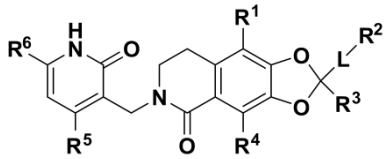
CLAIMS

1. A compound selected from among a heterotricyclic derivative compound of the following Formula 1, a pharmaceutically acceptable salt thereof, an optical isomer thereof, a hydrate thereof, and a solvate thereof:

[Formula 1]



wherein:

R^1 is H, a halogen, cyano, a C_{1-6} alkyl containing 0 to 3 halogen atoms, a C_{1-6} alkoxy containing 0 to 3 halogen atoms, C_{3-6} cycloalkyl, C_{1-6} alkylcarbonyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkenyl, aryl, a 5- to 6-membered aromatic heterocyclyl containing 1 to 3 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, or a 5- to 6-membered aliphatic heterocyclyl containing 1 or 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof and containing or not containing an unsaturated bond in a part of the ring thereof;

the C_{3-6} cycloalkyl, the aryl, the 5- to 6-membered aromatic heterocyclyl containing 1 to 3 heteroatoms independently selected from the group consisting of N, O and S in the ring thereof, or the 5- to 6-membered aliphatic heterocyclyl containing 1 or 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof and containing or not containing an unsaturated bond in a part of the ring thereof is unsubstituted or substituted with one to three independently selected from Group A below;

L is a bond, C_{1-6} alkylene, or oxy(C_{1-6})alkylene;

R^2 is ~~H,~~ C_{1-6} alkyl, C_{3-6} cycloalkyl, a 5- to 6-membered aliphatic heterocyclyl

containing 1 or 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, aryl, a 5- to 6-membered aromatic heterocyclyl containing 1 to 3 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, or 5- to 12-membered bicyclic heteroaryl;

the C_{1-6} alkyl, the C_{3-6} cycloalkyl, the 5- to 6-membered aliphatic heterocyclyl, the aryl, the 5- to 6-membered aromatic heterocyclyl, or the 5- to 12-membered bicyclic heteroaryl is unsubstituted or substituted with one or three independently selected from Group C below;

R^3 is C_{1-6} alkyl;

R^4 is H, a halogen, or a C_{1-6} alkyl containing 0 to 3 halogen atoms;

R^5 is C_{1-6} alkyl or C_{1-6} alkoxy;

R^6 is C_{1-6} alkyl;

Group A comprises a halogen, C_{1-6} alkyl, C_{1-6} alkoxy, and a 5 to 6-membered aliphatic heterocyclyl containing 1 or 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, wherein the C_{1-6} alkyl, the C_{1-6} alkoxy and the 5 to 6-membered aliphatic heterocyclyl are unsubstituted or substituted with one to three independently selected from Group B below;

Group B comprises a halogen, C_{1-6} alkyl, and a 5 to 6-membered aliphatic heterocyclyl containing 1 or 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof; and

Group C comprises hydroxy, formyl, a C_{1-6} alkyl containing 0 to 3 halogen atoms, substituted or unsubstituted C_{1-6} alkylcarbonyl, C_{1-6} alkoxy, C_{1-6} alkylsulfonyl, -$NR^{20}R^{21}$, (C_{1-6})alkoxy(C_{1-6})alkyl, di(C_{1-6})alkylamino(C_{1-6})alkyl, and a 4- to 6-membered aliphatic heterocyclyl containing 1 to 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, wherein R^{20} and R^{21} are each

independently H, formyl, C_{1-6} alkyl, or substituted or unsubstituted C_{1-6} alkylcarbonyl.

2. The compound of claim 1, wherein

R^1 is H, a halogen, a C_{1-6} alkyl containing 0 to 3 halogen atoms, C_{1-6} alkoxy, C_{3-6} cycloalkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkenyl, aryl, a 5- to 6-membered aromatic heterocyclyl containing 1 to 3 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, or a 5- to 6-membered aliphatic heterocyclyl containing 1 or 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof and containing or not containing an unsaturated bond in a part of the ring thereof.

3. The compound of claim ~~2~~1, wherein

R^1 is H, a halogen, methyl, ethyl, ~~nitrile~~cyano, methoxy, ethoxy, cyclopropyl, vinyl, acetylenyl, phenyl, isopropenyl, isopropyl, cyclopentenyl, cyclopentyl, cyclohexenyl, cyclohexyl, furanyl, pyridine, pyrazolyl, dihydropyranyl, or thiazolyl.

4. The compound of claim 1, wherein

R^2 is C_{1-6} alkyl, C_{3-6} cycloalkyl, a 5- to 6-membered aliphatic heterocyclyl containing 1 or 2 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, aryl, a 5- to 6-membered aromatic heterocyclyl containing 1 to 3 heteroatoms independently selected from the group consisting of N, O and S in a ring thereof, or 5- to 12-membered bicyclic heteroaryl, wherein the C_{1-6} alkyl, the C_{3-6} cycloalkyl, the 5- to 6-membered aliphatic heterocyclyl, the aryl, the 5- to 6-membered aromatic heterocyclyl, or the 5- to 12-membered bicyclic heteroaryl is unsubstituted or substituted with one or three independently selected from the group consisting of C_{1-6}

alkyl, C_{1-6} alkylsulfonyl, hydroxy, C_{1-6} alkoxy, amino, C_{1-6} alkylamino, di(C_{1-6})alkylamino, a 3- to 6-membered aliphatic heterocyclyl containing 1 or 2 heteroatoms in a ring thereof, and alkylamide.

5. The compound of claim 4, wherein

L is a bond or methylene;

R^2 is butyl, cyclobutyl, cyclopentyl, cyclohexyl, tetrahydropyranyl, piperidyl, phenyl, pyridine, indole, or isoxazole; and

R^3 is methyl, wherein the butyl, cyclobutyl, cyclopentyl, cyclohexyl, tetrahydropyranyl, piperidyl, phenyl, pyridine, indole, or isoxazole is unsubstituted or substituted with one independently selected from the group consisting of methyl, ethyl, ethylsulfonyl, hydroxy, methoxy, amino, methylamino, ethylamino, dimethylamino, diethylamino, ethylmethylamino, piperidyl, pyrrolidyl, trifluoroethyl, and (R)-2-hydroxybutanamide.

6. The compound of claim 1, wherein

L is a bond;

R^1 and R^4 are each independently H, a halogen, or methyl;

R^2 is C_{3-6} cycloalkyl or a C_{3-6} cycloalkyl substituted with $NR^{20}R^{21}$; and

R^3, R^5 and R^6 are methyl;

wherein $NR^{20}R^{21}$ is one selected from the group consisting of amino, C_{1-6} alkylamino, and di(C_{1-6})alkylamino.

7. The compound of claim 1, wherein the compound of Formula 1 is selected from the group consisting of the following compounds:

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2-methyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,9-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

4-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,9-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

4-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,9-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one isomer ~~A~~;

~~4-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,9-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one isomer B;~~

4,9-dichloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2-methyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

2-(trans-4-aminocyclohexyl)-9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-

(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one isomer ~~A~~;

~~9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one isomer B;~~

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(cis-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-2-(trans-4-(dimethylamino)cyclohexyl)-6-((4-methoxy-6-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-6-((6-methyl-2-oxo-4-propyl-1,2-dihydropyridin-3-yl)methyl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(ethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-2-(trans-4-(diethylamino)cyclohexyl)-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(trans-4-(piperidin-1-yl)cyclohexyl)-7,8-dihydro-[1,3]dioxolo[4,5-

g]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(trans-4-(pyrrolidin-1-yl)cyclohexyl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

(2S)-N-(trans-4-(9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-5-oxo-5,6,7,8-tetrahydro-[1,3]dioxolo[4,5-*g*]isoquinolin-2-yl)cyclohexyl)-2-hydroxybutanamide;

2-((trans-4-aminocyclohexyl)methyl)-9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-((trans-4-(dimethylamino)cyclohexyl))methyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-2-cyclohexyl-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-2-cyclopentyl-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(tetrahydro-2H-pyran-4-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(4-(dimethylamino)phenyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(4-(dimethylamino)butyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-

one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(3,5-(dimethylisoxazol-4)-yl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(piperidin-4-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(1-methylpiperidin-4-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(1-((R)-2-hydroxybutanoyl)piperidin-4-yl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(1-(2,2,2-trifluoroethyl)piperidin-4-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(1-methyl-1H-indol-5-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-methoxycyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(trans-4-(methylamino)cyclohexyl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-3-

(dimethylamino)cyclobutyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(cis-3-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-chloro-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(cis-3-(dimethylamino)cyclopentyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

2-(trans-4-aminocyclohexyl)-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one isomer ~~A~~;

~~6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one isomer B;~~

2-(trans-4-(dimethylamino)cyclohexyl)-6-((4-methoxy-6-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

2-(trans-4-(dimethylamino)cyclohexyl)-2,4,9-trimethyl-6-((6-methyl-2-oxo-4-propyl-1,2-dihydropyridin-3-yl)methyl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

2-cyclohexyl-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

2-(trans-4-(ethylamino)cyclohexyl)-6-((4-methoxy-6-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

2-(trans-4-(diethylamino)cyclohexyl)-6-((4-methoxy-6-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

2-(trans-4-(ethyl(methyl)amino)cyclohexyl)-6-((4-methoxy-6-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4,9-trimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-bromo-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-bromo-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-g]isoquinolin-5(6H)-one isomer ~~A~~;

~~9-bromo-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-g]isoquinolin-5(6H)-one isomer B;~~

9-bromo-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2,4-dimethyl-2-(trans-4-(methylamino)cyclohexyl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-9-vinyl-7,8-dihydro-[1,3]dioxolo[4,5-

g]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-9-ethynyl-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-cyclopropyl-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-9-(4-(morpholinomethyl)phenyl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-9-phenyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-(cyclopent-1-en-1-yl)-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-cyclopentyl-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-(cyclohex-1-en-1-yl)-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-cyclohexyl-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-9-(prop-1-en-2-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-9-isopropyl-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-9-ethyl-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-9-(furan-2-yl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

9-(3,6-dihydro-2H-pyran-4-yl)-6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-9-(pyridin-3-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-9-(thiazol-5-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one;

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-(dimethylamino)cyclohexyl)-2,4-dimethyl-9-(1-methyl-1H-pyrazol-4-yl)-7,8-dihydro-[1,3]dioxolo[4,5-*g*]isoquinolin-5(6H)-one; and

6-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-2-(trans-4-

(dimethylamino)cyclohexyl)-2,4-dimethyl-5-oxo-5,6,7,8-tetrahydro-[1,3]dioxolo[4,5-*g*]isoquinolin-9-carbonitrile.

8. A pharmaceutical composition containing, as an active ingredient, the compound of any one of claims 1 to 7 or a pharmaceutically acceptable salt thereof.

9. The pharmaceutical composition of claim 8 for use to treat~~, which is for treating~~ a cancer or tumor treatable by inhibiting an enzymatic activity of EZH1 (enhancer of zeste homolog 1) and/or EZH2 (enhancer of zeste homolog 2).

10. A pharmaceutical preparation comprising the pharmaceutical composition of claim 8.

11. The pharmaceutical preparation of claim 10, which is in the form of tablets, pills, powders, capsules, syrups or emulsions.

12. The pharmaceutical preparation of claim 10, further comprising at least one selected from the group of pharmaceutically acceptable carriers, adjuvants and excipients.

13. ~~Use of the~~A compound of any one of claims 1 to 7 or a pharmaceutically acceptable salt thereof for use in treating cancer or a tumor.