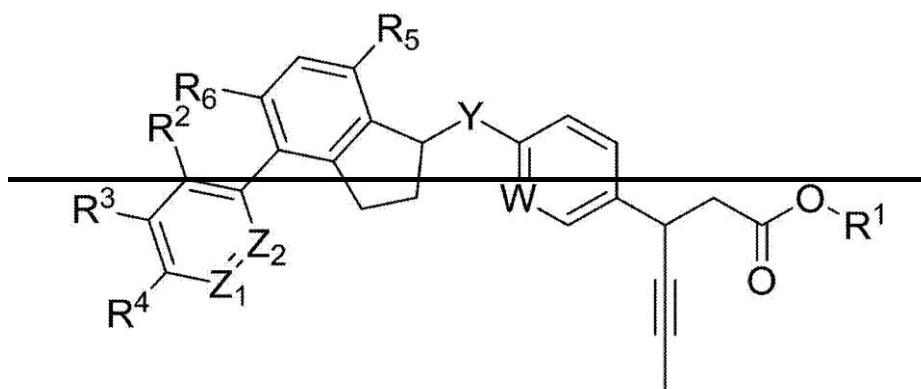


Claims

[Claim 1] — A compound represented by Formula (I), a racemate of the compound, an enantiomer of the compound, a diastereomer of the compound, or a pharmaceutically acceptable salt of the compound, the racemate, the enantiomer, or the diastereomer:

[Formula (I)]



where R¹ is hydrogen, or C₁₋₄ linear or branched alkyl;

R² is hydrogen, cyano, hydroxyl, C₁₋₄ linear or branched alkyl, or C₁₋₄ linear or branched alkoxy;

R³ and R⁴ are each independently hydrogen, halogen, cyano, C₁₋₄ linear or branched alkoxy, or OR⁸;

wherein R⁸ is hydrogen, C₃₋₁₀ heterocycloalkyl comprising 1-4 hetero atoms selected from the group consisting of N, O, and S, or alkyl substituted with C₃₋₁₀ heterocycloalkyl comprising 1-4 hetero atoms selected from the group consisting of N, O, and S;

R⁵ and R⁶ are each independently hydrogen, halogen, cyano, halomethyl, hydroxyl, C₁₋₄ linear or branched alkyl, or C₁₋₄ linear or branched alkoxy;

Y is NH or O;

Z¹ and Z² are each independently CR⁷ or N, wherein when Z¹ is N, Z² is CR⁷; and when Z¹ is CR⁷, Z² is N; and

~~W is CR⁷ or N,~~

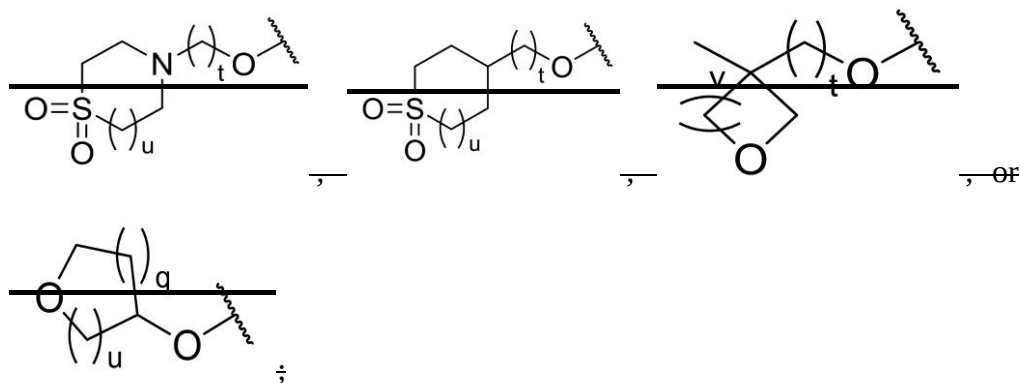
~~wherein R⁷ is hydrogen, halogen, cyano, hydroxyl, C₁₋₄ linear or branched alkyl, or C₁₋₄ linear or branched alkoxy.~~

~~[Claim 2] The compound, the racemate, the enantiomer, the diastereomer, or the pharmaceutically acceptable salt according to claim 1, wherein:~~

~~R¹ is hydrogen, or C₁₋₄ linear or branched alkyl;~~

~~R² is hydrogen, or C₁₋₄ linear or branched alkyl;~~

~~R³ and R⁴ are each independently hydrogen, halogen, cyano, C₁₋₄ linear alkoxy,~~



~~q is each independently 0 or 1;~~

~~t is each independently 0, 1, 2, or 3;~~

~~v is each independently 1 or 2; and~~

~~u is each independently 1 or 2;~~

~~R⁵ and R⁶ are each independently hydrogen, halogen, cyano, or C₁₋₄ linear or branched alkoxy;~~

~~Y is NH or O;~~

~~Z¹ and Z² are each independently CR⁷ or N, wherein when Z¹ is N, Z² is CR⁷, and when Z¹ is CR⁷, Z² is N; and~~

~~W is CR⁷ or N,~~

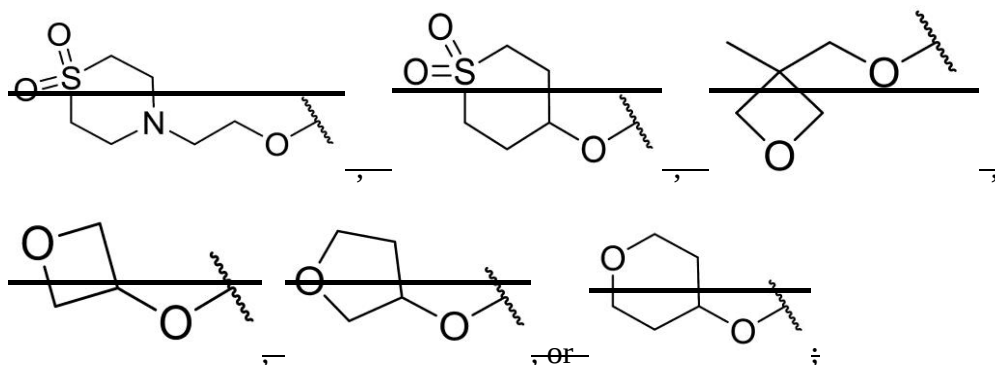
~~wherein R⁷ is hydrogen or C₁₋₂ linear alkyl.~~

~~[Claim 3] The compound, the racemate, the enantiomer, the diastereomer, or the pharmaceutically acceptable salt according to claim 2, wherein:~~

~~R¹ is hydrogen;~~

R^2 is hydrogen or C_{1-2} -alkyl;

R^3 and R^4 are each independently hydrogen, C_{1-2} -alkoxy,



R^5 and R^6 are each independently hydrogen, fluoro, cyano, or C_{1-2} -linear alkoxy;

Y is NH or O;

Z^1 and Z^2 are each independently CR^7 or N, wherein when Z^1 is N, Z^2 is CR^7 ; and when Z^1 is CR^7 , Z^2 is N; and

W is CR^7 or N,

wherein R^7 is selected from hydrogen or C_{1-2} -linear alkyl.

[Claim 41] The A compound according to claim 1, which is represented by selected from:

(S)-3-(4-(((R)-4-(6-((1,1-dioxidotetrahydro-2H-thiopyran-4-yl)oxy)pyridin-3-yl)-7-fluoro-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(6-((3-methyloxetan-3-yl)methoxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-4-(6-(2-(1,1-dioxidothiomorpholino)ethoxy)pyridin-3-yl)-7-fluoro-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(6-(oxetan-3-yloxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(6-(((S)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(4-methyl-6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(2-methyl-6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-4-(5-chloro-6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-7-fluoro-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(5-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-2-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(4-methyl-6-((3-methyloxetan-3-yl)methoxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(2-methyl-6-((3-methyloxetan-3-yl)methoxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(5-((3-methyloxetan-3-yl)methoxy)pyridin-2-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(5-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(5-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-4-(5-chloro-6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)-7-fluoro-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-4-(5-cyano-6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-7-fluoro-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-4-(5-cyano-6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)-7-fluoro-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-5-cyano-4-(6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-5-fluoro-4-(6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-5-methoxy-4-(6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-5-cyano-4-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-5-fluoro-4-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-5-methoxy-4-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)phenyl)hex-4-ynoic acid;

(S)-3-(4-(((R)-7-fluoro-4-(6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)amino)phenyl)hex-4-ynoic acid; and

3-(6-(((R)-7-fluoro-4-(6-(((R)-tetrahydrofuran-3-yl)oxy)pyridin-3-yl)-2,3-dihydro-1H-inden-1-yl)oxy)pyridin-3-yl)hex-4-ynoic acid,

or a racemate of the compound, an enantiomer of the compound, a diastereomer of the compound, or a pharmaceutically acceptable salt of the compound, the racemate, the enantiomer, or the diastereomer.

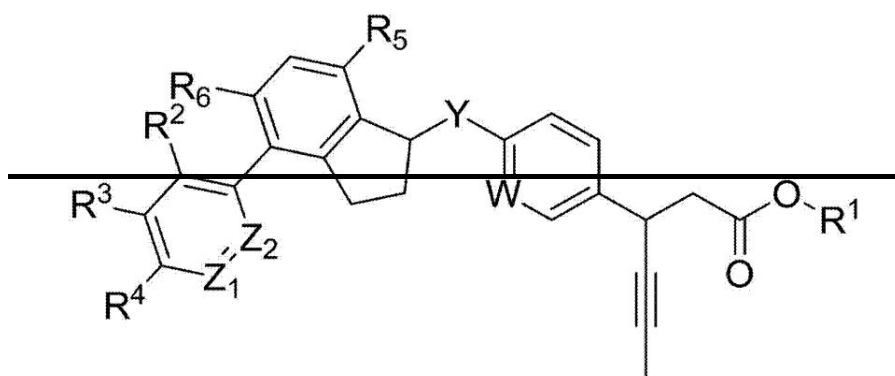
[Claim 2] A pharmaceutical composition comprising the compound, the racemate, the enantiomer, the diastereomer, or the pharmaceutically acceptable salt according to claim 1, and a pharmaceutically acceptable excipient.

[Claim 53] ~~A pharmaceutical composition for use in the prevention or treatment of metabolic disorder, comprising the~~ The compound, the racemate, the enantiomer, the diastereomer, or the pharmaceutically acceptable salt according to any one claim 1 of claims 1 to 4, or the pharmaceutical composition according to claim 2, for use in the prevention or treatment of metabolic disorder wherein the metabolic disease is selected from the group consisting of obesity, type 2 diabetes, incompatible glucose tolerance, insulin resistance, hyperglycemia, hyperlipidemia, hypertriglyceridemia and hypercholesterolemia.

[Claim 6] ~~The pharmaceutical composition according to claim 5, further comprising a pharmaceutically acceptable excipient.~~

[Claim 74] Use of ~~at~~the compound ~~represented by Formula (I), a~~the racemate ~~of the compound, an~~the enantiomer ~~of the compound, a~~the diastereomer ~~of the compound, or a~~the pharmaceutically acceptable salt ~~of the compound, the racemate, the enantiomer, or the diastereomer according to claim 1, or the pharmaceutical composition according to claim 2, in the manufacture of a medicament for the prevention or treatment of metabolic disorder;~~

~~[Formula (I)]~~



where R^1 is hydrogen, or C_{1-4} linear or branched alkyl;

R^2 is hydrogen, cyano, hydroxyl, C_{1-4} linear or branched alkyl, or C_{1-4} linear or branched alkoxy;

R^3 and R^4 are each independently hydrogen, halogen, cyano, C_{1-4} linear or branched alkoxy, or OR^8 ;

wherein R^8 is hydrogen, C_{3-10} heterocycloalkyl comprising 1-4 hetero atoms selected from the group consisting of N, O, and S, or alkyl substituted with C_{3-10} heterocycloalkyl comprising 1-4 hetero atoms selected from the group consisting of N, O, and S;

R^5 and R^6 are each independently hydrogen, halogen, cyano, halomethyl, hydroxyl, C_{1-4} linear or branched alkyl, or C_{1-4} linear or branched alkoxy;

Y is NH or O;

Z^1 and Z^2 are each independently CR^7 or N, wherein when Z^1 is N, Z^2 is CR^7 ;

and when Z^1 is CR^7 , Z^2 is N; and

~~W is CR^7 or N;~~

~~wherein R^7 is hydrogen, halogen, cyano, hydroxyl, C_{1-4} -linear or branched alkyl, or C_{1-4} -linear or branched alkoxy;~~ wherein the metabolic disease is selected from the group consisting of obesity, type 2 diabetes, incompatible glucose tolerance, insulin resistance, hyperglycemia, hyperlipidemia, hypertriglyceridemia and hypercholesterolemia.