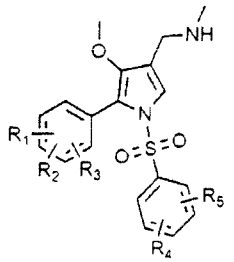
WHAT IS CLAIMED IS:

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

[Chemical Formula 1]



in Chemical Formula 1,

R_1, R_2 and R_3 are each independently hydrogen or halogen, with the proviso that R_1, R_2 and R_3 cannot be hydrogen simultaneously, and

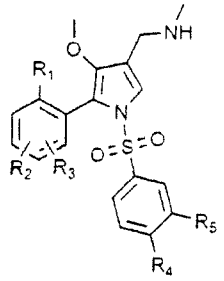
R_4 and R_5 are each independently hydrogen, halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, or C_{1-4} haloalkoxy, with the proviso that R_4 and R_5 cannot be hydrogen simultaneously.

2. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein R_1, R_2 and R_3 are each independently hydrogen, fluoro, or chloro, with the proviso that R_1, R_2 and R_3 cannot be hydrogen simultaneously.

3. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein R_4 and R_5 are each independently hydrogen, chloro, fluoro, methyl, trifluoromethyl, methoxy, or difluoromethoxy, with the proviso that R_4 and R_5 cannot be hydrogen simultaneously.

4. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein the compound is represented by the following Chemical Formula 1-1:

[Chemical Formula 1-1]



in Chemical Formula 1-1,

R_1 to R_5 are as defined in claim 1.

5. The compound or a pharmaceutically acceptable salt thereof according to claim 4, wherein R_1, R_2 and R_3 are each independently hydrogen, fluoro, or chloro, with the proviso that R_1, R_2 and R_3 cannot be hydrogen simultaneously.

6. The compound or a pharmaceutically acceptable salt thereof according to claim 4, wherein R_1 is halogen, and R_2 and R_3 are each independently hydrogen, or halogen.

7. The compound or a pharmaceutically acceptable salt thereof according to claim 4, wherein R_1 is fluoro, and R_2 and R_3 are each independently hydrogen, fluoro, or chloro, or

R_1 is chloro, and R_2 and R_3 are hydrogen.

8. The compound or a pharmaceutically acceptable salt thereof according to claim 4, wherein R_4 and R_5 are each independently hydrogen, chloro, fluoro, methyl, trifluoromethyl, methoxy, or difluoromethoxy, with the proviso that R_4 and R_5 cannot be hydrogen simultaneously.

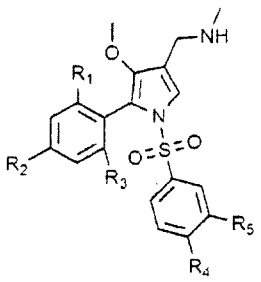
9. The compound or a pharmaceutically acceptable salt thereof according to claim 4, wherein R_4 is halogen, and R_5 is chloro, fluoro, methyl, trifluoromethyl, methoxy, or difluoromethoxy, or

R_4 and R_5 are each independently chloro, or fluoro.

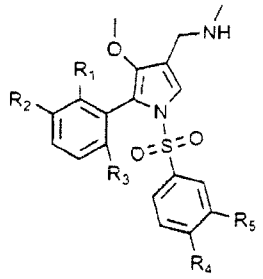
10. The compound or a pharmaceutically acceptable salt thereof according to claim 4, wherein R_1 is fluoro, and R_2 and R_3 are each independently hydrogen, or fluoro, R_4 is hydrogen, and R_5 is chloro, or trifluoromethyl.

11. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein the compound is selected from the group represented by the following Chemical Formulae 1-2 to 1-4:

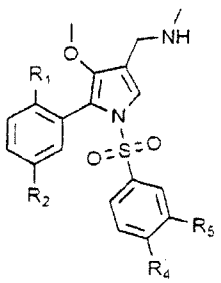
[Chemical Formula 1-2]



[Chemical Formula 1-3]



[Chemical Formula 1-4]



in Chemical Formulae 1-2 to 1-4,

R_1 to R_5 are as defined in claim 1.

12. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein the compound is selected from the group consisting of the following compounds:

1) 1-(5-(2-fluorophenyl)-4-methoxy-1-((3-chlorophenyl)sulfonyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

2) 1-(5-(2-fluorophenyl)-4-methoxy-1-((3-(trifluoromethyl)phenyl)sulfonyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

3) 1-(5-(2-fluorophenyl)-4-methoxy-1-((3-methoxyphenyl)sulfonyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

4) 1-(5-(2-fluorophenyl)-4-methoxy-1-((3-difluoromethoxyphenyl)sulfonyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

5) 1-(5-(2-chlorophenyl)-4-methoxy-1-((3-methoxyphenyl)sulfonyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

6) 1-(5-(2-fluoro-4-chlorophenyl)-4-methoxy-1-((3-chlorophenyl)sulfonyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

7) 1-(5-(2-fluoro-4-chlorophenyl)-4-methoxy-1-((3-(trifluoromethyl)phenyl)sulfonyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

8) 1-(5-(2,4-difluorophenyl)-1-((3-fluorophenyl)sulfonyl)-4-methyoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

9) 1-(5-(2,4-difluorophenyl)-1-((3-(trifluoromethyl)phenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

10) 1-(5-(2,4-difluorophenyl)-1-((3-methylphenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

11) 1-(5-(2,4-difluorophenyl)-1-((3-methoxyphenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

12) 1-(5-(2,4-difluorophenyl)-1-((3-difluoromethoxyphenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

13) 1-(5-(2,6-difluorophenyl)-1-((3-fluorophenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

14) 1-(5-(2,6-difluorophenyl)-1-((3-chlorophenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

15) 1-(5-(2,6-difluorophenyl)-1-((3-(trifluoromethyl)phenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

16) 1-(5-(2,6-difluorophenyl)-1-((3-methylphenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

17) 1-(5-(2,6-difluorophenyl)-1-((3-methoxyphenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

18) 1-(5-(2,6-difluorophenyl)-1-((3-chloro-4-fluorophenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

19) 1-(5-(2,6-difluorophenyl)-1-((3,4-difluorophenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

20) 1-(5-(2-fluoro-6-chlorophenyl)-1-((3-fluorophenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

21) 1-(5-(2-fluoro-6-chlorophenyl)-1-((3-chlorophenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

22) 1-(1-((3-fluorophenyl)sulfonyl)-4-methoxy-5-(2,4,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

23) 1-(1-((3-chlorophenyl)sulfonyl)-4-methoxy-5-(2,4,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

24) 1-(1-((3-trifluoromethylphenyl)sulfonyl)-4-methoxy-5-(2,4,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

25) 1-(1-((3-methoxyphenyl)sulfonyl)-4-methoxy-5-(2,4,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

26) 1-(1-((3,4-difluorophenyl)sulfonyl)-4-methoxy-5-(2,4,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methanamine;

27) 1-(1-((3-fluorophenyl)sulfonyl)-4-methoxy-5-(2,3,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

28) 1-(1-((3-chlorophenyl)sulfonyl)-4-methoxy-5-(2,3,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

29) 1-(1-((3-trifluoromethylphenyl)sulfonyl)-4-methoxy-5-(2,3,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

30) 1-(1-((3-methoxyphenyl)sulfonyl)-4-methoxy-5-(2,3,6-trifluorophenyl)-1H-pyrrol-3-yl)-N-methylmethanamine;

31) 1-(5-(2,5-difluorophenyl)-1-((3-fluorophenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine;

32) 1-(5-(2,5-difluorophenyl)-1-((3-trifluoromethylphenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine; and

33) 1-(5-(2,5-difluorophenyl)-1-((3-methoxyphenyl)sulfonyl)-4-methoxy-1H-pyrrol-3-yl)-N-methylmethanamine.

13. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein the pharmaceutically acceptable salt is hydrochloride or fumarate salt.

14. A pharmaceutical composition for the prevention and treatment of gastrointestinal damage due to gastrointestinal tract ulcer, gastritis, reflux esophagitis or *H. pylori*, comprising the compound or the pharmaceutically acceptable salt thereof according to any one of claims 1 to 13.

15. A pharmaceutical composition for the prevention and treatment of 5-HT receptor-mediated or muscarinic acetylcholine receptor-mediated diseases, comprising the compound or the pharmaceutically acceptable salt thereof according to any one of claims 1 to 13.

16. The pharmaceutical composition according to claim 15,

wherein the 5-HT receptor-mediated or muscarinic acetylcholine receptor-mediated diseases is depression, manic depression, schizophrenia, autism, obsessive-compulsive neurosis, anxiety disorder, migraine, hypertension, eating disorder, irritable bowel syndrome (IBS), peptic ulcer, diabetic neuropathy, asthma, and overactive bladder.