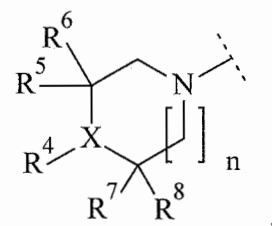


2. A compound according to claim 1, wherein R^1 is C_{1-7} -alkyl.
3. A compound according to any of claims 1 to 2, wherein R^1 is methyl.
4. A compound according to any of claims 1 to 3, wherein R^2 is hydrogen or C_{1-7} -alkyl.
5. A compound according to any of claims 1 to 4, wherein R^2 is hydrogen or methyl.
6. A compound according to any of claims 1 to 5, wherein R^3 is hydrogen or C_{1-7} -alkyl.
7. A compound according to any of claims 1 to 6, wherein R^3 is hydrogen or methyl.
8. A compound according to any of claims 1 to 7, wherein R^{14} is independently selected from C_{1-7} -alkyl and heterocycloalkyl or two R^{14} together form C_{1-7} -alkylene.
9. A compound according to any of claims 1 to 8, wherein R^{14} is independently selected from methyl, ethyl and pyrrolidinyl or two R^{14} together form ethylene
10. A compound according to any of claims 1 to 9, wherein the N-heterocycloalkyl in A as defined in Claim 1 is further characterized in that one ring nitrogen atom is basic.



11. A compound according to any of claims 1 to 10, wherein A is wherein

X is N or CH;

R^4 is hydrogen, C_{1-7} -alkyl or $-(CH_2)_m-NR^9R^{10}$;

R^5 is hydrogen or C_{1-7} -alkyl;

R^6 is hydrogen or C_{1-7} -alkyl;

R^7 is hydrogen or C_{1-7} -alkyl;

R^8 is hydrogen or C_{1-7} -alkyl;

R^9 and R^{10} are independently selected from hydrogen, C_{1-7} -alkyl and C_{3-8} -cycloalkyl;

n is 0, 1 or 2;

m is 0, 1, 2 or 3;

or R^4 and R^5 together form C_{1-7} -alkylene;

or R^4 and R^7 together form C_{1-7} -alkylene;

or R^5 and R^6 together form C_{2-7} -alkylene;

or R^5 and R^7 together form C_{1-7} -alkylene;

or R^5 and R^9 together form C_{1-7} -alkylene;

or R^7 and R^8 together form C_{2-7} -alkylene;

or R^7 and R^9 together form C_{1-7} -alkylene;

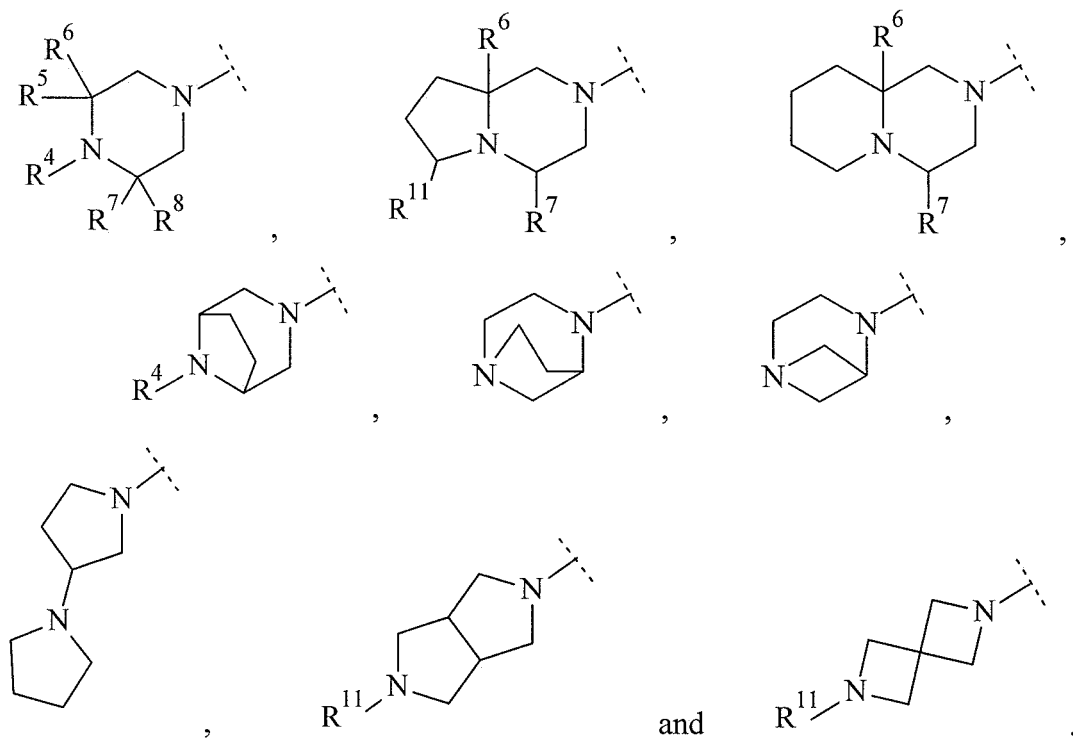
or R^9 and R^{10} together form C_{2-7} -alkylene;

with the proviso that if X is CH then R^4 is $-(CH_2)_m-NR^9R^{10}$; and

with the proviso that if X is N and R^4 is $-(CH_2)_m-NR^9R^{10}$ then m is 2 or 3.

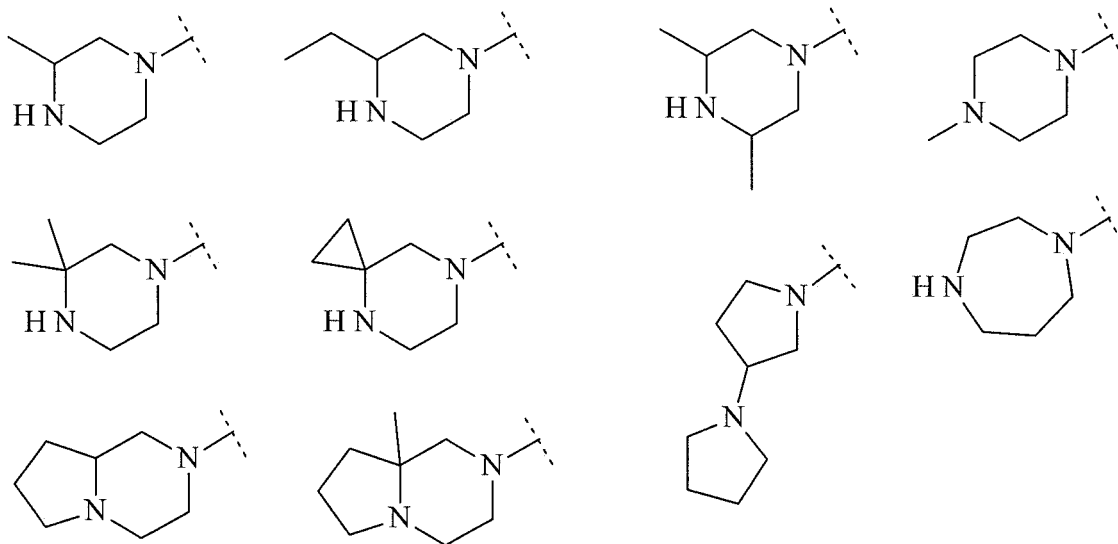
12. A compound according to claim 11, wherein X is N.
13. A compound according to any of claims 11 to 12, wherein n is 1.
14. A compound according to any of claims 11 to 13, wherein R^4 is hydrogen, methyl or $-(CH_2)_m-NR^9R^{10}$.
15. A compound according to any of claims 11 to 14, wherein R^4 is hydrogen.
16. A compound according to any of claims 11 to 15, wherein R^5 is hydrogen, methyl or ethyl.
17. A compound according to any of claims 11 to 16, wherein R^5 is methyl.
18. A compound according to any of claims 11 to 17, wherein R^6 is hydrogen or methyl.
19. A compound according to any of claims 11 to 18, wherein R^6 is hydrogen.
20. A compound according to any of claims 11 to 19, wherein R^7 is hydrogen or methyl.
21. A compound according to any of claims 11 to 20, wherein R^8 is hydrogen.
22. A compound according to any of claims 11 to 14, wherein m is 0.
23. A compound according to any of claims 11 to 13, wherein R^4 and R^5 together form propylene.
24. A compound according to any of claims 11 to 13, wherein R^5 and R^6 together form ethylene.
25. A compound according to any of claims 11 to 13, wherein R^9 and R^{10} together form butylene.

26. A compound according to any of claims 1 to 25, wherein A is selected from the group of:

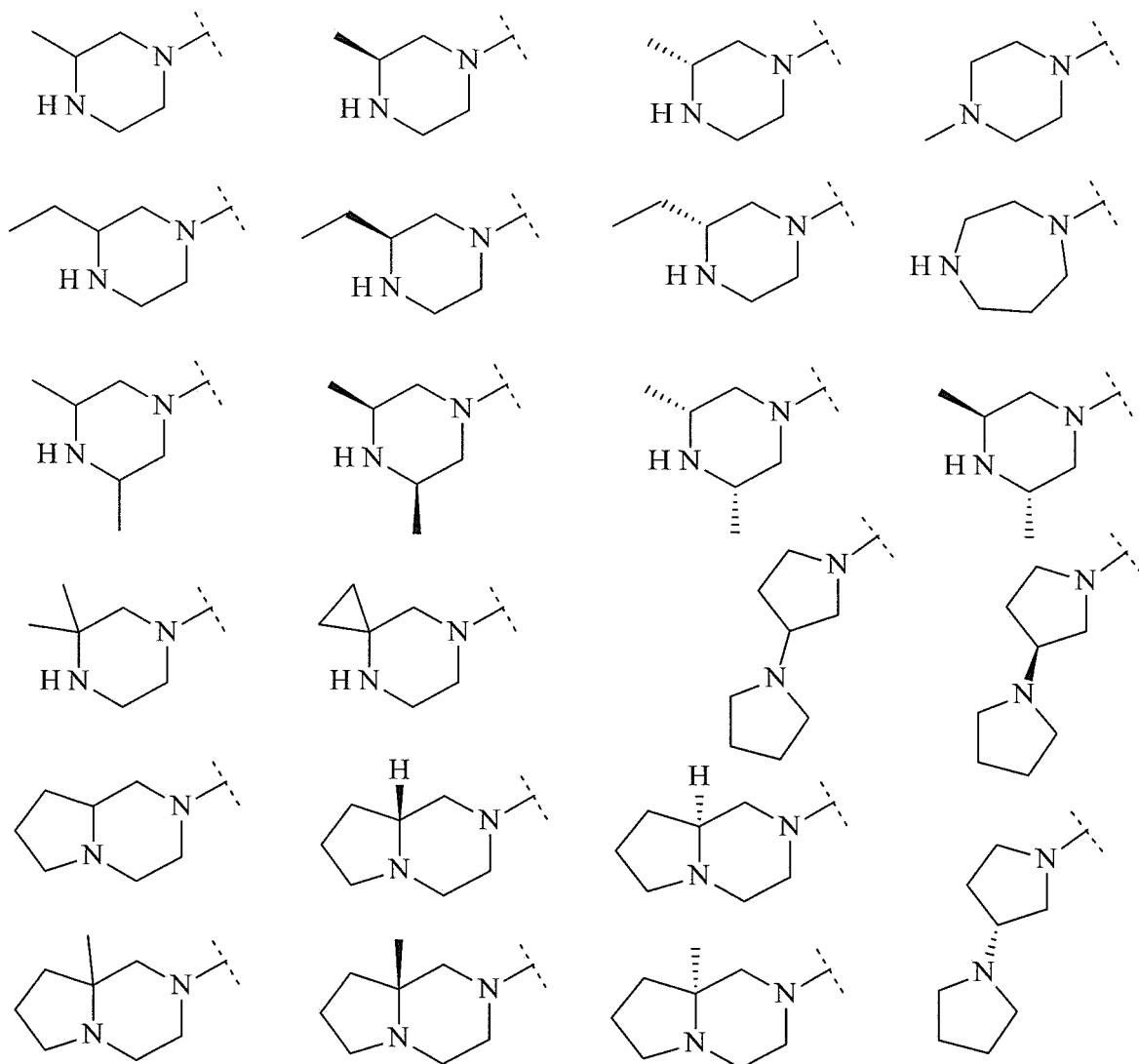


wherein R^4 , R^5 , R^6 , R^7 and R^8 are as defined in any of claims 1 to 25 and wherein R^{11} is hydrogen or C_{1-7} -alkyl.

27. A compound according to any of claims 1 to 26, wherein A is selected from the group of piperazinyl, diazepanyl, pyrrolidinyl and hexahydropyrrolo[1,2-a]pyrazinyl, each optionally substituted with 1, 2, 3 or 4 substituents selected from R^{14} as defined in any of claims 1 to 26.
28. A compound according to any of claims 1 to 27, wherein A is selected from the group of piperazin-1-yl, 1,4-diazepan-1-yl, pyrrolidin-1-yl and hexahydropyrrolo[1,2-a]pyrazin-2(1H)-yl, each optionally substituted with 1 or 2 substituents selected from R^{14} as defined in any of claims 1 to 27.
29. A compound according to any of claims 1 to 28, wherein A is selected from the group of:



30. A compound according to any of claims 1 to 28, wherein A is selected from the group of:



31. A compound according to any one of claims 1 to 30, selected from the group consisting of:
 2-(2-methylimidazo[1,2-b]pyridazin-6-yl)-7-(4-methylpiperazin-1-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aR)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aS)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aR)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aS)-8a-methyl-1,3,4,6,7,8-hexahydropyrrolo[1,2-a]pyrazin-2-yl]-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;

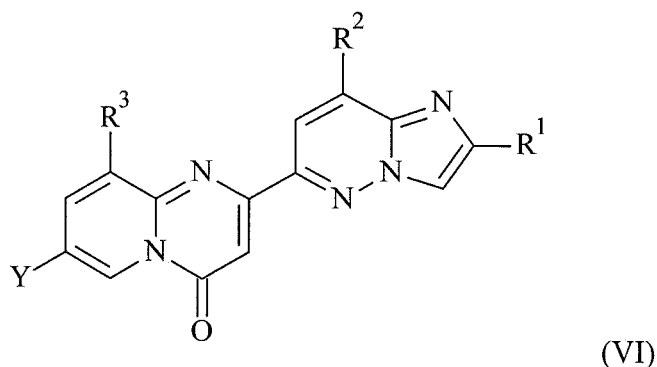
7-[(8aR)-8a-methyl-1,3,4,6,7,8-hexahydropyrrolo[1,2-a]pyrazin-2-yl]-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S,5R)-3,5-dimethylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3R)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 7-(1,4-diazepan-1-yl)-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2-methylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 2-(2-methylimidazo[1,2-b]pyridazin-6-yl)-7-[(3R)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 7-(1,4-diazepan-1-yl)-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(3R,5S)-3,5-dimethylpiperazin-1-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aS)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aS)-8a-methyl-1,3,4,6,7,8-hexahydropyrrolo[1,2-a]pyrazin-2-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aR)-8a-methyl-1,3,4,6,7,8-hexahydropyrrolo[1,2-a]pyrazin-2-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3R)-3-pyrrolidin-1-ylpyrrolidin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2-methylimidazo[1,2-b]pyridazin-6-yl)-7-[(3R)-3-pyrrolidin-1-ylpyrrolidin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-(3,3-dimethylpiperazin-1-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-(3,3-dimethylpiperazin-1-yl)-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-9-methyl-7-[(3S)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;

2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-9-methyl-7-[(3R)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3R,5S)-3,5-dimethylpiperazin-1-yl]-9-methyl-pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-(3,3-dimethylpiperazin-1-yl)-9-methyl-pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-9-methyl-pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S,5S)-3,5-dimethylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S)-3-pyrrolidin-1-ylpyrrolidin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 2-(2-methylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S)-3-pyrrolidin-1-ylpyrrolidin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 7-[(3S,5S)-3,5-dimethylpiperazin-1-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)-7-[(3R)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 7-[(3R,5S)-3,5-dimethylpiperazin-1-yl]-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-(3,3-dimethylpiperazin-1-yl)-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(3S,5S)-3,5-dimethylpiperazin-1-yl]-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(3R)-3-ethylpiperazin-1-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 and pharmaceutically acceptable salts thereof.

32. A compound according to any one of claims 1 to 31, selected from the group consisting of:
- 7-[(8aR)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aS)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aR)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2,8-

dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-[(3S,5R)-3,5-dimethylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 7-[(3R,5S)-3,5-dimethylpiperazin-1-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-[(8aS)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-9-methyl-7-[(3S)-3-methylpiperazin-1-yl]pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-9-methylpyrido[1,2-a]pyrimidin-4-one;
 7-[(3R,5S)-3,5-dimethylpiperazin-1-yl]-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 7-(4,7-diazaspiro[2.5]octan-7-yl)-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 and pharmaceutically acceptable salts thereof.

33. The compound of formula (VI)



wherein R^1 , R^2 and R^3 are as described in any of claims 1 to 7;

Y is halogen or trifluoromethanesulfonate;

and salts thereof.

34. A compound of formula (VI) according to claim 33, wherein Y is fluoro, chloro, bromo, iodo or trifluoromethanesulfonate.

35. A compound of formula (VI) according to claim 33, wherein Y is fluoro.
36. A compound of formula (VI) according to any one of claims 33 to 35, selected from the group consisting of:
 7-fluoro-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-fluoro-pyrido[1,2-a]pyrimidin-4-one;
 7-fluoro-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one;
 2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-7-fluoro-9-methyl-pyrido[1,2-a]pyrimidin-4-one;
 and salts thereof.
37. A compound of claim 31 or 32, wherein the compound is 7-[(8aR)-3,4,6,7,8,8a-hexahydro-1H-pyrrolo[1,2-a]pyrazin-2-yl]-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one, or a pharmaceutically acceptable salt thereof.
38. A compound of claim 31 or 32, wherein the compound is 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one, or a pharmaceutically acceptable salt thereof.
39. A compound of claim 31 or 32, wherein the compound is 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one, or a pharmaceutically acceptable salt thereof.
40. A compound of claim 31 or 32, wherein the compound is 7-(4,7-diazaspiro[2.5]octan-7-yl)-2-(2,8-dimethylimidazo[1,2-b]pyridazin-6-yl)-9-methyl-pyrido[1,2-a]pyrimidin-4-one, or a pharmaceutically acceptable salt thereof.
41. A compound of claim 31 or 32, wherein the compound is 7-[(3R,5S)-3,5-dimethylpiperazin-1-yl]-9-methyl-2-(2-methylimidazo[1,2-b]pyridazin-6-yl)pyrido[1,2-a]pyrimidin-4-one, or a pharmaceutically acceptable salt thereof.
42. A process for the preparation of compounds of formula (I) according to any of claims 1 to 32, comprising an aromatic nucleophilic substitution reaction between a compound of formula (VI) as described in any of claims 33 to 36 with a compound of formula M-A by heating in a solvent, wherein A, R¹, R² and R³ are as defined in any of claims 1 to 32, Y is as defined in any of claims 33 to 36, M is hydrogen, sodium or potassium, and wherein M is linked to A via a nitrogen atom of A.
43. The process of claim 42, wherein the aromatic nucleophilic substitution reaction is performed at a temperature from 80°C to 200°C.

44. The process according to any of claims 42 or 43, wherein the solvent of the aromatic nucleophilic substitution reaction is selected from dimethyl sulfoxide, N-methylpyrrolidone, and dimethylformamide.
45. The process according to any of claims 42 to 43, wherein M is hydrogen.
46. Pharmaceutical compositions comprising compounds of formula (I) according to any of claims 1 - 32 or 37 to 41 or their pharmaceutically acceptable salts and one or more pharmaceutically acceptable excipients.
47. Compounds of formula (I) according to any of claims 1 - 32 or 37 to 41 or their pharmaceutically acceptable salts above for use as therapeutically active substances.
48. Compounds of formula (I) according to any of claims 1 - 32 or 37 to 41 or their pharmaceutically acceptable salts for the use in the treatment or prevention of spinal muscular atrophy (SMA).

49. The use of compounds of formula (I) according to any of claims 1 - 32 or 37 to 41 or their pharmaceutically acceptable salts for the preparation of medicaments for the treatment or prevention of spinal muscular atrophy (SMA).