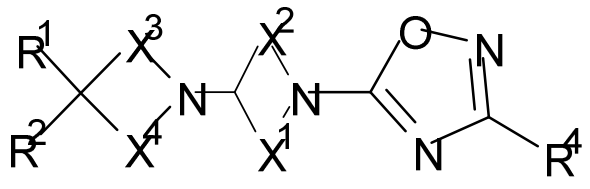
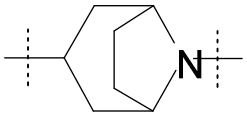
**CLAIMS**

1. A compound of formula (1):


(1);

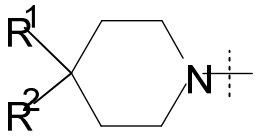
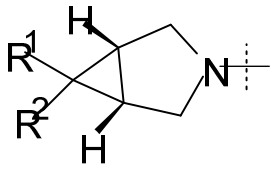
or a salt thereof, wherein:

the ring system formed by $X^1$ and $X^2$ is selected from:


and

;

the ring system formed by $X^3$ and $X^4$ is selected from:


and

;

$R^1$ is $CONR^5R^6$;

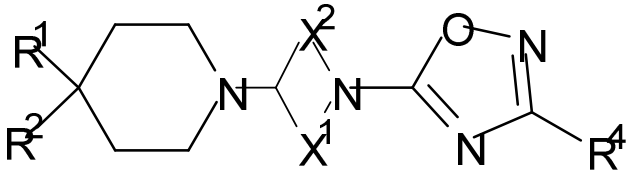
$R^2$ is selected from hydrogen, fluorine, cyano and a $C_{1-3}$ hydrocarbon group which is optionally substituted with one to six fluorine atoms;

$R^4$ is H or $C_{1-6}$ alkyl optionally substituted with one or more fluorine atoms;

$R^5$ is hydrogen or a non-aromatic $C_{1-10}$ hydrocarbon group optionally substituted with one or more fluorine atoms;

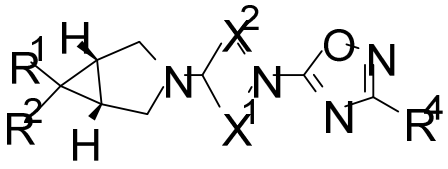
$R^6$ is hydrogen or a non-aromatic $C_{1-10}$ hydrocarbon group optionally substituted with one or more fluorine atoms.

2. The compound according to claim 1 which is a compound of formula (2):


(2);

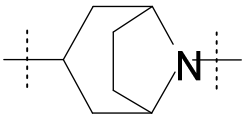
or a salt thereof.

3. The compound according to claim 1 which is a compound of formula (3):


(3);

or a salt thereof.

4. The compound according to claim 1, or a salt thereof, wherein the ring system formed by $X^1$ and $X^2$ is:


.

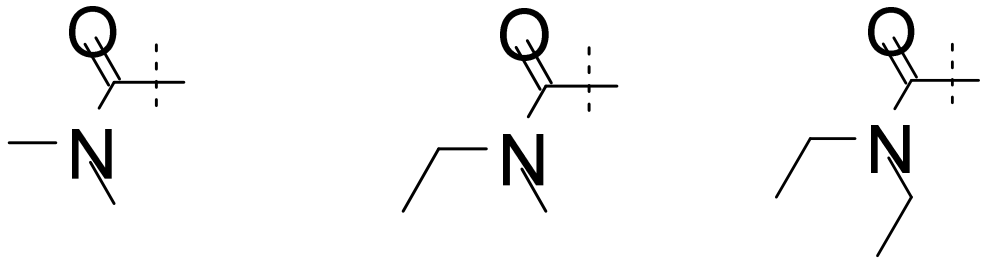
5. The compound according to claim 1, or a salt thereof, wherein $R^5$ is methyl, ethyl or methylcyclobutyl.

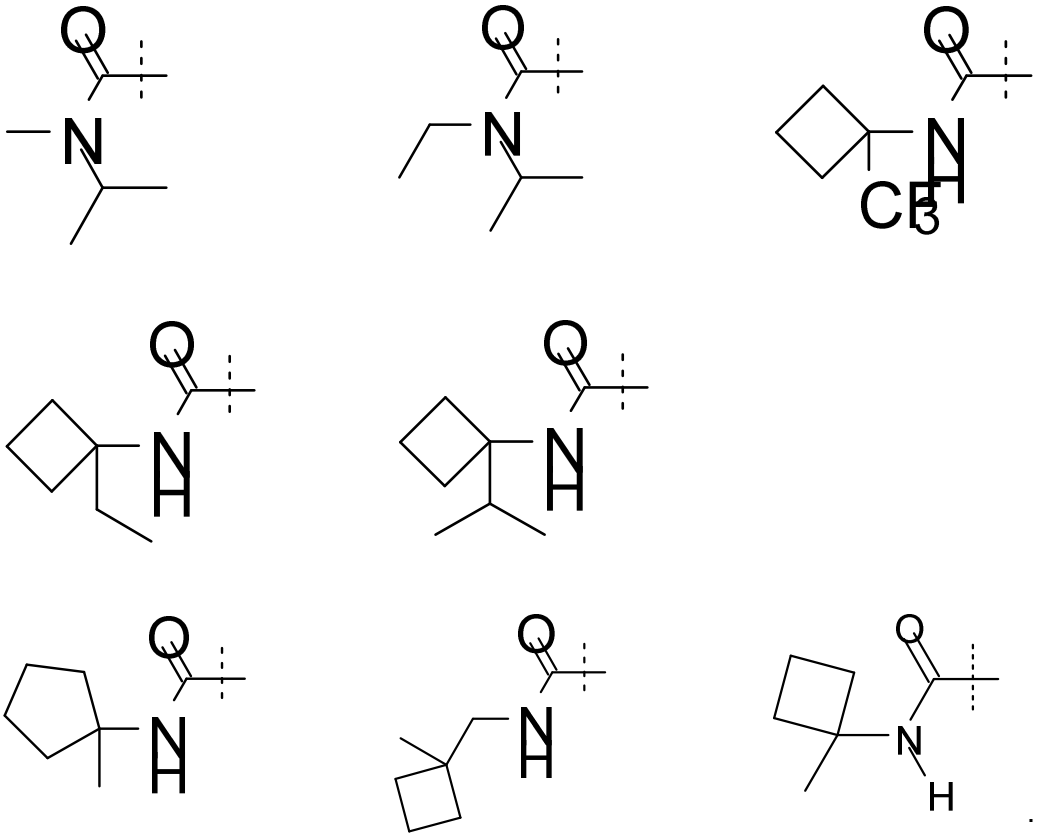
6. The compound according to claim 1, or a salt thereof, wherein $R^5$ is methylcyclobutyl.

7. The compound according to claim 1, or a salt thereof, wherein $R^6$ is H, methyl, ethyl or methylcyclobutyl.

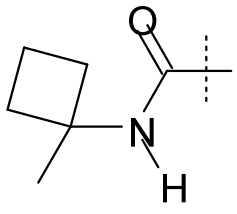
8. The compound according to claim 1, or a salt thereof, wherein $R^6$ is H.

9. The compound according to claim 1, or a salt thereof, wherein $R^1$ is selected from:





10. The compound according to claim 1, or a salt thereof, wherein $R^1$ is:



11. The compound according to claim 1, or a salt thereof, wherein $R^2$ is selected from H, methyl, cyano and F.

12. The compound according to claim 1, or a salt thereof, wherein $R^2$ is H.

13. The compound according to claim 1, or a salt thereof, wherein $R^4$ is methyl, trifluoromethyl, ethyl or isopropyl.

14. The compound according to claim 1 which is selected from:

*N*-(1-Methylcyclobutyl)-1-[8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]oct-3-yl]piperidine-4-carboxamide;
(1R,5S,6r)-N,N-Diethyl-3-[9-(3-methyl-1,2,4-oxadiazol-5-yl)-3-oxa-9-azabicyclo[3.3.1]non-7-yl]-3-azabicyclo[3.1.0] hexane-6-carboxamide;
1-(8-(3-Methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-N-(1-(trifluoromethyl)cyclobutyl)piperidine-4-carboxamide;
N-(1-Ethylcyclobutyl)-1-(8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo [3.2.1]octan-3-yl)piperidine-4-carboxamide;
N-(1-isopropylcyclobutyl)-1-(8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)piperidine-4-carboxamide;
1-(8-(3-Methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-N-(1-methylcyclopentyl)piperidine-4-carboxamide;
1-(8-(3-Methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-N-((1-methylcyclobutyl)methyl)piperidine-4-carboxamide;
(1R,5S,6r)-3-(8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-N-(1-methylcyclobutyl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;
N-(1-Methylcyclobutyl)-1-(8-(3-(trifluoromethyl)-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)piperidine-4-carboxamide;
(1R,5S,6r)-N-isopropyl-N-methyl-3-(9-(3-methyl-1,2,4-oxadiazol-5-yl)-3-oxa-9-azabicyclo[3.3.1]nonan-7-yl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;
(1R,5S,6r)-N,N-diethyl-3-(9-(3-(trifluoromethyl)-1,2,4-oxadiazol-5-yl)-3-oxa-9-azabicyclo[3.3.1]nonan-7-yl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;
(1R,5S,6r)-N-ethyl-N-methyl-3-(8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;
(1R,5S,6r)-N,N-diethyl-3-(8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;
(1R,5S,6r)-N,N-dimethyl-3-(9-(3-(trifluoromethyl)-1,2,4-oxadiazol-5-yl)-3-oxa-9-azabicyclo[3.3.1]nonan-7-yl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;
(1R,5S,6r)-N-isopropyl-N-methyl-3-(8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;
(1R,5S,6r)-3-(8-(3-methyl-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)-N-(1-(trifluoromethyl)cyclobutyl)-3-azabicyclo[3.1.0]hexane-6-carboxamide;

or a salt thereof.

15. The compound according to claim 1 which is N-(1-Methylcyclobutyl)-1-(8-(3-(trifluoromethyl)-1,2,4-oxadiazol-5-yl)-8-azabicyclo[3.2.1]octan-3-yl)piperidine-4-carboxamide or a salt thereof.

16. The compound according to claim 1 which is (1R,5S,6r)-N,N-diethyl-3-(9-(3-(trifluoromethyl)-1,2,4-oxadiazol-5-yl)-3-oxa-9-azabicyclo[3.3.1]nonan-7-yl)-3-azabicyclo[3.1.0]hexane-6-carboxamide or a salt thereof.

17. A pharmaceutical composition comprising a compound according to claim 1, or a salt thereof, and a pharmaceutically acceptable excipient.

18. A compound according to claim 1, or a salt thereof, for use in therapy.

19. Use of a compound according to claim 1, or a salt thereof, in the manufacture of a medicament for treating a cognitive disorder selected from Schizophrenia, Alzheimer's disease and dementia with Lewy bodies, or for the treatment or lessening the severity of acute, chronic, neuropathic, or inflammatory pain.

20. The use according to claim 19 wherein the cognitive disorder is Alzheimer's disease.

21. The use according to claim 19 wherein the cognitive disorder is dementia with Lewy bodies.