cognitive impairment, attention deficit disorder/hyperactivity syndrome, personality disorders, such as schizophrenia, in particular cognitive deficits related with schizophrenia, affective disorders such as depression, anxiety and obsessive compulsive disorders, motion or motor disorders such as Parkinson's disease and epilepsy, migraine, sleep disorders (including disturbances of the Circadian rhythm), feeding disorders, such as anorexia and bulimia, certain gastrointestinal disorders such as Irritable Bowel Syndrome, diseases associated with neurodegeneration, such as stroke, spinal or head trauma and head injuries, such as hydrocephalus, drug addiction and obesity.

There is still an ongoing need for providing compounds having high affinity and selectivity for the 5-HT_6 receptor. In particular the compounds should have low affinity to adrenergic receptors, such as the α_1-adrenergic receptor, histamine receptors, such as the H_1-receptor, and dopaminergic receptors, such as the D_2-receptor, in order to avoid or reduce side effects associated with modulation of these receptors, such as postural hypotension, reflex tachycardia, potentiation of the antihypertensive effect of prazosin, terazosin, doxazosin and labetalol or dizziness associated with the blockade of the α_1-adrenergic receptor, weight gain, sedation, drowsiness or potentiation of central depressant drugs associated with the blockade of the H_1-receptor, or extrapyramidal movement disorder, such as dystonia, parkinsonism, akathisia, tardive dyskinesia or rabbit syndrome, or endocrine effects, such as prolactin elevation (galactorrhea, gynecomastia, mentstrual changes, sexual dysfunction in males), associated with the blockade of the D_2-receptor.

The present invention provides compounds which have an affinity for the 5-HT_{2C} or 5-HT_6 receptor or both the 5-HT_{2C} and 5 -HT_6 receptors, thus allowing the treatment of disorders related to or affected by the 5-HT_{2C} or 5-HT_6 receptors or both the 5-HT_{2C} and 5-HT_6 receptors.

SUMMARY OF THE INVENTION

The invention is directed to aryl- and heteroaryl-fused decahydropyrroloazepine, and octahydro-1*H*-oxepino[4,5-*c*]pyrrole, octahydropyrrolothiazepine dioxide, decahydrocyclohepta[*c*]pyrrole, and octahydrocyclohepta[*c*]pyrrole derivatives, compositions comprising such compounds, and methods of using such compounds and compositions.

In one aspect, the present invention relates to a compound selected from the group consisting of:

trans-8-methoxy-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-fluoro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-9-(trifluoromethoxy)-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7,9-difluoro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

cis-9-fluoro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-(trifluoromethoxy)-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-9-fluoro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-10-fluoro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

cis-7,10-difluoro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7,10-difluoro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-9-methyl-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-methyl-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-8-(3,5-dimethyl-1,2-oxazol-4-yl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-{3-[(1S)-1-hydroxyethyl]phenyl}-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-{3-[(1R)-1-hydroxyethyl]phenyl}-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

cis-7-chloro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-8-(5-acetyl-2-thienyl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(isobutylamino)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-2-methyl-8-(piperidin-1-yl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(4-fluoro-2-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(5-fluoro-2-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(5-isopropyl-2-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(2-methoxy-4-methylphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(2,4-dimethoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-[3-(1-hydroxy-2-methylpropyl)phenyl]-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-[(E)-2-cyclopropylvinyl]-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-2-methyl-8-(3-oxo-2,3-dihydro-1H-inden-5-yl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-[4-fluoro-3-(1-hydroxyethyl)phenyl]-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aR,10bS)-8-isobutoxy-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bR)-8-isobutoxy-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-(3-hydroxy-2,3-dihydro-1H-inden-5-yl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-[3-(1-hydroxypropyl)phenyl]-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-[3-(1-hydroxy-3-methylbutyl)phenyl]-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-[3-(1-hydroxybutyl)phenyl]-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(4-fluoro-3-methylphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(4-methoxy-3-methylphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(3-fluoro-4-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(4-methoxy-3,5-dimethylphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-(6-methoxypyridin-3-yl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-(3-chloro-4-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(4-fluoro-3-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(2,3-dihydro-1-benzofuran-5-yl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-2-methyl-8-(3,4,5-trifluorophenyl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(2-fluoro-5-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(2,3-dihydro-1-benzofuran-6-yl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-(2-fluoro-4-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-(4-fluoro-2-methoxyphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-6-methyl-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

1-[trans-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][1]benzazepin-6(1H)-yl]ethanone;

trans-6-benzyl-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

trans-2,6-dimethyl-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

trans-8-(2,4-difluorophenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

cis-7-bromo-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

1-[trans-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][1]benzazepin-6(1H)-yl]-2-methylpropan-1-one;

trans-6-[(3,4-dichlorophenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-{[4-(difluoromethoxy)phenyl]sulfonyl}-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(3-methoxyphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(3-fluorophenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-(phenylsulfonyl)-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(5-chloro-2-thienyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(4-chlorophenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(2-methylphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(3-chloro-2-methylphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(2,5-dimethoxyphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(4-tert-butylphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-{[3-(trifluoromethyl)phenyl]sulfonyl}-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(4-methoxyphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-{[4-(trifluoromethyl)phenyl]sulfonyl}-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(3-methylphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-{[4-(trifluoromethoxy)phenyl]sulfonyl}-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-7-[3-(methylsulfonyl)phenyl]-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

1-{3-[trans-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrol-7-yl]phenyl}ethanone;

(3aS,10bS)-8-{4-fluoro-3-[(1S)-1-hydroxyethyl]phenyl}-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-8-{4-fluoro-3-[(1R)-1-hydroxyethyl]phenyl}-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-6-[(2-methoxyphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

2-[trans-7,7a,8,9,10,10a-hexahydropyrido[3,2-c]pyrrolo[3,4-e]azepin-6(5H)-ylsulfonyl]benzonitrile;

trans-6-[(4-methylphenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(4-fluorophenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-(2-thienylsulfonyl)-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(3-chlorophenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(5-bromo-2-thienyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(2-fluorophenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-[(2-chlorophenyl)sulfonyl]-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-(mesitylsulfonyl)-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-{[2-(trifluoromethoxy)phenyl]sulfonyl}-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-{[2-(trifluoromethyl)phenyl]sulfonyl}-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

trans-6-{[3-(trifluoromethoxy)phenyl]sulfonyl}-5,6,7,7a,8,9,10,10a-octahydropyrido[3,2-c]pyrrolo[3,4-e]azepine;

1-{3-[trans-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrol-7-yl]phenyl}ethanol;

trans-7-(pyridin-3-yl)-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-(pyridin-4-yl)-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-2-methyl-7-(pyridin-3-yl)-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

4-[trans-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrol-7-yl]-N-methylbenzamide;

trans-7-methoxy-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-8-methyl-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrol-10-ol;

trans-7-chloro-6-methyl-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

trans-7-chloro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-10-bromo-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-8-(3-isopropylphenyl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(3-isopropylphenyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-2-(2-fluoroethyl)-8-isobutoxy-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

N-methyl-3-[trans-6-oxo-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][2]benzazepin-8-yl]benzamide;

N-methyl-3-[trans-2-methyl-6-oxo-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][2]benzazepin-8-yl]benzamide;

trans-7-bromo-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-2-(2-fluoroethyl)-8-(4-fluorophenyl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(2-chloro-3-thienyl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(3-chloro-1H-pyrrol-2-yl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(5-chloro-1H-pyrrol-2-yl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-8-(2-chloro-3-thienyl)-2-methyl-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

(3aS,10bS)-2-methyl-8-(pyridin-2-yl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

trans-2-methyl-8-(4-oxo-3,4-dihydro-2H-chromen-6-yl)-2,3,3a,4,5,10b-hexahydropyrrolo[3,4-d][2]benzazepin-6(1H)-one;

trans-9-chloro-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

trans-7-chloro-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

cis-7-bromo-9-chloro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-bromo-9-chloro-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-9-chloro-2,6-dimethyl-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

trans-9-bromo-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine;

trans-7-phenyl-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-[(4-fluorobenzyl)oxy]-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-(4-fluorophenyl)-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-(4-fluorophenyl)-2-methyl-2,3,3a,4,5,10b-hexahydro-1H-[1]benzoxepino[4,5-c]pyrrole;

trans-7-(4-fluorophenyl)-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine; and methyl trans-1,2,3,3a,4,5,6,10b-octahydropyrrolo[3,4-d][1]benzazepine-7-carboxylate;

or a pharmaceutically acceptable salt or amide thereof.

In one aspect, the present invention relates to use of a compound as described herein, or a pharmaceutically acceptable salt or amide thereof, in the manufacture of a medicament for treating or preventing conditions, disorders or deficits modulated by a 5-HT_{2c} receptor, a 5-HT_6 receptor or both 5-HT_{2c} and 5-HT_6 receptors wherein the condition, disorder or deficit is selected from the group consisting of a cognitive dysfunction, attention deficit/hyperactivity syndrome, personality disorders, affective disorders, motion or motor disorders, migraine, sleep disorders, feeding disorders, gastrointestinal disorders, diseases associated with neurodegeneration, addiction diseases, obesity, diabetes, psoriasis, and ocular hypertension.

In one aspect, the present invention relates to use of a compound as described herein, or a pharmaceutically acceptable salt or amide thereof, in the manufacture of a medicament for treating a disorder or condition modulated by the 5-HT_{2c} receptor selected from the group consisting of bipolar disorder, depression, anxiety, schizophrenia, cognitive deficits of schizophrenia, obsessive compulsive disorder, epilepsy, substance abuse, eating disorders, sexual dysfunction/erectile dysfunction, Parkinson's disease, spinal cord injury, pain, bladder dysfunction/urinary incontinence, smoking cessation, and Alzheimer's disease.

In one aspect, the present invention relates to use of the compound as described herein or a pharmaceutically acceptable salt or amide thereof, in the manufacture of a medicament for treating a disorder modulated by the 5-HT_6 receptor selected form the group consisting of deficits in memory and cognition and learning, Alzheimer's disease, age-related cognitive decline, mild cognitive impairment, attention deficit/hyperactivity syndrome, schizophrenia, cognitive deficits of schizophrenia, depression, anxiety, obsessive compulsive disorders, Parkinson's disease, epilepsy, migraine, sleep disorders, anorexia, bulimia, irritable bowel syndrome, stroke, spinal or head trauma and head injuries, drug addiction, and obesity.

In one aspect, the present invention relates to compounds of having a formula of (I):