

R⁵ and R⁶, together with the nitrogen and carbon atoms to which they are each respectively attached, form a C₃₋₆ heterocyclic ring, the heterocyclic ring being monocyclic and having one ring atom which is a heteroatom;

X⁷ is selected from N and CR⁷;

R⁷ is selected from

- (a) hydrogen, halo, cyano, hydroxy and amino; and
- (b) C₁₋₆ alkyl and C₁₋₆ alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo;

R⁸ and R⁹ are each independently selected from

- (a) hydrogen, halo, cyano, hydroxy and amino; and
- (b) C₁₋₆ alkyl and C₁₋₆ alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo; or

R⁸ and R⁹, together with the carbon atoms to which they are attached, form a C₄₋₅ heterocyclic ring, the heterocyclic ring having one or two ring atoms that are heteroatoms, each of heteroatoms being independently selected from N, O and S;

R¹⁰ and R¹¹ are each independently selected from

- (a) hydrogen, halo, cyano, hydroxy and amino; and
- (b) C₁₋₆ alkyl and C₁₋₆ alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo.

[0010] Another aspect of the disclosure provides a compound which is selected from the example compounds, their tautomers, and pharmaceutically acceptable salts of any of the foregoing.

[0011] A further aspect of the disclosure provides a pharmaceutical composition comprising a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof; and a pharmaceutically acceptable excipient.

[0012] An additional aspect of the disclosure provides a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof, for use as a medicament.

[0012a] In an additional aspect of the disclosure, there is provided a compound, tautomer or pharmaceutically acceptable salt as defined above for use in treating a disease, disorder or condition selected from schizophrenia, autism spectrum disorder, sleep disorders, depression, bipolar disorder, cognitive impairment, attention deficit hyperactivity disorder,

post-traumatic stress disorder, substance use disorder, substance abuse, drug addiction, eating disorders, obsessive compulsive disorder, anxiety disorders, epilepsy, pain, fibromyalgia, Alzheimer's disease and Parkinson's disease.

[0012b] In another aspect, there is provided the use of a compound, tautomer or pharmaceutically acceptable salt as defined above in the manufacture of a medicament for activating GPR139 in a subject.

[0013] ~~Another aspect of t~~The disclosure also provides a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof, for treating a disease, disorder or condition associated with GPR139.

[0013a] In another aspect, there is provided the use of a compound, tautomer or pharmaceutically acceptable salt as defined above, in the manufacture of a medicament for the treatment of a disease, disorder or condition in a subject, wherein the disease, disorder or condition is associated with GPR139.

[0014] ~~A further aspect of~~ The disclosure also provides a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof, for use in treating a disease, disorder or condition selected from schizophrenia, autism spectrum disorder, sleep disorders, depression, bipolar disorder, cognitive impairment, attention deficit hyperactivity disorder, post-traumatic stress disorder, substance use disorder, substance abuse, drug addiction, eating disorders, obsessive compulsive disorder, anxiety disorders, epilepsy, pain, fibromyalgia, Alzheimer's disease and Parkinson's disease.

[0015] ~~An additional aspect of~~ The disclosure also provides a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof, for the manufacture of a medicament for the treatment of a disease, disorder or condition associated with GPR139.

[0016] ~~Another aspect of~~ The disclosure also provides a method for activating GPR139 in a subject, the method comprising administering to the subject a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof.

[0017] ~~A further aspect of~~ The disclosure also provides a method for treating a disease, disorder or condition associated with GPR139, the method comprising administering to the subject an effective amount of a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof.

[0018] An additional aspect of the disclosure provides a method for treating a disease, disorder or condition in a subject, the method comprising administering to the subject an effective amount of a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof, wherein the disease, disorder or condition is selected from schizophrenia, autism spectrum disorder, sleep disorders, depression, bipolar disorder, cognitive impairment, attention deficit hyperactivity disorder, post-traumatic stress disorder, substance use disorder, substance abuse, drug addiction, eating disorders, obsessive compulsive disorder, anxiety disorders, epilepsy, pain, fibromyalgia, Alzheimer's disease and Parkinson's disease.

[0018a] In another aspect, there is provided the use of a compound, tautomer or pharmaceutically acceptable salt as defined above, in the manufacture of a medicament for the treatment of a disease, disorder or condition in a subject, wherein the disease, disorder or condition is selected from schizophrenia, autism spectrum disorder, sleep disorders,

depression, bipolar disorder, cognitive impairment, attention deficit hyperactivity disorder, post-traumatic stress disorder, substance use disorder, substance abuse, drug addiction, eating disorders, obsessive compulsive disorder, anxiety disorders, epilepsy, pain, fibromyalgia, Alzheimer's disease and Parkinson's disease.

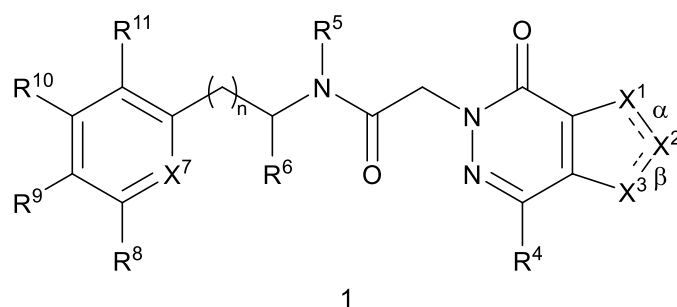
[0019] ~~A further aspect of~~ The disclosure also provides a compound of Formula 1, a tautomer thereof, or a pharmaceutically acceptable salt of the compound of Formula 1 or tautomer thereof; and at least one additional pharmacologically active agent.

[0019a] In another aspect, there is also provided a combination comprising a compound, tautomer or pharmaceutically acceptable salt as defined above, and at least one additional pharmacologically active agent.

[0020] Unless otherwise indicated, this disclosure uses definitions provided below.

WHAT IS CLAIMED IS:

1. A compound of Formula 1,



a tautomer thereof, or a pharmaceutically acceptable salt of the compound or tautomer,

wherein:

α is a single bond, β is a double bond, X^1 is NR^{1N} , and either (i) X^2 is N and X^3 is CR^{3C} or

(ii) X^2 is CR^2 and X^3 is selected from N and CR^{3C} ; or

α is a double bond, β is a single bond, X^3 is NR^{3N} and either (i) X^1 is N and X^2 is CR^2 or

(ii) X^1 is CR^{1C} and X^2 is selected from N and CR^2 ;

n is selected from 0 and 1;

R^{1C} , R^2 , R^{3C} and R^4 are each independently selected from

(a) hydrogen; and

(b) C_{1-6} alkyl and C_{3-8} cycloalkyl, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo;

R^{1N} and R^{3N} are each independently selected from C_{1-6} alkyl, C_{3-8} cycloalkyl and C_{6-10} aryl, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo;

R^5 is selected from hydrogen and C_{1-6} alkyl, and

R^6 is selected from C_{1-6} alkyl and C_{3-8} cycloalkyl; or

R^5 and R^6 , together with the nitrogen and carbon atoms to which they are each respectively attached, form a C_{3-6} heterocyclic ring, the heterocyclic ring being monocyclic and having one ring atom which is a heteroatom;

X^7 is selected from N and CR^7 ;

R^7 is selected from

(a) hydrogen, halo, cyano, hydroxy and amino; and

(b) C_{1-6} alkyl and C_{1-6} alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo;

R⁸ and R⁹ are each independently selected from

- (a) hydrogen, halo, cyano, hydroxy and amino; and
- (b) C₁₋₆ alkyl and C₁₋₆ alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo; or

R⁸ and R⁹, together with the carbon atoms to which they are attached, form a

C₄₋₅ heterocyclic ring, the heterocyclic ring having one or two ring atoms that are heteroatoms, each of heteroatoms being independently selected from N, O and S;

R¹⁰ and R¹¹ are each independently selected from

- (a) hydrogen, halo, cyano, hydroxy and amino; and
- (b) C₁₋₆ alkyl and C₁₋₆ alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo.

2. The compound, tautomer or pharmaceutically acceptable salt of claim 1, wherein α is a single bond, β is a double bond, X¹ is NR^{1N}, and either (i) X² is N and X³ is CR^{3C} or (ii) X² is CR² and X³ is selected from N and CR^{3C}.

3. The compound, tautomer or pharmaceutically acceptable salt of claim 2, wherein R^{1N} is selected from C₁₋₄ alkyl, cyclopropyl and phenyl.

4. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 2 to 3, wherein X² is N and X³ is CR^{3C}.

5. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 2 to 4, wherein R^{3C} is selected from hydrogen, C₁₋₄ alkyl and cyclopropyl.

6. The compound, tautomer or pharmaceutically acceptable salt of claim 1, wherein α is a double bond, β is a single bond, X³ is NR^{3N} and either (i) X¹ is N and X² is CR² or (ii) X¹ is CR^{1C} and X² is selected from N and CR².

7. The compound, tautomer or pharmaceutically acceptable salt of claim 6, wherein R^{3N} is selected from C₁₋₄ alkyl and C₃₋₆ cycloalkyl.

8. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 6 to 7, wherein X¹ is CR^{1C} and X² is selected from N and CR².

9. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 6 to 7, wherein X¹ is CR^{1C} and X² is N.

10. The compound, tautomer or pharmaceutically acceptable salt of claim 9, wherein R^{1C} is selected from hydrogen, C_{1-4} alkyl and cyclopropyl.
11. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 3 and 6 to 8, wherein R^2 is hydrogen.
12. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 11, wherein R^4 is selected from hydrogen, C_{1-4} alkyl and cyclopropyl.
13. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 12, wherein R^5 is hydrogen.
14. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 13, wherein R^6 is methyl.
15. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 14, wherein n is 0.
16. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 15, wherein X^7 is CR^7 .
17. The compound, tautomer or pharmaceutically acceptable salt of claim 16, wherein R^7 is selected from
- (a) hydrogen and halo; and
 - (b) C_{1-6} alkyl and C_{1-6} alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo.
18. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 17, wherein R^8 is selected from
- (a) hydrogen and halo; and
 - (b) C_{1-6} alkyl and C_{1-6} alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo.
19. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 18, wherein R^9 is selected from
- (a) hydrogen and halo; and

(b) C₁₋₆ alkyl and C₁₋₆ alkoxy, each unsubstituted or substituted with 1 to 3 substituents independently selected from halo.

20. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 18, wherein R¹⁰ is selected from hydrogen, halo and C₁₋₄ alkyl which is unsubstituted or substituted with 1 to 3 substituents independently selected from halo.

21. The compound, tautomer or pharmaceutically acceptable salt of any one of claims 1 to 20, wherein R¹¹ is selected from hydrogen, halo and C₁₋₄ alkyl which is unsubstituted or substituted with 1 to 3 substituents independently selected from halo.

22. The compound of claim 1, which is selected from the following compounds:

(S)-2-(4-methyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)-N-(1-(*p*-tolyl)ethyl)acetamide;

(S)-N-(1-(4-methoxyphenyl)ethyl)-2-(4-methyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)acetamide;

(S)-2-(4-isopropyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)-N-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(4-isopropyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)-N-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(4-methyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)-N-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-N-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(4-methyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)acetamide;

(S)-2-(4-isopropyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)-N-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-N-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(4-isopropyl-7-oxo-1-phenyl-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)acetamide;

(S)-2-(1-(*tert*-butyl)-4-methyl-7-oxo-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)-N-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-N-(1-(3-fluoro-4-methoxyphenyl)ethyl)-2-(3-isopropyl-1,7-dimethyl-4-oxo-1H-pyrazolo[3,4-d]pyridazin-5(4H)-yl)acetamide;

(S)-2-(1-(*tert*-butyl)-4-isopropyl-7-oxo-1,7-dihydro-6H-pyrazolo[3,4-d]pyridazin-6-yl)-N-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-(*tert*-butyl)-4-isopropyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-(*tert*-butyl)-4-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-(*tert*-butyl)-4-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-(*tert*-butyl)-4-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-(*tert*-butyl)-4-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-isopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-2-(1,3-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methoxyphenyl)ethyl)acetamide;

(S)-*N*-(1-(*p*-tolyl)ethyl)-2-(1,3,4-trimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1-isopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-*N*-(1-(4-chloro-2-fluorophenyl)ethyl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(3-fluorophenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2,5-dimethylphenyl)ethyl)acetamide;

(S)-2-(1,3-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-imidazo[4,5-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2,3-difluorophenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxy-3-methylphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)acetamide;

(S)-2-(1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1,3-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1,3-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(4-cyclopropyl-7-oxo-1-phenyl-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(4-cyclopropyl-7-oxo-1-phenyl-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(4-cyclopropyl-7-oxo-1-phenyl-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(4-cyclopropyl-7-oxo-1-phenyl-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1,3-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1,3-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(3-isopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(3-isopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(3-isopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(3-isopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-isopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1-isopropyl-3,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-isopropyl-3,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)acetamide;

(S)-2-(1-isopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)acetamide;

(S)-2-(1,3-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)acetamide;

N-(1-(chroman-6-yl)ethyl)-2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)-*N*-(1-(3-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-*N*-(1-(4-chloro-2-methylphenyl)ethyl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)-*N*-(1-mesitylethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)-*N*-(1-(2,4-dimethylphenyl)ethyl)acetamide;

(S)-*N*-(1-(2-chloro-4-fluorophenyl)ethyl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)acetamide;

(S)-*N*-(1-(4-chloro-2-methoxyphenyl)propan-2-yl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(3-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-mesitylethyl)acetamide;

(S)-*N*-(1-(2-chloro-4-fluorophenyl)ethyl)-2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-isopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1-isopropyl-7-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

5-(2-(2-(4-chlorophenyl)pyrrolidin-1-yl)-2-oxoethyl)-3-cyclopropyl-1-methyl-1,5-dihydro-4*H*-pyrazolo[3,4-*d*]pyridazin-4-one;

6-(2-(2-(4-chlorophenyl)pyrrolidin-1-yl)-2-oxoethyl)-1-cyclopropyl-3-methyl-1,6-dihydro-7*H*-pyrazolo[3,4-*d*]pyridazin-7-one;

(S)-2-(1-isopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1-isopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-isopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-N-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1-isopropyl-3-methyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-isopropyl-3-methyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3-methyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-isopropyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-isopropyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-isopropyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-isopropyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1,3-dimethyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3,7-dimethyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6H-pyrazolo[3,4-*d*]pyridazin-6-yl)-N-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)acetamide;

(S)-N-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)-2-(1,3,4-trimethyl-7-oxo-1,7-dihydro-6H-pyrazolo[3,4-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1-isopropyl-3-methyl-7-oxo-1,7-dihydro-6H-pyrazolo[3,4-*d*]pyridazin-6-yl)-N-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)acetamide;

N-(1-(chroman-6-yl)ethyl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

2-(1-cyclopropyl-3,4-dimethyl-7-oxo-1,7-dihydro-6H-pyrazolo[3,4-*d*]pyridazin-6-yl)-N-(1-(2,3-dihydrobenzo[*b*][1,4]dioxin-6-yl)ethyl)acetamide;

2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(2,3-dihydrobenzo[*b*][1,4]dioxin-6-yl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5H-pyrazolo[3,4-*d*]pyridazin-5-yl)-N-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1,3,7-trimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)-2-(1,3,7-trimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-*N*-(1-(*p*-tolyl)ethyl)-2-(1,3,7-trimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)-2-(1,3,7-trimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-*N*-(1-(4-methoxyphenyl)ethyl)-2-(1,3,7-trimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-*N*-(1-(2,6-difluorophenyl)ethyl)-2-(1,3-dimethyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2-fluoro-4-methoxyphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2,4-difluorophenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(3-fluoro-4-methoxyphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(3-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-*N*-(1-(2-chloro-4-fluorophenyl)ethyl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-fluoro-3-methoxyphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(2,4,6-trifluorophenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-fluoro-3-methylphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(3,5-difluorophenyl)ethyl)acetamide;

(S)-*N*-(1-(2-chloro-6-fluorophenyl)ethyl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1,7-dimethyl-4-oxo-1,4-dihydro-5*H*-imidazo[4,5-*d*]pyridazin-5-yl)-*N*-(1-(5-(trifluoromethyl)pyridin-2-yl)ethyl)acetamide;

(S)-2-(3-methyl-4-oxo-3,4-dihydro-5*H*-imidazo[4,5-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(3-methyl-4-oxo-3,4-dihydro-5*H*-imidazo[4,5-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-methyl-4-oxo-1,4-dihydro-5*H*-imidazo[4,5-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(1-methyl-4-oxo-1,4-dihydro-5*H*-imidazo[4,5-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethoxy)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)-*N*-(1-(4-methoxyphenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)-*N*-(1-phenylethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrrolo[2,3-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(3-fluorophenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-*N*-(1-(2-chloro-6-fluorophenyl)ethyl)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(3-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)acetamide;

(S)-2-(1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)-*N*-(1-phenylethyl)acetamide;

(S)-*N*-(1-(3-fluorophenyl)ethyl)-2-(1,3,4-trimethyl-7-oxo-1,7-dihydro-6*H*-pyrazolo[3,4-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1-cyclobutyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-(bicyclo[1.1.1]pentan-1-yl)-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(1-(*tert*-butyl)-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-2-(3-cyclopropyl-1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(*R*)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-*N*-(1-(4-chlorophenyl)ethyl)-2-(1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-*N*-(1-(4-methoxyphenyl)ethyl)-2-(1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)acetamide;

(S)-2-(1-isopropyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(methyl-*d*₃)phenyl)ethyl)acetamide;

(S)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(methyl-*d*₃)phenyl)ethyl)acetamide;

(S)-2-(1-isopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(methyl-*d*₃)phenyl)ethyl)acetamide;

(S)-2-(1-methyl-4-oxo-3-(trifluoromethyl)-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(*p*-tolyl)ethyl)acetamide;

(S)-*N*-(1-(2-fluoro-4-methylphenyl)ethyl)-2-(1-methyl-4-oxo-3-(trifluoromethyl)-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-*N*-(1-(3-fluoro-4-methylphenyl)ethyl)-2-(1-methyl-4-oxo-3-(trifluoromethyl)-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-methyl-4-oxo-3-(trifluoromethyl)-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)-*N*-(1-(4-(trifluoromethyl)phenyl)ethyl)acetamide;

(S)-*N*-(cyclopropyl(phenyl)methyl)-2-(1-cyclopropyl-3-methyl-4-oxo-1,4-dihydro-5*H*-pyrazolo[3,4-*d*]pyridazin-5-yl)acetamide;

(S)-2-(1-methyl-7-oxo-1,7-dihydro-6*H*-pyrrolo[2,3-*d*]pyridazin-6-yl)-*N*-(1-(4-(methyl-*d*₃)phenyl)ethyl)acetamide;

a tautomer of any one of the aforementioned compounds, and a pharmaceutically acceptable salt of any one of the aforementioned compounds or tautomer thereof.

23. A pharmaceutical composition comprising:

a compound, tautomer or pharmaceutically acceptable salt as defined in any one of claims 1 to 22; and

a pharmaceutically acceptable excipient.

24. A compound, tautomer or pharmaceutically acceptable salt as defined in any one of claims 1 to 22 for use as a medicament.

25. A compound, tautomer or pharmaceutically acceptable salt as defined in any one of claims 1 to 22 for use in treating a disease, disorder or condition selected from schizophrenia, autism spectrum disorder, sleep disorders, depression, bipolar disorder, cognitive impairment, attention deficit hyperactivity disorder, post-traumatic stress disorder, substance use disorder, substance abuse, drug addiction, eating disorders, obsessive compulsive disorder, anxiety disorders, epilepsy, pain, fibromyalgia, Alzheimer's disease and Parkinson's disease.

26. ~~Use of A method for activating GPR139 in a subject, the method comprising administering to the subject~~ a compound, tautomer or pharmaceutically acceptable salt as defined in any one of claims 1 to 22 in the manufacture of a medicament for activating GPR139 in a subject.

27. ~~Use of A method of treating a disease, disorder or condition in a subject, the method comprising administering to the subject~~ a compound, tautomer or pharmaceutically acceptable salt as defined in any one of claims 1 to 22, in the manufacture of a medicament for the treatment of a disease, disorder or condition in a subject, wherein the disease, disorder or condition is associated with GPR139.

28. ~~A method of treating a disease, disorder or condition in a subject, the method comprising administering to the subject~~ Use of a compound, tautomer or pharmaceutically acceptable salt as defined in any one of claims 1 to 22, in the manufacture of a medicament for the treatment of a disease, disorder or condition in a subject, wherein the disease, disorder or condition is selected from schizophrenia, autism spectrum disorder, sleep disorders, depression, bipolar disorder, cognitive impairment, attention deficit hyperactivity disorder, post-traumatic stress disorder, substance use disorder, substance abuse, drug addiction, eating disorders, obsessive compulsive disorder, anxiety disorders, epilepsy, pain, fibromyalgia, Alzheimer's disease and Parkinson's disease.

29. A combination comprising a compound, tautomer or pharmaceutically acceptable salt as defined in any one of claims 1 to 22, and at least one additional pharmacologically active agent.