dimethyl-1H-pyrrolo[2,3-b]pyridin-3-yl)(1H-benzo[d]imidazol-2-yl)methanone
13	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone
14	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-thieno[3,2-b]pyrrol-5-yl)methanone
15	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-morpholino-1H-pyrrolo[3,2-c]pyridin-2-yl)methanone
16	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-morpholino-1H-pyrrolo[3,2-c]pyridin-2-yl)methanone
17	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone
18	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4H-furo[3,2-b]pyrrol-5-yl)methanone
19	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-indol-2-yl)methanone

20	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-indol-2-yl)methanone
21	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(4-methylpiperazin-1-yl)-1H-indol-2-yl)methanone
22	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(4-methylpiperazin-1-yl)-1H-indol-2-yl)methanone
23	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-c]pyridin-2-yl)methanone
24	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-c]pyridin-2-yl)methanone
25	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
26	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
27	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
28	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
29	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-c]pyridin-2-yl)methanone
30	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-c]pyridin-2-yl)methanone
31	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((hexahydropyrrolo[1,2-a]pyrazin-2(1H)-yl)methyl)-1H-indol-2-yl)methanone
32	(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-indol-2-yl)methanone
33	(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
34	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone

35	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
36	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
37	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
38	(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-(4-methylpiperazin-1-yl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
39	(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-morpholino-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
40	(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methyl-1H-pyrazol-4-yl)-1H-indol-2-yl)methanone
41	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
42	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
43	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
44	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
45	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(methylsulfonyl)-1H-indol-2-yl)methanone
46	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(methylsulfonyl)-1H-indol-2-yl)methanone
47	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
48	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
49	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((4-methyltetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone

50	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((4-methyltetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone
51	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-indol-2-yl)methanone
52	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-indol-2-yl)methanone
53	N-(2-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-carbonyl)-1H-indol-7-yl)cyclopropanesulfonamide
54	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
55	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
56	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
57	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
58	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
59	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
60	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((R)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone
61	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((R)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone
62	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-indol-2-yl)methanone
63	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-indol-2-yl)methanone
64	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-1H-indol-2-yl)methanone

65	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-1H-indol-2-yl)methanone
66	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-fluoro-1H-indol-2-yl)methanone
67	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-fluoro-1H-indol-2-yl)methanone
68	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
69	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
70	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((S)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone
71	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((S)-1-methoxypropan-2-yl)amino)-1H-indol-2-yl)methanone
72	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((1-methoxy-2-methylpropan-2-yl)amino)-1H-indol-2-yl)methanone
73	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((1-methoxy-2-methylpropan-2-yl)amino)-1H-indol-2-yl)methanone
74	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone
75	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone
76	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-chloro-1H-indol-2-yl)methanone
77	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-chloro-1H-indol-2-yl)methanone
78	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
79	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone

80	(6-((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
81	(6-((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
82	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
83	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
84	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyltetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone
85	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyltetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone
86	(6-(3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
87	(6-(3-oxa-8-azabicyclo[3.2.1]octan-8-yl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
88	(6-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
89	(6-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
90	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
91	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
92	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

93	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
94	(5-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
95	(5-((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
96	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
97	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
98	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(dimethylphosphoryl)-1H-indol-2-yl)methanone
99	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(dimethylphosphoryl)-1H-indol-2-yl)methanone
100	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropanecarbonyl)-1H-indol-2-yl)methanone
101	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropanecarbonyl)-1H-indol-2-yl)methanone
102	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
103	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
104	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
105	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
106	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(dimethylphosphoryl)-1H-indol-2-yl)methanone
107	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(dimethylphosphoryl)-1H-indol-2-yl)methanone

108	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylphosphoryl)-1H-indol-2-yl)methanone
109	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylphosphoryl)-1H-indol-2-yl)methanone
110	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-ethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
111	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-ethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
112	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
113	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
114	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
115	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
116	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
117	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
118	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(oxetan-3-ylamino)-1H-indol-2-yl)methanone
119	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(oxetan-3-ylamino)-1H-indol-2-yl)methanone
120	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-ethyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
121	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-ethyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
122	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

123	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
124	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
125	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
126	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
127	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
128	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
129	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
130	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
131	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
132	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
133	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
134	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone
135	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3aR,6aS)-tetrahydro-1H-furo[3,4-c]pyrrol-5(3H)-yl)-1H-indol-2-yl)methanone
136	(5-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone

137	(5-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
138	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
139	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
140	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
141	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
142	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone
143	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-1H-indol-2-yl)methanone
144	(4-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
145	(4-(((1R,4R)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
146	(5-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
147	(5-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
148	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
149	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
150	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone

151	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
152	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
153	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
154	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
155	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-chloro-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
156	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
157	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
158	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-1H-indol-2-yl)methanone
159	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-1H-indol-2-yl)methanone
160	(4-((3-oxa-6-azabicyclo[3.1.1]heptan-6-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
161	(4-((3-oxa-6-azabicyclo[3.1.1]heptan-6-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
162	(S)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]quinoxalin-3-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
163	(R)-(2-amino-1-(3-hydroxy-2,6-dimethylphenyl)-1H-pyrrolo[2,3-b]quinoxalin-3-yl)(1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
164	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
165	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(1-methyl-1,2,3,6-

	tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
166	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxy-3-methylazetidin-1-yl)methyl)-1H-indol-2-yl)methanone
167	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxy-3-methylazetidin-1-yl)methyl)-1H-indol-2-yl)methanone
168	(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
169	(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
170	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3S,4R)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone
171	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3S,4R)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone
172	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone
173	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone
174	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
175	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
176	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
177	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
178	(4-((6-oxa-3-azabicyclo[3.1.1]heptan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone

179	(4-((6-oxa-3-azabicyclo[3.1.1]heptan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
180	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3R,4S)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone
181	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((3R,4S)-3-fluoro-4-methoxypiperidin-1-yl)methyl)-1H-indol-2-yl)methanone
182	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone
183	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone
184	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone
185	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone
186	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone
187	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone
188	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
189	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
190	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

191	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
192	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
193	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-((4-methylpiperazin-1-yl)methyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
194	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methyl)-1H-indol-2-yl)methanone
195	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)methyl)-1H-indol-2-yl)methanone
196	(4-((3-oxa-8-azabicyclo[3.2.1]octan-8-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
197	(4-((3-oxa-8-azabicyclo[3.2.1]octan-8-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
198	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
199	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
200	(R)-2-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-carbonyl)-1H-pyrrolo[3,2-b]pyridin-7-carbonitrile
201	(S)-2-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-carbonyl)-1H-pyrrolo[3,2-b]pyridin-7-carbonitrile
202	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone
203	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-2-(methoxymethyl)azetidin-1-yl)methyl)-1H-indol-2-yl)methanone
204	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(difluoromethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

205	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(difluoromethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
206	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
207	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
208	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methylpiperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
209	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-methylpiperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
210	(4-(((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
211	(4-(((1R,5S)-8-oxa-3-azabicyclo[3.2.1]octan-3-yl)methyl)-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
212	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone
213	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-3-methoxypyrrolidin-1-yl)methyl)-1H-indol-2-yl)methanone
214	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
215	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
216	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
217	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
218	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone

219	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
220	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
221	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
222	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
223	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
224	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
225	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methoxy-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
226	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
227	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
228	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
229	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
230	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
231	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)methoxy)-1H-indol-2-yl)methanone
232	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

233	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
234	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
235	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-chloro-5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
236	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-7-(trifluoromethyl)-1H-indol-2-yl)methanone
237	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)amino)-7-(trifluoromethyl)-1H-indol-2-yl)methanone
238	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
239	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
240	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
241	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(1H-indol-2-yl)methanone
242	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
243	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-(((3-methyloxetan-3-yl)methyl)amino)-1H-indol-2-yl)methanone
244	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
245	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
246	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

247	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
248	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropylmethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
249	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(cyclopropylmethoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
250	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
251	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-((3-methyloxetan-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
252	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
253	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
254	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5,7-dimethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
255	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5,7-dimethyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
256	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
257	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-methoxy-5-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
258	(R)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
259	(S)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
260	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
261	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-

	(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
262	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
263	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
264	(R)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
265	(S)-(6-amino-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
266	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
267	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-fluoro-4-((3-methyloxetan-3-yl)amino)-1H-indol-2-yl)methanone
268	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
269	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
270	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
271	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
272	(R)-(6-amino-2-cyclopropyl-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
273	(S)-(6-amino-2-cyclopropyl-5-(3-fluoro-5-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-

	b]pyrazin-7-yl)(5-methoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
274	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
275	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
276	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
277	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
278	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-7-(morpholinomethyl)-1H-indol-2-yl)methanone
279	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-7-(morpholinomethyl)-1H-indol-2-yl)methanone
280	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-indol-2-yl)methanone
281	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-indol-2-yl)methanone
282	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone
283	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(morpholinomethyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone
284	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-methyl-7-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
285	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-

	yl)(5-methyl-7-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
286	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone
287	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((4-methylpiperazin-1-yl)methyl)-7-(trifluoromethyl)-1H-indol-2-yl)methanone
288	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-indol-2-yl)methanone
289	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methyl-1,2,3,6-tetrahydropyridin-4-yl)-1H-indol-2-yl)methanone
290	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
291	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((4-methylpiperazin-1-yl)methyl)-1H-indol-2-yl)methanone
292	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methylpiperidin-4-yl)-1H-indol-2-yl)methanone
293	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-methylpiperidin-4-yl)-1H-indol-2-yl)methanone
294	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone
295	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone
296	(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-7-methyl-1H-indol-2-yl)(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone

297	(4-(((1S,4S)-2-oxa-5-azabicyclo[2.2.1]heptan-5-yl)methyl)-7-methyl-1H-indol-2-yl)(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)methanone
298	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
299	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
300	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
301	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
302	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)oxy)-1H-indol-2-yl)methanone
303	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)oxy)-1H-indol-2-yl)methanone
304	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-1-methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone
305	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-1-methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone
306	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone
307	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)oxy)-1H-indol-2-yl)methanone
308	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)methoxy)-1H-indol-2-yl)methanone
309	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)methoxy)-1H-indol-2-yl)methanone

310	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
311	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-2,3-dimethyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
312	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-1-methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone
313	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-1-methylpyrrolidin-2-yl)methoxy)-1H-indol-2-yl)methanone
314	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
315	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
316	(R)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
317	(S)-(6-amino-2-cyclopropyl-5-(3-hydroxy-2,6-dimethylphenyl)-3-methyl-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylpiperidin-4-yl)methoxy)-1H-indol-2-yl)methanone
318	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
319	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(oxetan-3-yl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
320	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
321	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-3-fluoro-1-

	methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
322	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
323	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
324	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
325	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
326	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(oxetan-3-yloxy)-1H-indol-2-yl)methanone
327	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(oxetan-3-yloxy)-1H-indol-2-yl)methanone
328	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
329	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((3-methyloxetan-3-yl)oxy)-1H-indol-2-yl)methanone
330	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((1-(2-fluoro-2-methylpropyl)piperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
331	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((1-(2-fluoro-2-methylpropyl)piperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
332	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(2-fluoro-2-methylpropyl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
333	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(1-(2-fluoro-2-methylpropyl)piperidin-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

334	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(morpholinomethyl)-1H-indol-2-yl)methanone
335	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(morpholinomethyl)-1H-indol-2-yl)methanone
336	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(2-morpholinoethoxy)-1H-indol-2-yl)methanone
337	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(2-morpholinoethoxy)-1H-indol-2-yl)methanone
338	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
339	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
340	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone
341	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-methoxyazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone
342	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-fluoroazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone
343	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3-fluoroazetidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone
344	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone
345	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-indol-2-yl)methanone
346	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)amino)-1H-indol-2-yl)methanone
347	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((1-methylazetidin-3-yl)amino)-1H-indol-2-yl)methanone

348	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((tetrahydro-2H-pyran-4-yl)amino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
349	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((tetrahydro-2H-pyran-4-yl)amino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
350	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-morpholino-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
351	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-morpholino-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
352	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((tetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone
353	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-((tetrahydro-2H-pyran-4-yl)amino)-1H-indol-2-yl)methanone
354	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
355	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(morpholinomethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
356	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(2-hydroxy-2-methylpropoxy)-7-methyl-1H-indol-2-yl)methanone
357	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(2-hydroxy-2-methylpropoxy)-7-methyl-1H-indol-2-yl)methanone
358	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-tetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone
359	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((R)-tetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone
360	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-tetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone
361	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-4-(((S)-tetrahydrofuran-3-yl)amino)-1H-indol-2-yl)methanone
362	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1s,3S)-3-

	methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone
363	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1s,3S)-3-methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone
364	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylamino)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
365	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(dimethylamino)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
366	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1r,3R)-3-methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone
367	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((1r,3R)-3-methoxycyclobutyl)amino)-7-methyl-1H-indol-2-yl)methanone
368	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(tetrahydro-2H-pyran-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
369	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(tetrahydro-2H-pyran-4-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
370	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(3,6-dihydro-2H-pyran-4-yl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
371	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(3,6-dihydro-2H-pyran-4-yl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
372	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((R)-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
373	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((R)-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
374	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((S)-1-

	methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
375	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(((S)-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
376	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
377	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
378	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7H-pyrrolo[2,3-d]pyrimidin-6-yl)methanone
379	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7H-pyrrolo[2,3-d]pyrimidin-6-yl)methanone
380	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(methylamino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
381	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(methylamino)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
382	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-pyrrolo[3,2-c]pyridin-2-yl)methanone
383	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-1H-pyrrolo[3,2-c]pyridin-2-yl)methanone
384	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone
385	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(morpholinomethyl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone
386	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone

387	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[2,3-c]pyridin-2-yl)methanone
388	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(4-methylpiperazin-1-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
389	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-(4-methylpiperazin-1-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
390	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
391	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(2-hydroxypropan-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
392	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
393	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
394	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
395	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
396	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
397	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
398	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2,4-dimethyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
399	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2,4-dimethyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
400	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone

401	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(morpholinomethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
402	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
403	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
404	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
405	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
406	(S)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
407	(R)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-ethoxy-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
408	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
409	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-fluoro-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
410	(S)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
411	(R)-(6-amino-5-(4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(trifluoromethyl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
412	(6-amino-5-((S)-4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
413	(6-amino-5-((R)-4-fluoro-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-

	(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
414	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-2-(morpholinomethyl)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
415	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-methyl-2-(morpholinomethyl)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
416	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
417	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
418	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
419	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4,4-difluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
420	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
421	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
422	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
423	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(morpholinomethyl)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
424	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
425	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-3,3-difluoro-1-

	methylpiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
426	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
427	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-((3,3-difluoropyrrolidin-1-yl)methyl)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
428	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
429	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
430	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
431	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
432	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
433	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
434	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
435	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
436	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone

437	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
438	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
439	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
440	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
441	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
442	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
443	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
444	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
445	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
446	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
447	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
448	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-

	b]pyridin-2-yl)methanone
449	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-7-methyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
450	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
451	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
452	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
453	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
454	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
455	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
456	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
457	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[2,3-b]pyrazin-6-yl)methanone
458	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
459	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
460	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-

	cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
461	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
462	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
463	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(6-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
464	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7H-pyrrolo[2,3-d]pyrimidin-6-yl)methanone
465	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-7H-pyrrolo[2,3-d]pyrimidin-6-yl)methanone
466	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
467	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
468	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
469	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
470	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
471	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
472	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-

	pyrrolo[2,3-b]pyridin-2-yl)methanone
473	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-pyrrolo[2,3-b]pyridin-2-yl)methanone
474	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone
475	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone
476	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
477	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-cyclopropyl-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
478	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone
479	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-indol-2-yl)methanone
480	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
481	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
482	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
483	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
484	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
485	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-

	methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
486	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
487	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
488	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
489	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((R)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
490	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
491	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(3-cyclopropyl-5H-pyrrolo[3,2-c]pyridazin-6-yl)methanone
492	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
493	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4S)-1-cyclopropyl-3-fluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
494	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
495	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
496	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
497	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(5-(((S)-4-methylmorpholin-3-yl)methoxy)-1H-pyrrolo[3,2-

	b]pyridin-2-yl)methanone
498	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
499	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
500	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
501	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
502	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((R)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
503	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((S)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
504	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((S)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
505	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-methyl-5-((R)-4-methylmorpholin-2-yl)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
506	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-1-cyclopropyl-3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
507	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((S)-1-cyclopropyl-3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
508	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-1-cyclopropyl-3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
509	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((R)-1-cyclopropyl-

	3,3-difluoropiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
510	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
511	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
512	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
513	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-(((3S,4R)-1-cyclopropyl-4-fluoropyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
514	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
515	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
516	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
517	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
518	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
519	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((3R,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
520	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-4-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
521	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(2-cyclopropyl-4-methyl-

	5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
522	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
523	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
524	(R)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
525	(S)-(6-amino-5-(3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-methyl-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
526	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((S)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
527	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((S)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
528	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
529	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(7-cyclopropyl-5-(((R)-4-methylmorpholin-2-yl)methoxy)-1H-pyrrolo[3,2-b]pyridin-2-yl)methanone
530	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
531	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((S)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
532	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
533	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4R)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
534	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-

	(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
535	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4S)-3-fluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
536	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
537	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((R)-3,3-difluoro-1-methylpiperidin-4-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
538	(6-amino-5-((R)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone
539	(6-amino-5-((S)-3-hydroxy-2,6-dimethylphenyl)-5H-pyrrolo[2,3-b]pyrazin-7-yl)(4-cyclopropyl-2-(((3S,4S)-4-fluoro-1-methylpyrrolidin-3-yl)oxy)-5H-pyrrolo[3,2-d]pyrimidin-6-yl)methanone

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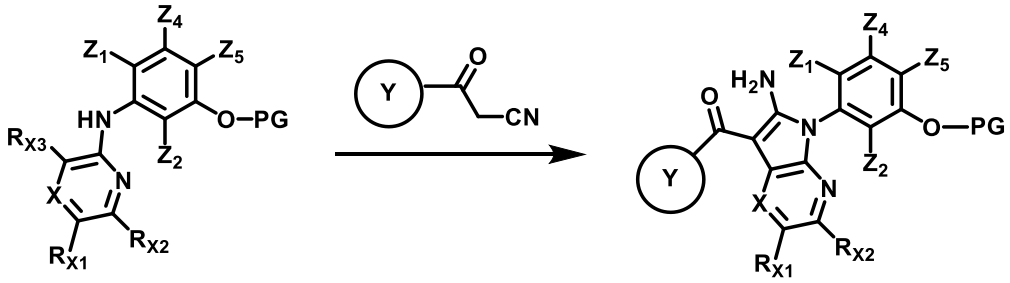
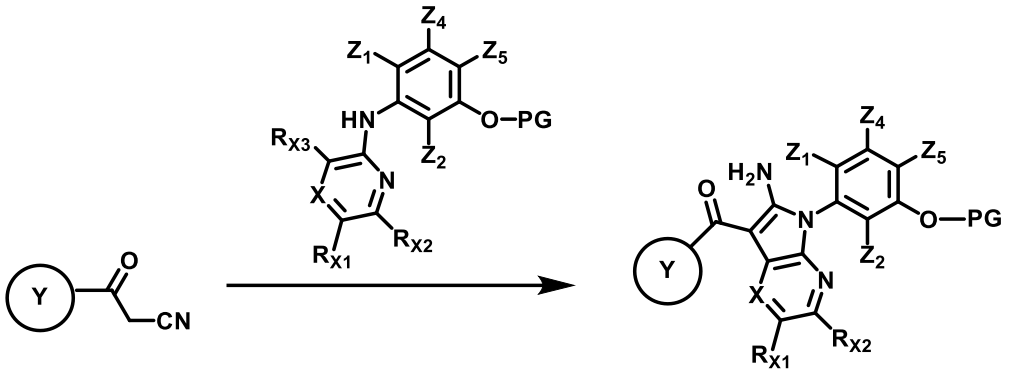
【Claim 6】

A method for preparing the compound according to any one of claims 1 to 5, a stereoisomer thereof, or a pharmaceutically acceptable salt thereof, comprising: steps represented by the following Scheme I or II:

[Scheme I]



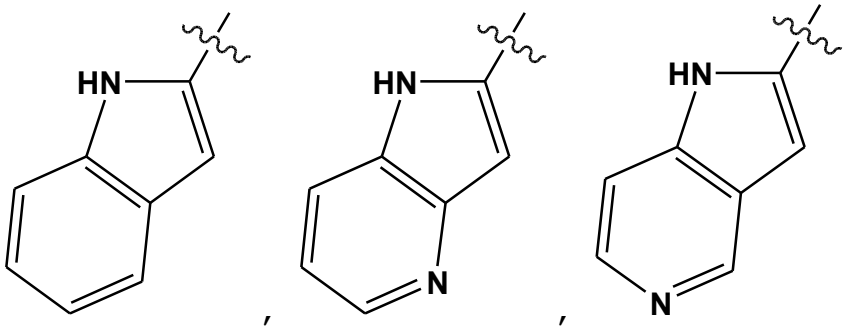
[Scheme II]

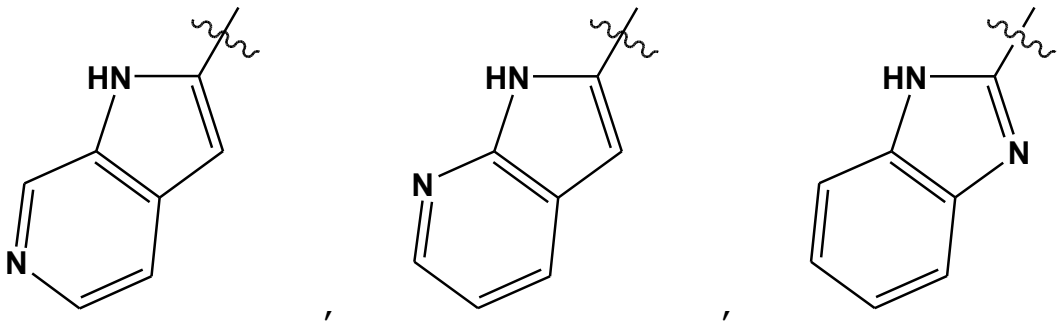


in Scheme I or II above,

R_{X1} and R_{X2} are each independently -H, -C_{1-6}alkyl, -(3-6 membered cycloalkyl), or -(4-6 membered heterocycloalkyl), wherein at least one H on the ring of the -(3-6 membered cycloalkyl) or -(4-6 membered heterocycloalkyl) may be substituted with -C_{1-3}alkyl;

R_{X3} is -halo;

Ring Y is 

, 

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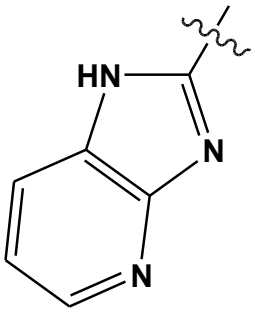
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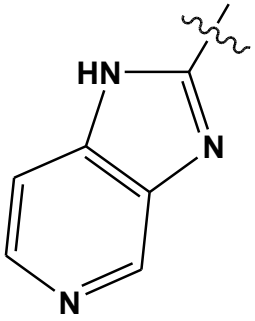
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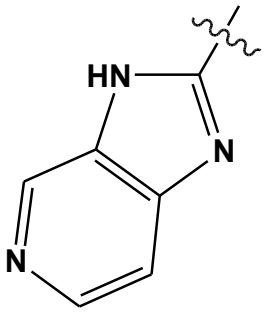
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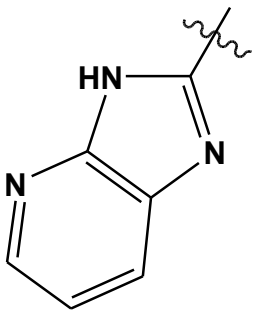
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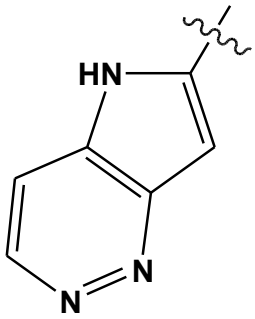
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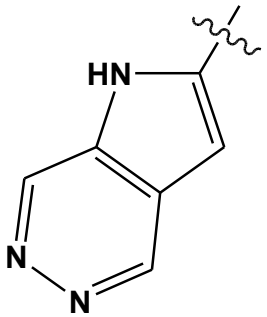
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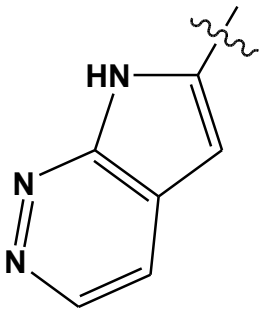
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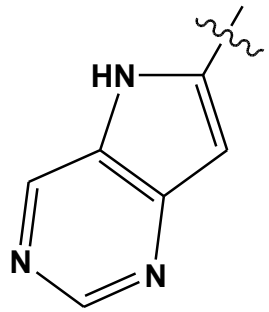
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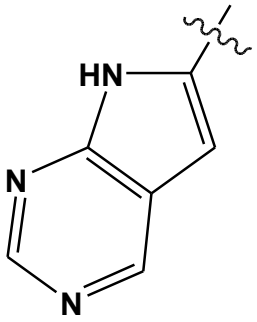
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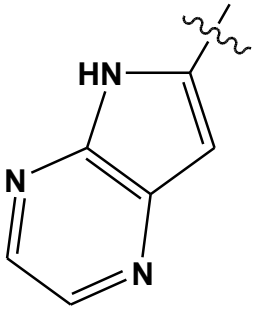
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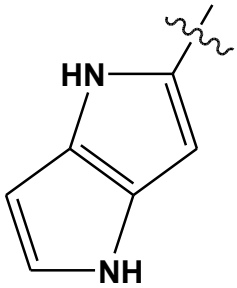
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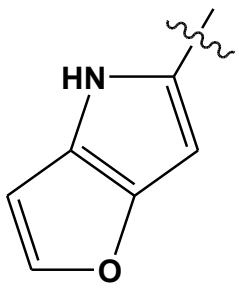
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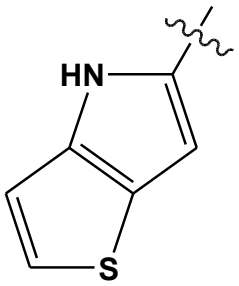
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wherein at least one H on the ring of the Ring Y may be substituted with -C_{1-3}alkyl, -C_{1-3}aminoalkyl, -C_{1-3}hydroxyalkyl, -C_{1-3}haloalkyl, -CN, -(CH_2)m-R_a, -NH-R_b, -O-R_c, -halo, -(3-6 membered cycloalkyl), -C(=O)-(3-6 membered cycloalkyl), -$S(=O)_2$-C_{1-3}alkyl, or -P(=O)-(C_{1-3}alkyl)(C_{1-3}alkyl);

m is 0 or 1;

R_a is -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl), wherein at least one H on the ring of the -(3-6 membered heterocycloalkyl), -(7-12 membered heterobicycloalkyl), -(3-6 membered heterocycloalkenyl), or -(5-6 membered heteroaryl) may be substituted with -C_{1-3}alkyl, -C_{1-3}alkyl-O-C_{1-3}alkyl, -O-C_{1-3}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered heterocycloalkyl);

R_b and R_c are each independently -C_{1-3}alkyl, -C_{1-3}haloalkyl, -C_{1-6}hydroxyalkyl, -C_{1-6}alkyl-O-C_{1-3}alkyl, -$S(=O)_2$-(3-6 membered cycloalkyl), -(CH_2)n-(3-6 membered cycloalkyl), or -(CH_2)n-(3-6 membered heterocycloalkyl), wherein at least one H on the ring of the -(CH_2)n-(3-6 membered cycloalkyl) or -(CH_2)n-(3-6 membered heterocycloalkyl) may be substituted with -C_{1-3}alkyl, -O-C_{1-3}alkyl, -C_{1-6}haloalkyl, -halo, or -(3-6 membered cycloalkyl);

n is 0, 1, or 2;

Z_1 and Z_2 are each independently -C_{1-3}alkyl;

Z_4 is –H;

Z_5 is -H or -halo; and

PG is a -OH protecting group.

【Claim 7】

A pharmaceutical composition comprising the compound according to any one of claims 1 to 5, the stereoisomer thereof, or the pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable additive.

【Claim 8】

A pharmaceutical composition for preventing or treating cancer, comprising the compound according to any one of claims 1 to 5, the stereoisomer thereof, or the pharmaceutically acceptable salt thereof, as an active ingredient.

【Claim 9】

The pharmaceutical composition of claim 8, wherein the pharmaceutical composition inhibits PKMYT1 and/or CCNE1.

【Claim 10】

The pharmaceutical composition of claim 8, wherein the cancer is related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression.

【Claim 11】

The pharmaceutical composition of claim 8, wherein the cancer is related to PPP2R1A and/or FBXW7 inactivating mutations.

【Claim 12】

The pharmaceutical composition of claim 8, wherein the cancer is at least one selected from the group consisting of uterine cancer, endometrial cancer, uterine papillary serous carcinoma (UPSC), uterine carcinosarcoma, uterine corpus cancer, uterine corpus endometrial carcinoma, cervical cancer, ovarian cancer, serous ovarian cancer, high grade serous ovarian cancer (HGSOC), breast cancer, triple negative breast cancer (TNBC), pancreatic cancer, pancreatic ductal adenocarcinoma (PDAC), colorectal cancer (CRC), rectal cancer, gastric cancer, esophageal cancer, liver cancer, liver hepatocellular carcinoma (LIHC), lung cancer, non-small cell lung cancer (NSCLC), squamous cell carcinoma of the lung, leukemia, chronic myeloid leukemia, lymphoma, prostate cancer, bladder cancer, testicular cancer, kidney cancer, kidney renal papillary cell carcinoma (KIRP), kidney renal clear cell carcinoma (KIRC), bone cancer, osteosarcoma, Ewing sarcoma, chondrosarcoma, soft tissue cancer, brain cancer, glioblastoma, glioma, brain

lower grade glioma (LGG), head and neck cancer, adenoid cystic carcinoma (ACC), skin cancer, melanoma, and thymoma.

【Claim 13】

Use of the compound according to any one of claims 1 to 5, the stereoisomer thereof, or the pharmaceutically acceptable salt thereof, for use in the manufacture of a medicament for the treatment or prevention of diseases related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression.

【Claim 14】

A method for treating or preventing a disease related to PKMYT1 and/or CCNE1 hyperactivation, amplification, or overexpression, comprising administering to a subject in need thereof a therapeutically effective amount of the compound according to any one of claims 1 to 5, the stereoisomer thereof, or the pharmaceutically acceptable salt thereof.

【Claim 15】

A method for treating or preventing at least one disease selected from the group consisting of uterine cancer, endometrial cancer, uterine papillary serous carcinoma (UPSC), uterine carcinosarcoma, uterine corpus cancer,

uterine corpus endometrial carcinoma, cervical cancer, ovarian cancer, serous ovarian cancer, high grade serous ovarian cancer (HGSOC), breast cancer, triple negative breast cancer (TNBC), pancreatic cancer, pancreatic ductal adenocarcinoma (PDAC), colorectal cancer (CRC), rectal cancer, gastric cancer, esophageal cancer, liver cancer, liver hepatocellular carcinoma (LIHC), lung cancer, small cell lung cancer (SCLC), non-small cell lung cancer (NSCLC), squamous cell carcinoma of the lung, leukemia, acute myeloid leukemia, chronic myeloid leukemia, lymphoma, prostate cancer, bladder cancer, testicular cancer, kidney cancer, kidney renal papillary cell carcinoma (KIRP), kidney renal clear cell carcinoma (KIRC), bone cancer, osteosarcoma, Ewing sarcoma, chondrosarcoma, soft tissue cancer, brain cancer, glioblastoma, glioma, brain lower grade glioma (LGG), head and neck cancer, adenoid cystic carcinoma (ACC), skin cancer, melanoma, and thymoma, comprising administering to a subject in need thereof a therapeutically effective amount of the compound according to any one of claims 1 to 5, the stereoisomer thereof, or the pharmaceutically acceptable salt thereof.