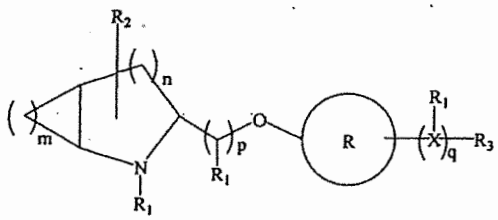
The compounds of Examples 3-20 were prepared by following the procedures as described in Examples 1 to 2, with some non-critical variations.

3.	3-(2-Methylpyridin-3-yl-oxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;	IR (cm^{-1}): 2946, 2535, 2110, 1669, 1627, 1570, 1414, 1294, 1205, 1179, 1130, 1031, 798, 719; ^{1}H-NMR (CD_3OD): 8.21 (d, J = 5.0 Hz, 1H), 7.85 (d, J = 8.4 Hz, 1H), 7.63 (dd, J = 5.5, 8.3 HZ, 1H), 4.52 (dd, J = 3.3, 10.7 Hz, 1H), 4.25 (dd, J = 9.1, 10.7 Hz, 1H), 3.95-3.85 (m, 1H), 3.45-3.97 (m, 1H), 2.61 (s, 3H), 2.40 (dd, J = 7.2, 13 Hz, 1H), 2.20-2.10 (m, 1H), 2.0-1.92 (m, 1H), 1.10-1.02 (m, 1H), 1.0-0.90 (m, 1H); Mass (m/z): 205 [$M+H^+$].
4.	3-(2-Chloropyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;	IR (cm^{-1}): 3411, 3029, 2870, 2481, 1533, 1452, 1334, 1296, 1025, 999, 846, 827, 807, 721; ^{1}H-NMR (D_2O): 7.88 (d, J = 4.3 Hz, 1H), 7.42 (d, J = 8.1 Hz, 1H), 7.29 (dd, J = 4.7, 8.1 Hz, 1H), 4.44 (dd, J = 3.2, 10.8 Hz, 1H), 4.10 (dd, J = 8.5, 10.8 Hz, 1H), 3.85-3.75 (m, 1H), 3.30-3.23 (m, 1H), 2.25 (dd, J = 7.2, 13.0 Hz, 1H), 2.05 (ddd, J = 4.8, 13.0, 16.0 Hz, 1H), 1.85-1.78 (m, 1H), 0.90-0.85 (m, 1H), 0.85-0.75 (m, 1H); Mass (m/z): 225, 277 [$M+H^+$].
5.	3-(2-Chloropyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane ~~di~~hydrochloride;	IR (cm^{-1}): 3463, 2887, 2814, 2734, 2586, 2495, 1585, 1526, 1455, 1310, 1281, 1024, 846, 825, 697, 624; ^{1}H-NMR (D_2O): 7.94 (d, J = 2.7 Hz, 1H), 7.35 (dd, J = 2.7, 8.8 Hz, 1H), 7.30 (d, J = 8.8 Hz, 1H), 4.32 (dd, J = 3.2, 10.8 Hz, 1H), 4.10 (dd, J = 7.6, 10.8 Hz, 1H), 3.75-3.65 (m, 1H), 3.28-3.20 (m, 1H), 2.21 (dd, J = 7.2, 13.1 Hz, 1H), 2.05 (ddd, J = 4.8, 11.6, 16.0 Hz, 1H), 1.85-1.75 (m, 1H), 0.90-0.85 (m, 1H), 0.83-0.74 (m, 1H); Mass (m/z): 225, 227 [$M+H^+$].

We claim:

1. A compound of the general formula (I),



(I)

and their derivatives, prodrugs, tautomers, stereoisomers, polymorphs, solvates, hydrates, metabolites, N-oxides and pharmaceutically acceptable salts.

Wherein R represents aryl or heteroaryl;

R_1 represents hydrogen, alkyl or cycloalkyl;

R_2 represents hydrogen, alkyl, alkoxy, cycloalkyl, cycloalkylalkyl, cycloalkoxy, aryl, heteroaryl, heterocyclyl or heterocyclylalkyl;

R_3 represents hydrogen, hydroxy, halogen, oxo, thio, nitro, amide, amine, carboxylic, alkyl, alkoxy, cycloalkyl, cycloalkylalkyl, cycloalkoxy, haloalkyl, haloalkoxy, heterocyclyl or heterocyclylalkyl;

"X" represents C, O, N, S;

"m" represents 1 to 4;

"n" represents 1 to 2;

"p" represents 0 to 2;

"q" represents 0 to 1.

2. The compound as claimed in claim 1, wherein R is aryl or heteroaryl.

3. The compound as claimed in claim 1, wherein R_1 is hydrogen, alkyl or cycloalkyl.

4. The compound as claimed in claim 1, wherein R_2 is hydrogen, alkyl, alkoxy, cycloalkyl, cycloalkylalkyl, cycloalkoxy, aryl, heteroaryl, heterocyclyl or heterocyclylalkyl.

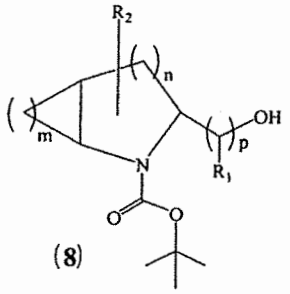
5.The compound as claimed in claim 1, wherein R_3 is hydrogen, hydroxy, halogen, oxo, thio, nitro, amide, amine, carboxylic, alkyl, alkoxy, cycloalkyl, cycloalkylalkyl, cycloalkoxy, haloalkyl, haloalkoxy, heterocyclyl or heterocyclylalky.

6.The compound as claimed in claim 1, which is selected from the group consisting of:
3-(Pyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;
2-Methyl-3-(pyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
3-(2-Methylpyridin-3-yl-oxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;
3-(2-Chloropyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;
3-(2-Chloropyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;
3-(2-Fluoropyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;
3-(5-Chloropyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;
3-(5-Bromopyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane tartrate;
3-(2-Fluoropyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane tartrate;
3-(2-Fluoropyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane tartrate;
3-(2-Chloropyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;
2-Methyl-3-(2-methylpyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
2-Methyl-3-(2-methylpyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
3-(2-Chloropyridin-5-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;
3-(2-Fluoropyridin-5-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;
3-(5-Chloropyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;
3-(5-Bromopyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane dihydrochloride;
3-(2-Methylpyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
5-(2-Azabicyclo[3.1.0]hex-3-ylmethoxy)pyridine-2-carboxylic acid amide;
5-(2-Azabicyclo[3.1.0]hex-3-ylmethoxy)pyridine-2-carboxylic acid;
3-(2-Methoxypyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
3-(2-Isopropoxypyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
[5-(2-Azabicyclo[3.1.0]hex-3-ylmethoxy)pyridin-2-yl]-methanol;
3-(2-Methoxymethylpyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
[5-(2-Azabicyclo[3.1.0]hex-3-ylmethoxy)pyridin-2-ylmethyl]methylamine;
5-(2-Methyl-2-azabicyclo[3.1.0]hex-3-ylmethoxy)pyridine-2-carboxylic acid amide;
5-(2-Methyl-2-azabicyclo[3.1.0]hex-3-ylmethoxy)pyridine-2-carboxylic acid;
3-(2-Methoxypyridin-5-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;
3-(2-Isopropoxypyridin-5-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;
[5-(2-Methyl-2-azabicyclo[3.1.0]hex-3-ylmethoxy)pyridin-2-yl]methanol;
Methyl-[5-(2-methyl-2-azabicyclo[3.1.0]hex-3-ylmethoxy)pyridin-2-ylmethyl]amine;
5-[1-(2-Azabicyclo[3.1.0]hex-3-yl)-ethoxy]pyridin-2-ylamine;

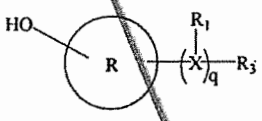
{5-[1-(2-Azabicyclo[3.1.0]hex-3-yl)-ethoxy]pyridin-2-yl}methylamine;
[5-(2-Azabicyclo[3.1.0]hex-3-ylmethoxy)pyridin-2-yl]dimethylamine;
3-(2-Pyrrolidin-1-yl-pyridin-5-yloxymethyl)-2-aza-bicyclo[3.1.0]hexane;
5-[1-(2-Methyl-2-azabicyclo[3.1.0]hex-3-yl)ethoxy]pyridin-2-ylamine;
Methyl-{5-[1-(2-methyl-2-azabicyclo[3.1.0]hex-3-yl)ethoxy]pyridin-2-yl}amine;
Dimethyl-[5-(2-methyl-2-azabicyclo[3.1.0]hex-3-ylmethoxy)pyridin-2-yl]amine;
2-Methyl-3-(2-pyrrolidin-1-yl-pyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane;
3-(Pyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane;
3-(6-Methylpyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane;
3-(2-Methylpyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane;
3-(5-Chloropyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane;
2-Methyl-3-(2-methylpyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane;
3-(5-Chloropyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[4.1.0]heptane;
4-[2-(Pyridin-3-yloxy)ethyl]-2-azabicyclo[3.1.0]hexane;
4-[2-(5-Chloropyridin-3-yloxy)ethyl]-2-methyl-2-azabicyclo[3.1.0]hexane;
3-(Pyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane hydrochloride;
3-(5-Chloropyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane hydrochloride;
and their derivatives, prodrugs, tautomers, stereoisomers, polymorphs, solvates, hydrates, metabolites, N-oxides and pharmaceutically acceptable salts.

7. A process for the preparation of a compound of formula (I) as claimed in claim 1, which comprises:

(a) reacting the compound of formula (8) with hydroxyl compound of formula (9)

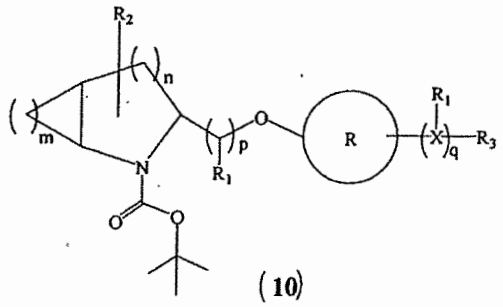


(8)



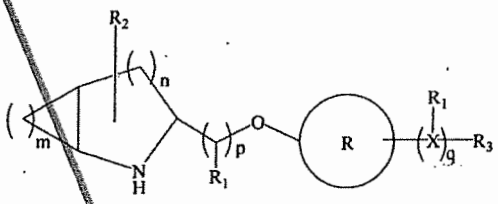
(9)

to form a compound of formula (10)



(10)

(b) converting the compound of formula (**10**) to deprotected compound of formula (**11**)



(11)

(c) converting the compound of formula (**11**) to compound of formula (**I**). Optionally converting the compound of formula (**I**) to their derivatives, prodrugs, tautomers, stereoisomers, polymorphs, solvates, hydrates, metabolites, N-oxides and pharmaceutically acceptable salts by using known methods.

8. A pharmaceutical composition comprising a compound according to any of the preceding claims or a pharmaceutically acceptable carrier, diluent, recipient or solvate along with a therapeutically effective amount of a compound according to claim 1.

9. The pharmaceutical composition as claimed in claim 8, which comprises one or more, additional agents selected from the group consisting 5-HT_{1-7} receptors, GABA inverse agonists and other nicotinic acetylcholine receptors.

10. The pharmaceutical composition as claimed in claims 8 to 9, which is in the form of a tablet, capsule, powder, lozenges, suppositories, syrup, solution, suspension or an injectable, wherein said form is administered in a single dose or multiple dose units.

11. The pharmaceutical composition as claimed in claim 8 to 10, for the treatment and prevention of clinical conditions such as anxiety, alzheimer's disease, depression, convulsive disorders, obsessive-compulsive disorders, cognitive memory disorders, ADHD (Attention Deficient Disorder/Hyperactivity Syndrome), pain, inflammation, personality disorders, psychosis, paraphrenia, psychotic depression, parkinson's disease, mania, schizophrenia, panic disorders, sleep disorders, withdrawal from drug abuse syndrome, stroke, head trauma, mild cognitive impairment, neurodegenerative disorders and obesity.

12. A method for the treatment of a disorder of the central nervous system related to or affected by the $\alpha_4\beta_2$ nicotinic receptor, in a patient in need thereof, which comprises providing to said patient a therapeutically effective amount of a compound of formula (I) as defined in any one of claims 1 to 6.

13. A method for the treatment of a disorder of the central nervous system related to or affected by the $\alpha_4\beta_2$ nicotinic receptor in mammal, comprising administering to said mammal a therapeutically effective amount of a compound of claim 1, in combination with a group consisting 5-HT_{1-7} receptors, GABA inverse agonists and other nicotinic acetylcholine receptors.

14. The method according to claim 12, wherein the said disorder is anxiety, alzheimer's disease, depression, convulsive disorders, obsessive-compulsive disorders, cognitive memory disorders, ADHD (Attention Deficient Disorder/Hyperactivity Syndrome), pain, inflammation, personality disorders, psychosis, paraphrenia, psychotic depression, parkinson's disease, mania, schizophrenia, panic disorders, sleep disorders, withdrawal from drug abuse syndrome, stroke, head trauma, mild cognitive impairment, neurodegenerative disorders and obesity.

15. Use of a compound according to any one of the claims 1 to 6 in the manufacture of medicament for the treatment and/or prevention diseases related to $\alpha_4\beta_2$ nicotinic receptor.

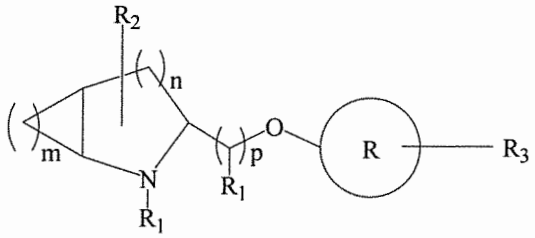
16. The use of compound according to the claim 15, for the treatment and/or prevention of clinical conditions such as anxiety, alzheimer's disease, depression, convulsive

disorders, obsessive-compulsive disorders, cognitive memory disorders, ADHD (Attention Deficient Disorder/Hyperactivity Syndrome), pain, inflammation, personality disorders, psychosis, paraphrenia, psychotic depression, parkinson's disease, mania, schizophrenia, panic disorders, sleep disorders, withdrawal from drug abuse syndrome, stroke, head trauma, mild cognitive impairment, neurodegenerative disorders and obesity.

17. A compound as claimed by claim 1, wherein the said compound is radio labeled.

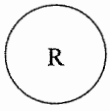
We claim:

1. A compound of the general formula (**I**),



(**I**)

wherein,



is heteroaryl;

at each occurrence, R_1 is independently selected from hydrogen or alkyl;

at each occurrence, R_2 is hydrogen;

at each occurrence, R_3 is independently selected from hydrogen, halogen or alkyl;

"m" is an integer 1;

"n" is an integer ranging from 1 to 2;

"p" is an integer ranging from 1 to 2; or a stereoisomer thereof or a pharmaceutically acceptable

salt thereof.

2.The compound according to claim 1, which is selected from the group consisting of:

3-(Pyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;

2-Methyl-3-(pyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane;

3-(2-Methylpyridin-3-yl-oxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;

3-(2-Chloropyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;

3-(2-Chloropyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane hydrochloride;

3-(2-Fluoropyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;

3-(5-Chloropyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane dihydrochloride;

3-(5-Bromopyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane tartrate;

3-(2-Fluoropyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane tartrate;

3-(2-Fluoropyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane tartrate;

3-(2-Chloropyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;

2-Methyl-3-(2-methylpyridin-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane;

2-Methyl-3-(2-methylpyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane;

3-(2-Chloropyridin-5-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;

3-(2-Fluoropyridin-5-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;

3-(5-Chloropyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane;

3-(5-Bromopyridin-3-yloxymethyl)-2-methyl-2-azabicyclo[3.1.0]hexane dihydrochloride;

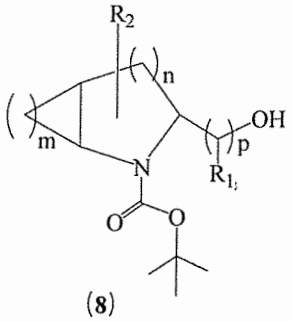
3-(2-Methylpyridin-5-yloxymethyl)-2-azabicyclo[3.1.0]hexane;

3-(Pyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane; and

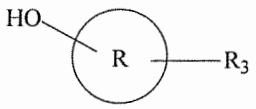
3-(5-Chloropyridin-3-yloxymethyl)-2-azabicyclo[4.1.0]heptane; or their stereoisomers, or their pharmaceutically acceptable salts.

3. A process for the preparation of a compound of formula (**I**) as claimed in claim 1, which comprises:

(a) reacting the compound of formula (**8**) with hydroxyl compound of formula (**9**)

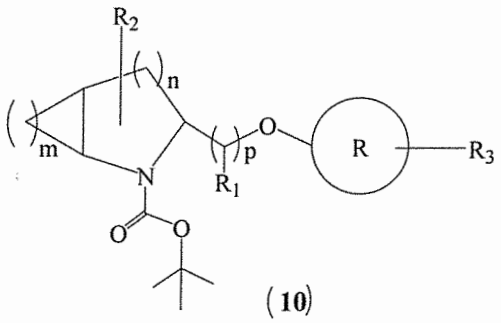


(**8**)



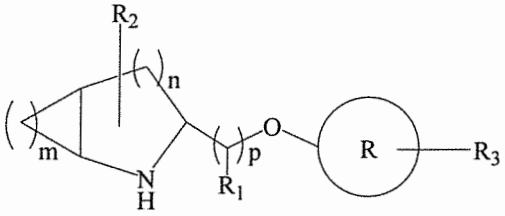
(**9**)

to form a compound of formula (**10**),



(**10**)

(b) converting the compound of formula (**10**) to deprotected compound of formula (**11**),



(**11**)

(c) converting the compound of formula (**11**) to compound of formula (**I**),optionally converting the compound of formula (**I**) to their stereoisomer's and pharmaceutically acceptable salts by using known methods.

4. A pharmaceutical composition comprising a compound according to any of the preceding claims or a pharmaceutically acceptable carrier, diluent, recipient or solvate along with a therapeutically effective amount of a compound according to claim 1.

5. The pharmaceutical composition according to claim 4, for the treatment of clinical conditions such as depression, cognitive memory disorders, pain and obesity.

6. Use of a compound according to any one of the claims 1 to 2 in the manufacture of medicament for the treatment of diseases related to $\alpha_4\beta_2$ nicotinic receptor.

7. The use of compound according to the claim 6, for the treatment of clinical conditions such as depression, cognitive memory disorders, pain and obesity.

8. A compound of formula (**I**) as claimed in claim 1, for manufacture of a medicament for treatment of diseases related to $\alpha_4\beta_2$ nicotinic receptor.