R_5 and R_5' are each independently selected from group consisting of H, halogen, C_1-C_4alkyl, C_1-C_4alkoxy, C_2-C_4alkenyl, cyano, amino, phenyl, and hydroxyl, wherein C_1-C_4alkyl, C_2-C_4alkenyl and phenyl are optionally substituted by one or more substituents selected from R_a;

R_7 is selected from group consisting of –C(O)-C_1-C_4alkyl or C(O)-O-C_1-C_4alkyl, wherein C_1-C_4 alkyl is optionally substituted by 1, 2 or 3 substituents selected from R_b;

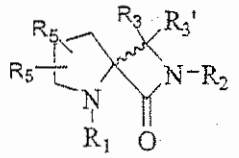
R_8 is selected from group consisting of H, –C(O)- C_1-C_4 alkyl or C(O)-O- C_1-C_4 alkyl, wherein C_1-C_4alkyl is optionally substituted by 1, 2 or 3 substituents selected from R_a;

R_a is selected, independently for each occurrence, from carboxy, hydroxyl, halogen, amino, phenyl, C_1-C_4 alkyl, and C_1-C_4 alkoxy;

R_b is selected, independently for each occurrence, from the group consisting of carboxy, hydroxyl, halogen, amino, phenyl, C_1-C_4 alkyl, C_1-C_4 alkoxy, and -NH-R_c; and

R_c is selected, independently for each occurrence, -C(O)-O-C_1-C_4alkyl; and –C(O)-C_1-C_4alkyl.

[0008a] In a first aspect, there is provided a compound represented



and pharmaceutically acceptable salts, stereoisomers, and N-oxides thereof; wherein

R_1 is C(O)-C_2-C_4alkyl, wherein C_2-C_4alkyl is substituted at one carbon with NH_2 or –N-carbobenzyloxy and at a different carbon by hydroxyl;

R_3 and R_3' are independently selected from the group consisting of H, halogen, hydroxyl, phenyl, C_1-C_4alkyl, amido, amine, or C_2-C_4alkenyl, wherein C_1-C_4alkyl, C_2-C_4alkenyl and phenyl are optionally substituted by one or more substituents selected from R_a;

R_2 is selected from the group consisting of H, R_7, $S(O)_2$-C_1-C_4alkyl, hydroxyl, or phenyl wherein C_1-C_4alkyl and phenyl are optionally substituted by one or more substituents selected from R_a;

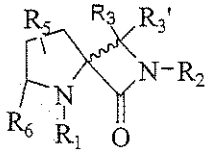
R_5 is H, halogen, C_1-C_4alkyl, C_1-C_4alkoxy, C_2-C_4alkenyl, cyano, amino, phenyl, or hydroxyl, wherein C_1-C_4alkyl, C_2-C_4alkenyl and phenyl are optionally substituted by one or more substituents selected from R_a;

R_7 is –C(O)-C_1-C_4alkyl, wherein-C_1-C_4 alkyl is optionally substituted by 1, 2 or 3 substituents selected from R_b;

R_a is selected, independently for each occurrence, from carboxy, hydroxyl, halogen, amino, and phenyl; and

R_b is selected, independently for each occurrence, from the group consisting of carboxy, hydroxyl, halogen, amino, phenyl, C_1-C_4 alkyl, C_1-C_4 alkoxy, and -NH-R_c.

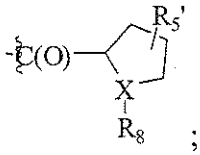
[0008b] In a second aspect, there is provided a compound represented by formula II:



II

and pharmaceutically acceptable salts, stereoisomers and N-oxides thereof; wherein

R_1 is selected from the group consisting of H, hydroxyl, -$S(O)_2$-C_1-C_4alkyl, C_1-C_4alkyl, R_7, or



;

X is CH or N;

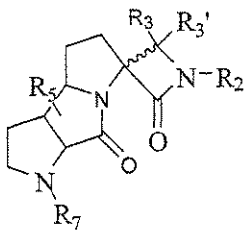
R_3 and R_3' are each independently selected from the group consisting of H, halogen, hydroxyl, phenyl, C_1-C_4alkyl, amido, amine, or C_2-C_4alkenyl, wherein C_1-C_4alkyl, C_2-C_4alkenyl and phenyl are optionally substituted by one or more substituents selected from R_a;

R_2 is selected from the group consisting of H, R_7, -$S(O)_2$, $S(O)_2$-C_1-C_4alkyl, hydroxyl, or phenyl wherein C_1-C_4alkyl and phenyl are optionally substituted by one or more substituents selected from R_a;

R_5 is selected from group consisting of H, halogen, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4 alkenyl, cyano, amino, phenyl, and hydroxyl, wherein C_1-C_4alkyl, C_2-C_4alkenyl and phenyl are optionally substituted by one or more substituents selected from R_a;

R_6 is selected from group consisting of H, halogen, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_2-C_4alkenyl, cyano, amino, phenyl, and hydroxyl wherein C_1-C_4 alkyl, C_2-C_4alkenyl and phenyl are optionally substituted by 1, 2 or 3 substituents selected from R_a;

R_7 is –C(O)-C_1-C_4alkyl, wherein C_1-C_4 alkyl is optionally substituted by 1, 2 or 3 substituents selected from R_b; or R_1 and R_6, taken together with formula II form:



;

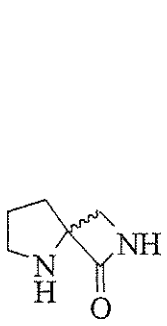
R_8 is selected from group consisting of H, or –C(O)-C_1-C_4alkyl wherein C_1-C_4alkyl is optionally substituted by 1, 2 or 3 substituents selected from R_a;

R_a is selected, independently for each occurrence, from carboxy, hydroxyl, halogen, amino, and phenyl;

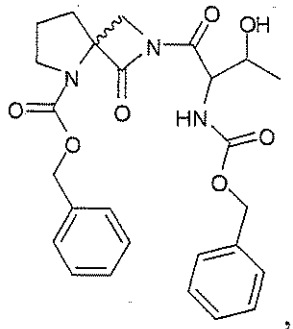
R_b is selected, independently for each occurrence, from the group consisting of carboxy, hydroxyl, halogen, amino, phenyl, C_1-C_4alkyl, C_1-C_4alkoxy, and -NH-R_c; and

R_c is selected, independently for each occurrence, -C(O)-O-C_1-C_4alkyl; and –C(O)-C_1-C_4alkyl.

[0008c] In a third aspect, there is provided a compound selected from the group consisting of:

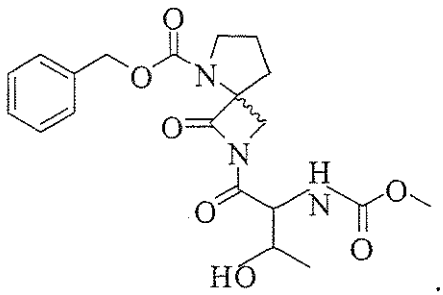


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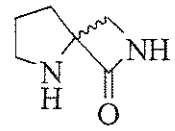


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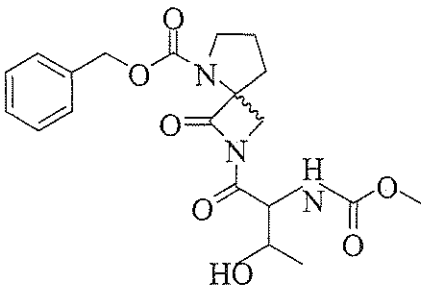
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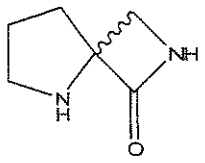
[0008d] In a fourth aspect, there is provided a non-peptidyl compound selected from the group consisting of:



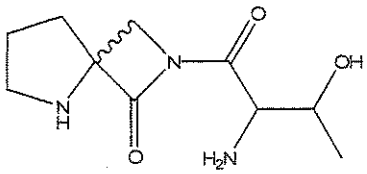
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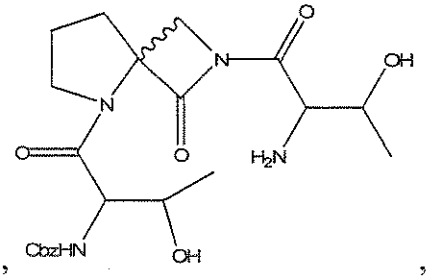
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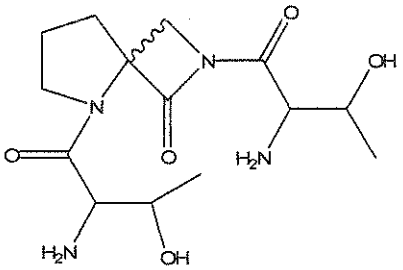
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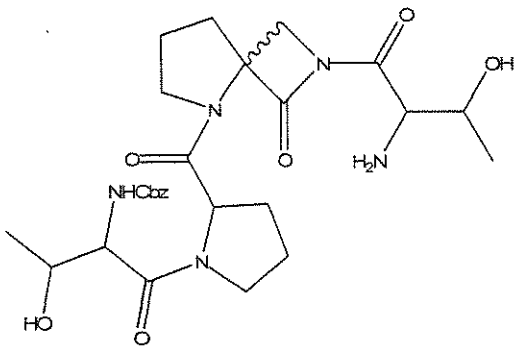


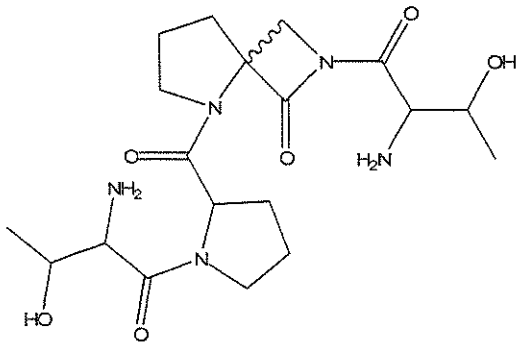
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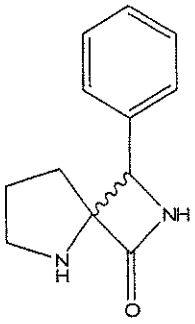
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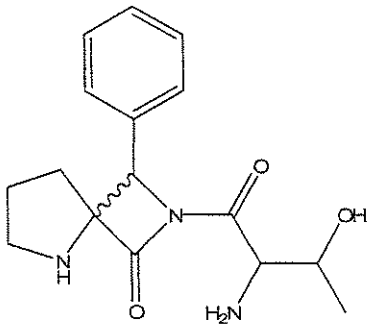

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NH_2
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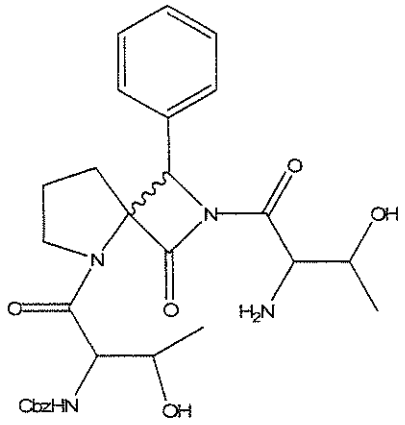
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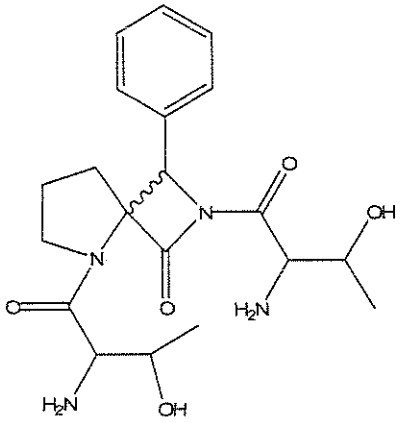
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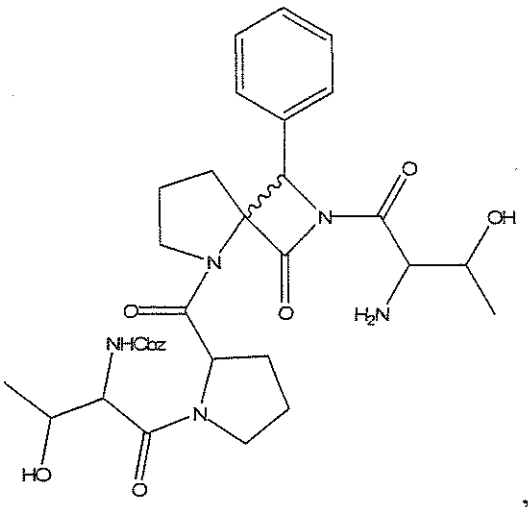
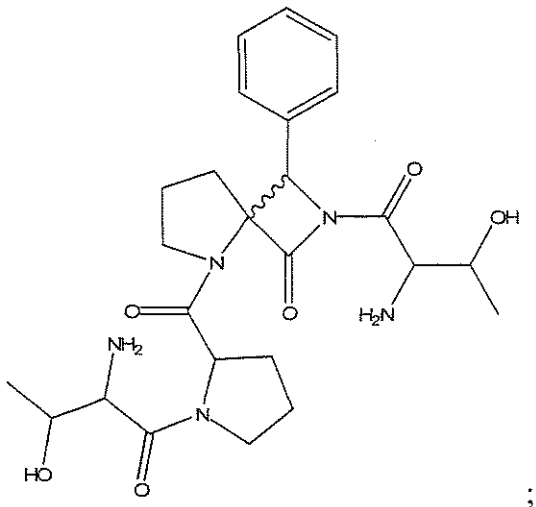
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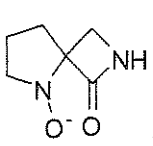
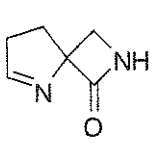
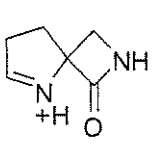
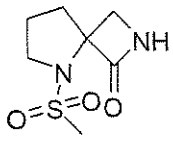
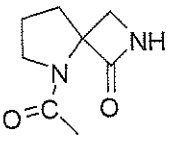
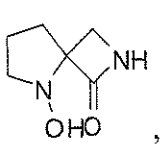
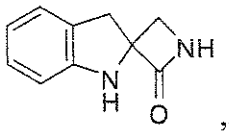
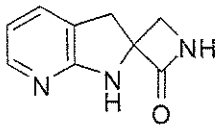

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or pharmaceutically acceptable salts, stereoisomers and N-oxides thereof.

[0008e] In a fifth aspect, there is provided the use of an effective amount of a compound as defined herein in the preparation of a medicament for treating depression, obsessive-compulsive disorder, or schizophrenia in a patient in need thereof.

[0009] Also provided herein are pharmaceutically acceptable compositions comprising a disclosed compound, and a pharmaceutically acceptable excipient. For example, such compositions may be suitable for oral administration to a patient.

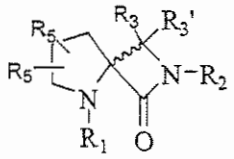
[0010] A method for treating a cognitive disorder, such as a disorder associated with memory loss or impaired learning comprising administering to an patient in need thereof an effective amount of a disclosed compound. For example, provided herein are methods of treating or ameliorating memory loss or impaired learning in a patient in need thereof.

In an embodiment, methods for treating neuropathic pain in a patient in need thereof comprising administering an effective amount of a disclosed compound is provided.

[0011] Also disclosed herein are methods for treating depression, obsessive-compulsive disorder, or schizophrenia in a patient in need thereof comprising administering an effective amount of a disclosed compound. In another embodiment, methods for treating post traumatic stress disorder, an alcohol dependency disorder, or an addiction to an addictive drug in a patient in need thereof comprising administering an effective amount of a disclosed compounds are provided.

CLAIMS

1. A compound represented



and pharmaceutically acceptable salts, stereoisomers, and N-oxides thereof; wherein

R_1 is C(O)-C_2-C_4alkyl, wherein C_2-C_4alkyl is substituted at one carbon with NH_2 or –N-carbobenzyloxy and at a different carbon by hydroxyl;

R_3 and R_3' are independently selected from the group consisting of H, halogen, hydroxyl, phenyl, C_1-C_4alkyl, amido, amine, or C_2-C_4alkenyl, wherein C_1-C_4alkyl, C_2-C_4alkenyl and phenyl are optionally substituted by one or more substituents selected from R_a;

R_2 is selected from the group consisting of H, R_7, $S(O)_2$-C_1-C_4alkyl, hydroxyl, or phenyl wherein C_1-C_4alkyl and phenyl are optionally substituted by one or more substituents selected from R_a;