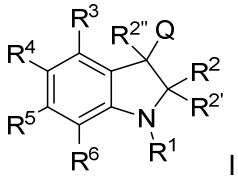
[007] Some potential non-hallucinogenic psychedelic analogs have been reported (Cunningham M.J. et al., ACS Chem. Neurosci. 2023, 14, 1, 119-135, Hofman, A. LSD, My Problem Child: Reflections on Sacred Drugs, Mysticism, and Science; MAPS, Multidisciplinary Association for Psychedelic Studies: Santa Cruz, CA, 2009, Weingartner, H. et al., J. Clin. Pharmacol. New Drugs 1971, 11, 103-111, Shulgin. A.T. 2-Amino-1-(2,5-dimethoxyphenyl) butanes US Patent No. 4105695A, Shulgin, A.T. Soc. Pharmacol. 1987, 1, 279-290, Cameron, et al. Nature 2021, 589(7842) 474-479, Lu J. et al., Molecular Psychiatry, 2021, 26, 6237-6252, Cao et al., Science 2022, 375, 403-411, Vargas et al., Science, 2023, 379, 700-706). While results with these non-hallucinogenic 5-HT_{2A} agonists have been encouraging, non-hallucinogenic 5-HT_{2A} agonist therapeutic development remains in its infancy.

[008] There remains a need to provide new psychedelic and non-hallucinogenic 5-HT_{2A} agonist molecules for the treatment, for example, of mental diseases.

SUMMARY OF THE APPLICATION

[0008a] In one aspect, provided herein is a compound of Formula I:



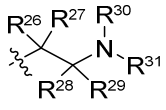
I

or a pharmaceutically acceptable salt, solvate, and/or prodrug thereof,

wherein:

R^1 is selected from $C(O)R^7$, CO_2R^7, $C(O)N(R^7)(R^{7'})$, $S(O)R^7$, SO_2R^7, C_{1-6}alkyleneR^7, and R^7;

Q is Q3:



(Q3);

$\sim$ over a bond means that the bond is attached to a remaining portion of the compound;

R^2, $R^{2'}$ and $R^{2''}$ are independently selected from H, halo, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkyleneN$(R^{2a})(R^{2b})$, and SC_{1-6}alkyl;

R^{2a} and R^{2b} are independently selected from H and C_{1-6}alkyl;

R^3, R^4, R^5 and R^6 are independently selected from H, halo, N$(R^{5'})(R^{6'})$, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkyleneN$(R^{5'})(R^{6'})$ and SC_{1-6}alkyl, the latter four groups being optionally substituted with one or two substituents independently selected from OH and C_{1-6}alkoxy, or

two adjacent R^3, R^4, R^5, and R^6 are linked together to form O-$(CH_2)_{1-2}$O and the remaining of R^3, R^4, R^5 and R^6 are independently selected from H, halo, C_{1-6}alkyl, C_{1-6}alkoxy, $N(R^{5'})(R^{6'})$, C_{1-6}alkyleneN$(R^{5'})(R^{6'})$, and SC_{1-6}alkyl, or

one of R^3, R^4, R^5 and R^6 is selected from A, O-A and C_{1-4}alkyleneA and the remaining of R^3, R^4, R^5, and R^6 are independently H or halo;

$R^{5'}$ and $R^{6'}$ are independently selected from H and C_{1-6}alkyl;

A is selected from phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{54} and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{54}, wherein the phenyl, C_{3-10}cycloalkyl, 3- to 6-membered heterocycloalkyl, and 5- to 6-membered heteroaryl are optionally substituted with one or more substituents independently selected from halo, C_{1-4}alkyl, OC_{1-4}alkyl, $N(R^{54a})(R^{54b})$, C_{1-4}alkyleneN$(R^{54a})(R^{54b})$, and SC_{1-4}alkyl;

R^7 is selected from H, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoieties independently selected from O, S, N, and $NR^{7''}$, and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoieties independently selected from O, S, N, and $NR^{7''}$, wherein the latter 7 groups are optionally substituted with one or more substituents independently selected from halo, OR^{55}, $N(R^{55})(R^{56})$, and SR^{55} and/or the C_{1-6}alkyl is optionally interrupted by one to three heteromoieties independently selected from O, C(O), CO_2, and NR^{57};

$R^{7'}$ is selected from H and C_{1-6}alkyl;

$R^{7''}$ is selected from H and C_{1-6}alkyl;

R^{26}, R^{27}, R^{28}, and R^{29} are independently selected from H, halo, and C_{1-6}alkyl;

R^{30} and R^{31} are independently selected from H, C_{1-6}alkyl, and $C(O)C_{1-6}$alkyl, or

R^{30} and R^{31}, together with the N atom to which they are bound, form a 3- to 6-membered heterocyclic ring which optionally comprises one or two additional heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{58};

R^{54}, R^{55}, R^{56}, R^{57}, and R^{58} are independently selected from H and C_{1-6}alkyl;

R^{54a} and R^{54b} are independently selected from H and C_{1-6}alkyl; and

available hydrogen atoms are optionally and independently substituted with a fluorine atom or a chlorine atom and available atoms are optionally substituted with alternate isotope thereof,

provided that when R^{26}, R^{27}, R^{28}, and R^{29} are all H and R^{30} and R^{31} are H or CH_3, and:

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5, and R^6 are all H,

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^5, and R^6 are all H and R^4 is OCH_3, or

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5, and R^6 are all H and R^5 is OCH_3,

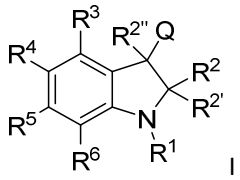
then the compound of Formula I is an (R)- or (S)-enantiomer of the carbon to which Q is attached.

[0008b] In another aspect, provided herein is a pharmaceutical composition comprising one or more compounds as disclosed herein or a pharmaceutically acceptable salt, solvate, and/or prodrug thereof and a pharmaceutically acceptable carrier.

[0008c] In another aspect, provided herein is a use of one or more compounds as disclosed herein in the manufacture of a medicament for treating a central nervous system (CNS) disease, disorder, or condition in a subject in need thereof.

[009] [0008d] In another aspect, provided herein is a use of one or more compounds as disclosed herein in the manufacture of a medicament for treating a central nervous system (CNS) disease, disorder, or condition and/or a neurological disease, disorder, or condition in a subject in need thereof.Compounds of the present application modulate the activity of serotonin receptor subtypes, in particular 5-HT_{2A}, by direct binding to these receptors.

[010] Accordingly, the present application includes compounds of Formula I:



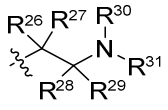
I

or a pharmaceutically acceptable salt, solvate and/or prodrug thereof,

wherein:

R^1 is selected from $C(O)R^7$, CO_2R^7, $C(O)N(R^7)(R^{7'})$, $S(O)R^7$, SO_2R^7, $C_{1\text{-}4}$alkyleneR^7 and R^7;

Q is Q3:



(Q3);

$\sim$ over a bond means that the bond is attached to a remaining portion of the compound;

R^2, $R^{2'}$ and $R^{2''}$ are independently selected from H, halo, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$alkoxy $C_{1\text{-}6}$alkyleneN(R^{2a})(R^{2b}) and $SC_{1\text{-}6}$alkyl;

R^{2a} and R^{2b} are independently selected from H and C_{1-6}alkyl;

R^3, R^4, R^5 and R^6 are independently selected from H, halo, $N(R^{5'})(R^{6'})$, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkyleneN$(R^{5'})(R^{6'})$ and SC_{1-6}alkyl, the latter four groups being optionally substituted with one or two substituents selected from OH and C_{1-6}alkoxy, or

two adjacent of R^3, R^4, R^5 and R^6 are linked together to form O-$(CH_2)_{1-2}$O and the remaining of R^3, R^4, R^5 and R^6 are independently selected from H, halo, C_{1-6}alkyl, C_{1-6}alkoxy, $N(R^{5'})(R^{6'})$, C_{1-6}alkyleneN$(R^{5'})(R^{6'})$ and SC_{1-6}alkyl, or

one of R^3, R^4, R^5 and R^6 is selected from A, O-A and C_{1-4}alkyleneA and the other of R^4 and remaining of R^3, R^4, R^5 and R^6 are, independently H or halo;

$R^{5'}$ and $R^{6'}$ are independently selected from H and C_{1-6}alkyl;

A is selected from phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoeities independently selected from O, S, S(O), SO_2, N and NR^{54} and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoeities independently selected from O, S, S(O), SO_2, N and NR^{54}, wherein the phenyl, C_{3-10}cycloalkyl, 3- to 6-membered heterocycloalkyl and 5- to 6-membered heteroaryl are optionally substituted with one or more substituents independently selected from halo, C_{1-4}alkyl, OC_{1-4}alkyl, $N(R^{54a})(R^{54b})$, C_{1-4}alkyleneN$(R^{54a})(R^{54b})$ and SC_{1-4}alkyl;

R^7 is selected from H, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoeities independently selected from O, S, N and $NR^{7''}$ and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoeities independently selected from O, S, N and $NR^{7''}$, wherein the latter 7 groups are optionally substituted with one or more substituents independently selected from halo, OR^{55}, $N(R^{55})(R^{56})$ and SR^{55} and/or the C_{1-6}alkyl is optionally interrupted by one to three heteromoieties independently selected from O, C(O), CO_2 and NR^{57};

$R^{7'}$ is selected from H and C_{1-6}alkyl;

$R^{7''}$ is selected from H and C_{1-6}alkyl;

R^{26}, R^{27}, R^{28} and R^{29} are independently selected from H, halo and C_{1-6}alkyl;

R^{30} and R^{31} are independently selected from H, C_{1-6}alkyl and $C(O)C_{1-6}$alkyl, or

R^{30} and R^{31}, together with the N atom to which they are bound, form a 3- to 6-membered heterocyclic ring which optionally comprises one or two additional heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{58};

R^{54}, R^{55}, R^{56}, R^{57} and R^{58} are independently selected from H and C_{1-6}alkyl;

R^{54a} and R^{54b} are independently selected from H and C_{1-6}alkyl; and

all available hydrogen atoms are optionally and independently substituted with a fluorine atom or chlorine atom and all available atoms are optionally substituted with alternate isotope thereof,

provided that when R^{26}, R^{27}, R^{28} and R^{29} are all H and R^{30} and R^{31} are H or CH_3, and:

R^1 is R^7 and R^7 is H,

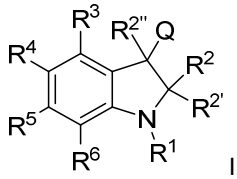
R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5 and R^6 are all H,

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^5 and R^6 are all H and R^4 is OCH_3, or

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5 and R^6 are all H and R^5 is OCH_3,

then the compound of Formula I is an (R)- or (S)-enantiomer of the carbon to which Q is attached.

[011] In some examples, the compound of Formula I is defined as follows:

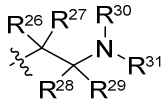


I

or a pharmaceutically acceptable salt, solvate and/or prodrug thereof,

R^1 is H;

Q is Q3:



(Q3);

$\sim$ over a bond means that the bond is attached to a remaining portion of the compound;

R^2, $R^{2'}$ and $R^{2''}$ are independently selected H, D and F;

R^3, R^4, R^5 and R^6 are independently selected from H, C_{1-4}alkoxy, C_{1-4}fluoralkoxy and C_{1-4}deuteroalkoxy, or

two adjacent of R^3, R^4, R^5 and R^6 are linked together to form O-$(CH_2)_{1-2}$O and the remaining of R^3, R^4, R^5 and R^6 are independently selected from H, halo, C_{1-6}alkyl and C_{1-6}alkoxy;

R^{26}, R^{27}, R^{28} and R^{29} are independently selected from H, halo and C_{1-6}alkyl;

R^{30} and R^{31} are independently selected from H, C_{1-6}alkyl and $C(O)C_{1-6}$alkyl, or

R^{30} and R^{31}, together with the N atom to which they are bound, form a 3- to 6-membered heterocyclic ring which optionally comprises one or two additional heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{58};

R^{58} is selected from H and C_{1-6}alkyl; and

all available hydrogen atoms are optionally and independently substituted with a fluorine atom or chlorine atom and all available atoms are optionally substituted with alternate isotope thereof,

provided that when R^{26}, R^{27}, R^{28} and R^{29} are all H and R^{30} and R^{31} are H or CH_3, and:

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5 and R^6 are all H,

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^5 and R^6 are all H and R^4 is OCH_3, or

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5 and R^6 are all H and R^5 is OCH_3,

then the compound of Formula I is an (R)- or (S)-enantiomer of the carbon to which Q is attached.

[012] In a further example, the compounds of the application are used as medicaments. Accordingly, the application also includes a compound of the application for use as a medicament.

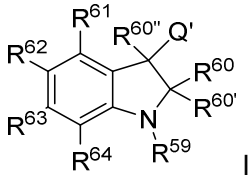
[013] The present application also includes a method of treating psychosis or psychotic symptoms comprising administering a therapeutically effective amount of one or more compounds of the application to a subject in need thereof.

[014] The present application also includes a method of treating a mental illness comprising administering a therapeutically effective amount of one or more compounds of the application to a subject in need thereof.

[015] The present application also includes a method of treating a central nervous system (CNS) disease, disorder or condition and/or a neurological disease, disorder or condition.

[016] The present application also includes a method of treating an endophenotype and/or symptom cluster associated with a disease, disorder or condition that is treated by activation of a serotonin receptor.

[017] The present application also includes methods and uses of a non-hallucinogenic compound of Formula II



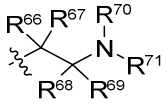
II

or a pharmaceutically acceptable salt, solvate and/or prodrug thereof,

wherein:

R^{59} is selected from $C(O)R^{65}$, CO_2R^{65}, $C(O)N(R^{65})(^{'65'})$, $S(O)R^{65}$, SO_2R^{65}, C_{1-6}alkyleneR^{65} and R^{65};

Q' is Q3':



(Q3');

$\sim$ over a bond means that the bond is attached to a remaining portion of the compound;

R^{60}, $R^{60'}$ and $R^{60''}$ are independently selected from H, halo, C_{1-6}alkyl and C_{1-6}alkoxy, C_{1-6}alkyleneN(R^{60a})(R^{60b}) and SC_{1-6}alkyl;

R^{60a} and R^{60b} are independently selected from H and C_{1-6}alkyl;

R^{61}, R^{62}, R^{63} and R^{64} are independently selected from H, halo, N($R^{63'}$)($R^{64'}$), C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkyleneN($R^{63'}$)($R^{64'}$) and SC_{1-6}alkyl, the latter four groups being optionally substituted with one or two substituents selected from OH and C_{1-6}alkoxy, or

two adjacent of R^{61}, R^{62}, R^{63} and R^{64} are linked together to form O-$(CH_2)_{1-2}$O and the remaining of R^{61}, R^{62}, R^{63} and R^{64} are independently selected from H, halo, C_{1-6}alkyl and C_{1-6}alkoxy, N($R^{63'}$)($R^{64'}$), C_{1-6}alkyleneN($R^{63'}$)($R^{64'}$) and SC_{1-6}alkyl; or

one of R^{61}, R^{62}, R^{63} and R^{64} is selected from A', O-A' and C_{1-4}alkyleneA' and the remaining of R^{61}, R^{62}, R^{63} and R^{64} are independently H or halo;

$R^{63'}$ and $R^{64'}$ are independently selected from H and C_{1-6}alkyl;

A' is selected from phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoeities independently selected from O, S, S(O), SO_2, N and NR^{72} and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoeities independently selected from O, S, S(O), SO_2, N and NR^{72}, wherein the phenyl, C_{3-10}cycloalkyl, 3- to 6-membered heterocycloalkyl and 5- to 6-membered heteroaryl are optionally substituted with one or more substituents

independently selected from halo, C_{1-4}alkyl, OC_{1-4}alkyl, $N(R^{72a})(R^{72b})$, C_{1-6}alkyleneN$(R^{72a})(R^{72b})$ and SC_{1-6}alkyl;

R^{65} is selected from H, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoeities independently selected from O, S, N and $NR^{65''}$ and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoeities independently selected from O, S, N and $NR^{65''}$, wherein the latter 5 groups are optionally substituted with one or more substituents independently selected from halo, OR^{73}, $N(R^{73})(R^{74})$ and SR^{73} and/or the C_{1-6}alkyl is optionally interrupted by one to three heteromoieties independently selected from O, C(O), CO_2 and NR^{75};

$R^{65'}$ is selected from H and C_{1-6}alkyl;

$R^{65''}$ is selected from H and C_{1-6}alkyl;

R^{66}, R^{67}, R^{68} and R^{69} are independently selected from H, halo and C_{1-6}alkyl;

R^{70} and R^{71} are independently selected from H, C_{1-6}alkyl and $C(O)C_{1-6}$alkyl, or

R^{70} and R^{71}, together with the N atom to which they are bound, form a 3- to 6-membered heterocyclic ring which optionally comprises one or two additional heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{76};

R^{72}, R^{73}, R^{74}, R^{75} and R^{76} are independently selected from H and C_{1-6}alkyl;

R^{72a} and R^{72b} are independently selected from H and C_{1-6}alkyl; and

all available hydrogen atoms are optionally and independently substituted with a fluorine atom or chlorine atom and all available atoms are optionally substituted with alternate isotope thereof.

[018] The application additionally provides a process for the preparation of compounds of the application. General and specific processes are discussed in more detail below and set forth in the examples below.

[019] The application also provides a process for the preparation of compounds of Formula II, or a pharmaceutically acceptable salt, solvate and/or prodrug thereof. General and specific processes are discussed in more detail below and set forth in the examples below.

[020] Other features and advantages of the present application will become apparent from the following detailed description. It should be understood, however, that the detailed description and the specific examples, while indicating examples of the application, are given by way of illustration only and the scope of the claims should not be limited by these

examples but should be given the broadest interpretation consistent with the description as a whole.

BRIEF DESCRIPTION OF THE DRAWINGS

[021] The present application will be described in greater detail with reference to the attached drawings in which:

[022] Figure 1 shows the scores for exemplary compound II-1 in the mouse head twitch assays at doses of up to 30 mg/kg.

DETAILED DESCRIPTION

I. Definitions

[023] Unless otherwise indicated, the definitions and embodiments described in this and other sections are intended to be applicable to all embodiments and aspects of the present application herein described for which they are suitable as would be understood by a person skilled in the art.

[024] The term "compound(s) of the application" or "compound(s) of the present application" and the like as used herein refers to a compound of Formula I and includes pharmaceutically acceptable salts, solvates and/or prodrugs thereof as well as all stereoisomers and regioisomers.

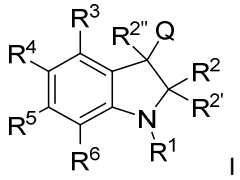
[025] The term "composition(s) of the application" or "composition(s) of the present application" and the like as used herein refers to a composition, such a pharmaceutical composition, comprising one or more compounds of the application.

[026] The term "and/or" as used herein means that the listed items are present, or used, individually or in combination. In effect, this term means that "at least one of or "one or more" of the listed items is used or present. The term "and/or" with respect to pharmaceutically acceptable salts and/or solvates thereof means that the compounds of the application exist as individual salts and solvates, as well as a combination of, for example, a salt of a solvate of a compound of the application.

[027] As used in the present application, the singular forms "a", "an" and "the" include plural references unless the content clearly dictates otherwise. For example, an example including "a compound" should be understood to present certain aspects with one compound, or two or more additional compounds.

Claims:

1. A compound of Formula I:



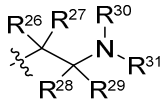
I

or a pharmaceutically acceptable salt, solvate, and/or prodrug thereof,

wherein:

R^1 is selected from $C(O)R^7$, CO_2R^7, $C(O)N(R^7)(R^{7'})$, $S(O)R^7$, SO_2R^7, C_{1-6}alkyleneR^7, and R^7;

Q is Q3:



(Q3);

$\sim$ over a bond means that the bond is attached to a remaining portion of the compound;

R^2, $R^{2'}$ and $R^{2''}$ are independently selected from H, halo, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkylene$N(R^{2a})(R^{2b})$, and SC_{1-6}alkyl;

R^{2a} and R^{2b} are independently selected from H and C_{1-6}alkyl;

R^3, R^4, R^5 and R^6 are independently selected from H, halo, $N(R^{5'})(R^{6'})$, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkylene$N(R^{5'})(R^{6'})$ and SC_{1-6}alkyl, the latter four groups being optionally substituted with one or two substituents independently selected from OH and C_{1-6}alkoxy, or

two adjacent R^3, R^4, R^5, and R^6 are linked together to form $O\text{-}(CH_2)_{1-2}O$ and the remaining of R^3, R^4, R^5 and R^6 are independently selected from H, halo, C_{1-6}alkyl, C_{1-6}alkoxy, $N(R^{5'})(R^{6'})$, C_{1-6}alkylene$N(R^{5'})(R^{6'})$, and SC_{1-6}alkyl, or

one of R^3, R^4, R^5 and R^6 is selected from A, O-A and C_{1-4}alkyleneA and the remaining of R^3, R^4, R^5, and R^6 are independently H or halo;

$R^{5'}$ and $R^{6'}$ are independently selected from H and C_{1-6}alkyl;

A is selected from phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{54} and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{54}, wherein the phenyl, C_{3-10}cycloalkyl, 3- to 6-membered

heterocycloalkyl, and 5- to 6-membered heteroaryl are optionally substituted with one or more substituents independently selected from halo, C_{1-4}alkyl, OC_{1-4}alkyl, $N(R^{54a})(R^{54b})$, C_{1-4}alkyleneN$(R^{54a})(R^{54b})$, and SC_{1-4}alkyl;

R^7 is selected from H, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoieties independently selected from O, S, N, and $NR^{7''}$, and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoieties independently selected from O, S, N, and $NR^{7''}$, wherein the latter 7 groups are optionally substituted with one or more substituents independently selected from halo, OR^{55}, $N(R^{55})(R^{56})$, and SR^{55} and/or the C_{1-6}alkyl is optionally interrupted by one to three heteromoieties independently selected from O, C(O), CO_2, and NR^{57};

$R^{7'}$ is selected from H and C_{1-6}alkyl;

$R^{7''}$ is selected from H and C_{1-6}alkyl;

R^{26}, R^{27}, R^{28}, and R^{29} are independently selected from H, halo, and C_{1-6}alkyl;

R^{30} and R^{31} are independently selected from H, C_{1-6}alkyl, and $C(O)C_{1-6}$alkyl, or

R^{30} and R^{31}, together with the N atom to which they are bound, form a 3- to 6-membered heterocyclic ring which optionally comprises one or two additional heteromoieties independently selected from O, S, S(O), SO_2, N, and NR^{58};

R^{54}, R^{55}, R^{56}, R^{57}, and R^{58} are independently selected from H and C_{1-6}alkyl;

R^{54a} and R^{54b} are independently selected from H and C_{1-6}alkyl; and

available hydrogen atoms are optionally and independently substituted with a fluorine atom or a chlorine atom and available atoms are optionally substituted with alternate isotope thereof,

provided that when R^{26}, R^{27}, R^{28}, and R^{29} are all H and R^{30} and R^{31} are H or CH_3, and:

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5, and R^6 are all H,

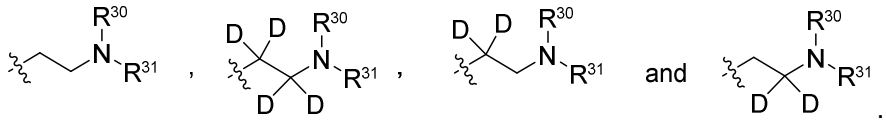
R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^5, and R^6 are all H and R^4 is OCH_3, or

R^1, R^2, $R^{2'}$, $R^{2''}$, R^3, R^4, R^5, and R^6 are all H and R^5 is OCH_3,

then the compound of Formula I is an (R)- or (S)-enantiomer of the carbon to which Q is attached.

2. The compound of claim 1, wherein R^{26}, R^{27}, R^{28}, and R^{29} are independently selected from H and D.

3. The compound of claim 1, wherein Q is selected from one of the following groups:



4. The compound of claim 3, wherein R^{30} and R^{31} are independently selected from H, C_{1-6}alkyl, and $C(O)C_{1-6}$alkyl, wherein available hydrogen atoms are optionally and independently substituted with a fluorine atom or a deuterium atom.

5. The compound of claim 4, wherein R^{30} and R^{31} are independently selected from H, D, C_{1-6}alkyl, C_{1-6}fluoroalkyl, C_{1-6}deuteroalkyl, C_{1-6}alkoxy, $C(O)C_{1-6}$fluoroalkyl, and $C(O)C_{1-6}$deuteroalkyl.

6. The compound of claim 5, wherein R^{30} and R^{31} are independently selected from H, D, CH_3, CF_3, and $CH(CH_3)$.

7. The compound of any one of claims 1 to 8, wherein R^1 is selected from $C(O)R^7$, CO_2R^7, $C(O)N(R^7)(R^{7'})$, $S(O)R^7$, SO_2R^7, C_{1-4}alkyleneR^7, and R^7, wherein R^7 is selected from H, C_{1-4}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, phenyl, C_{3-6}cycloalkyl, 3- to 6-membered heterocycloalkyl comprising 1 to 4 heteromoieties independently selected from O, S, N, and $NR^{7''}$, and 5- to 6-membered heteroaryl comprising 1 to 4 heteromoieties independently selected from O, S, N, and $NR^{7''}$, wherein the latter 7 groups are optionally substituted with one or more substituents independently selected from halo, OR^{55}, $N(R^{55})(R^{56})$, and SR^{55} and/or the C_{1-4}alkyl is optionally interrupted by one to three heteromoieties independently selected from O, C(O), CO_2, and NR^{57}; and wherein available hydrogen atoms are optionally and independently substituted with a fluorine atom or a deuterium atom.

8. The compound of claim 1, wherein R^7 is selected from H, D, C_{1-4}alkyl, C_{1-4}fluoroalkyl, and C_{1-4}deuteroalkyl.

9. The compound of any one of claims 1 to 8, wherein R^2, $R^{2'}$, and $R^{2''}$ are independently selected from H, halo, C_{1-4}alkyl, C_{1-4}alkoxy, C_{1-4}fluroalkoxy, C_{1-3}alkyleneN$(R^{2a})(R^{2b})$ and SC_{1-4}alkyl wherein available hydrogen atoms are optionally and independently substituted with a fluorine atom or a deuterium atom.

10. The compound of claim 9, wherein R^2, $R^{2'}$, and $R^{2''}$ are independently selected from H, D, F, Cl, C_{1-4}alkyl, C_{1-4}fluoroalkyl, C_{1-4}deuteroalkyl, C_{1-4}alkoxy, C_{1-4}fluoroalkoxy, C_{1-4}deuteroalkoxy, C_{1-3}alkyleneN$(R^{2a})(R^{2b})$, SC_{1-4}alkyl, SC_{1-4}fluoroalkyl, and SC_{1-4}deuteroalkyl.

11. The compound of claim 9, wherein R^2, $R^{2'}$, and $R^{2''}$ are all H or R^2, $R^{2'}$, and $R^{2''}$ are all D.

12. The compound of any one of claims 1 to 11, wherein R^3, R^4, R^5, and R^6 are independently selected from H, halo, C_{1-4}alkyl, C_{1-4}alkoxy, C_{1-4}alkyleneN$(R^{5'})(R^{6'})$, and SC_{1-}

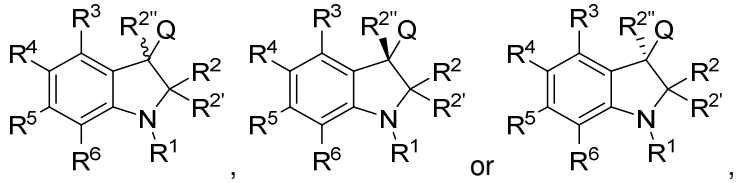
$_4$alkyl, the latter four groups being optionally substituted with one or two substituents selected from OH and C_{1-4}alkoxy wherein available hydrogen atoms are optionally and independently substituted with a fluorine atom or a deuterium atom.

13. The compound of claim 12, wherein R^3, R^4, R^5, and R^6 are independently selected from H, D, F, Cl, Br, $N(R^{5'})(R^{6'})$, C_{1-4}alkyl, C_{1-4}fluoroalkyl, C_{1-4}deuteroalkyl, C_{1-4}alkoxy, C_{1-4}fluoroalkoxy, C_{1-4}deuteroalkoxy, C_{1-4}alkyleneN$(R^{5'})(R^{6'})$, SC_{1-4}alkyl, SC_{1-4}fluoroalkyl, and SC_{1-4}deuteroalkyl, the latter ten groups being optionally substituted with one or two substituents independently selected from OH, C_{1-4}alkoxy, C_{1-4}fluoroalkoxy, and C_{1-4}deuteroalkoxy.

14. The compound of claim 13, wherein one of R^3, R^4, R^5, and R^6 is selected from C_{1-3}alkoxy, C_{1-3}fluoroalkoxy, and C_{1-3}deuteroalkoxy substituted with one or two substituents selected from OH, C_{1-3}alkoxy, C_{1-3}fluoroalkoxy, and C_{1-3}deuteroalkoxy, and the remaining of R^3, R^4, R^5, and R^6 are independently selected from H, D, CH_3O, CD_3O, and CF_3O.

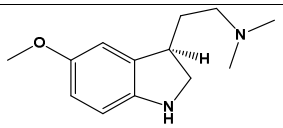
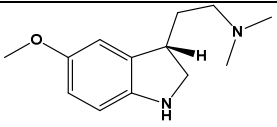
15. The compound of claim 12, wherein one to three of R^3, R^4, R^5, and R^6 are independently selected from H, D, F, CH_3, CD_2H, CDH_2, CD_3, CF_3, CHF_2, CH_2CH_3, $CH(CH_3)_2$, CH_2CH_2D, CH_2CD_2H, CD_2CD_3, CH_3O, CD_2HO, CDH_2O, CD_3O, CF_3O, CHF_2O, CH_3CH_2O, $CH(CH_3)_2O$, CH_2DCH_2O, CD_2HCH_2O, and CD_3CD_2O and the remaining of R^3, R^4, R^5, and R^6 are selected from H and D.

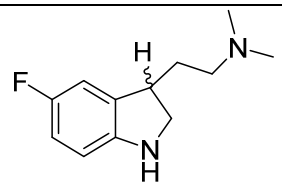
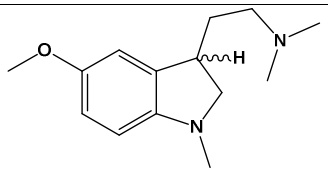
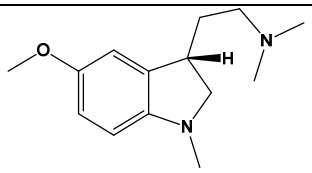
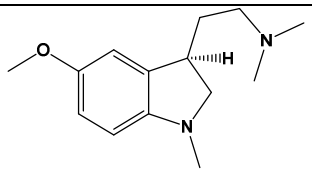
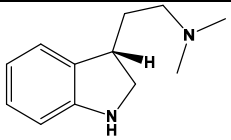
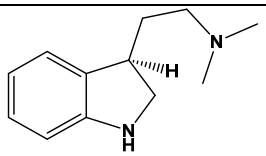
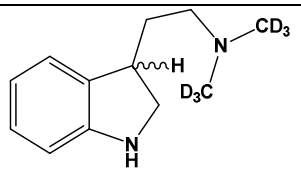
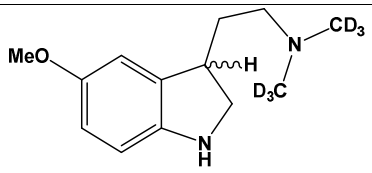
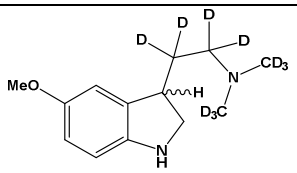
16. The compound of any one of claims 1 to 15, wherein the compound of Formula I has one of the following structures:

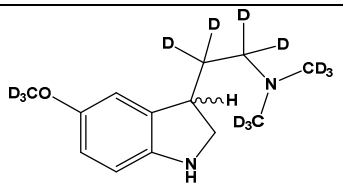
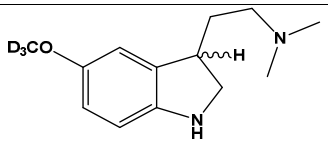
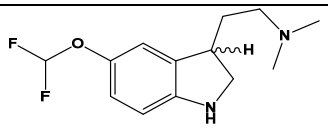
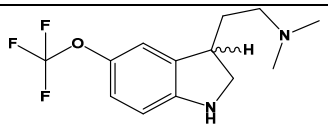
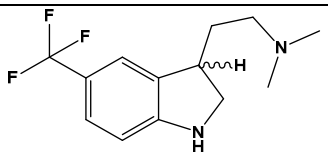
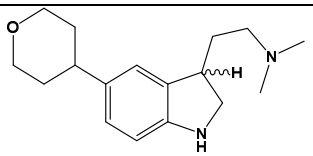
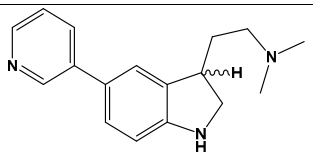
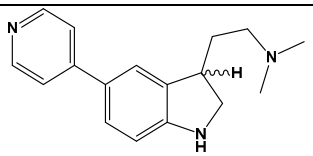
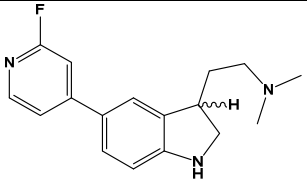
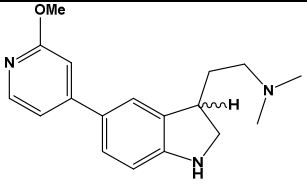


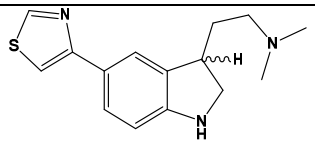
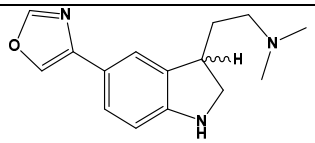
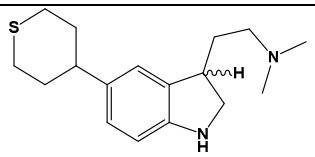
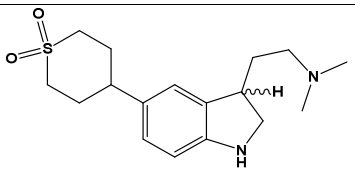
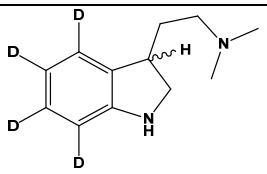
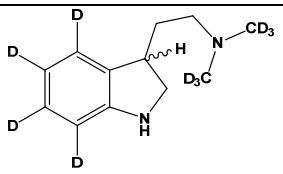
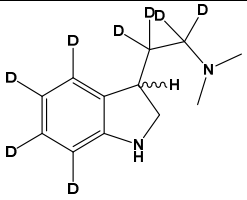
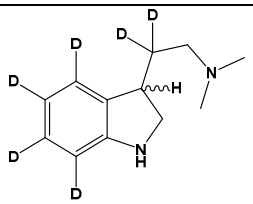
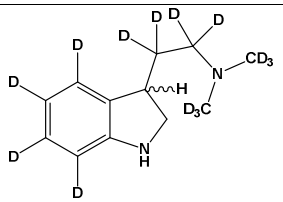
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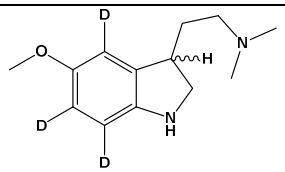
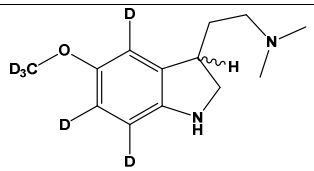
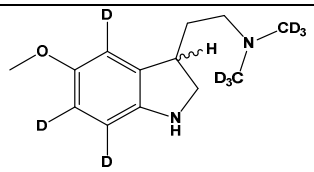
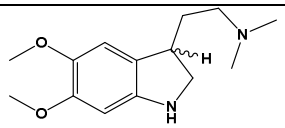
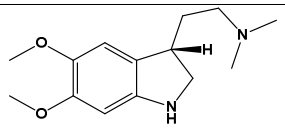
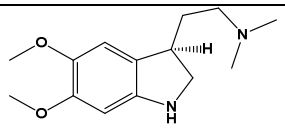
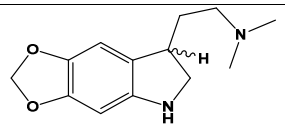
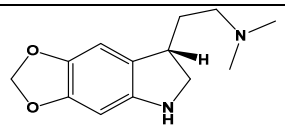
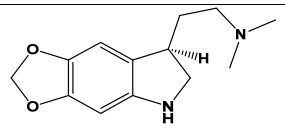
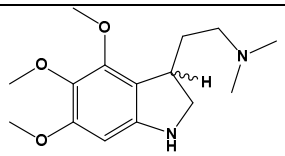
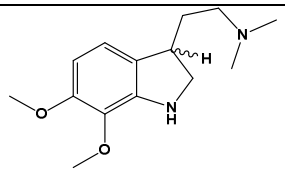
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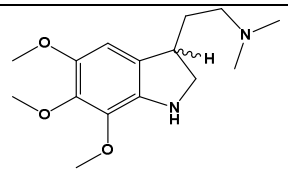
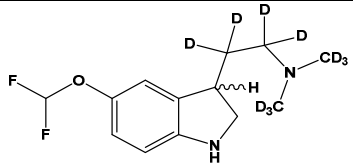
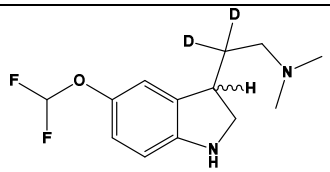
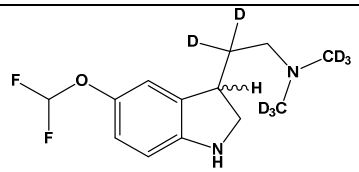
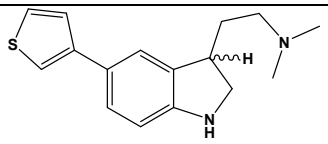
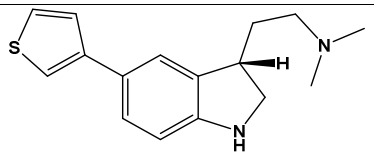
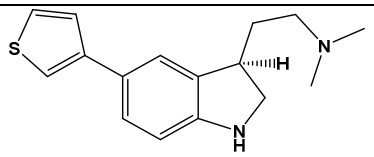
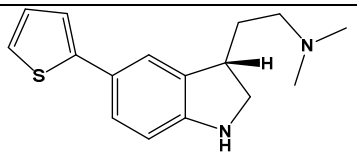
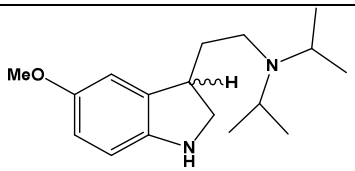
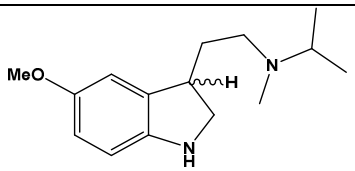
Compound I.D.	Structure
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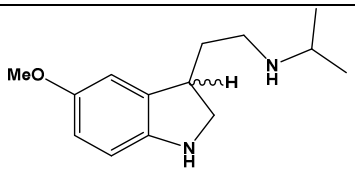
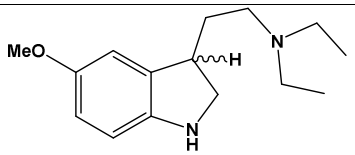
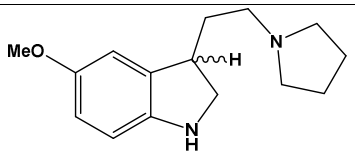
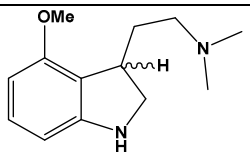
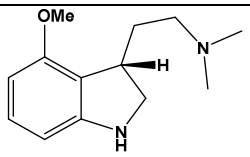
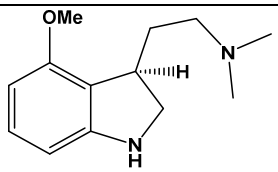
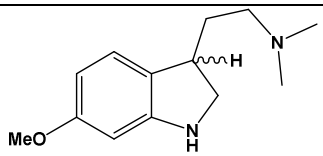
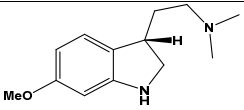
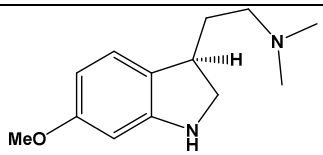
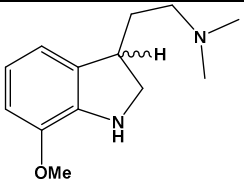
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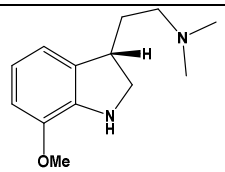
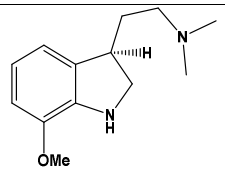
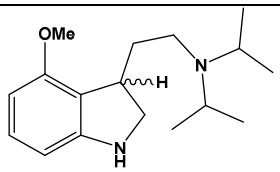
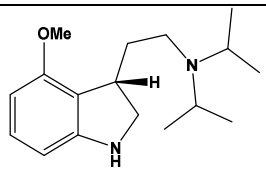
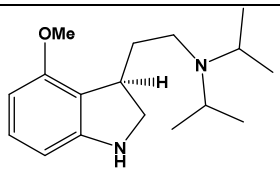
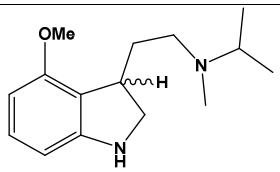
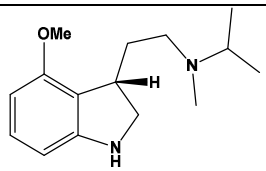
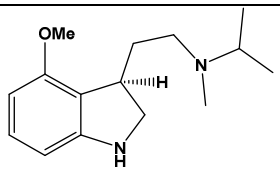
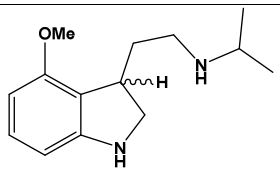
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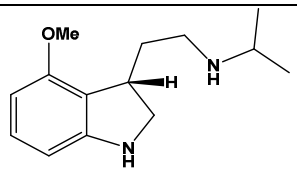
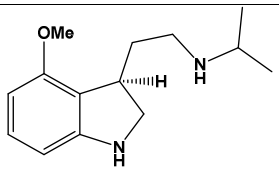
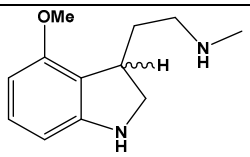
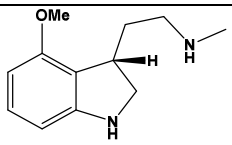
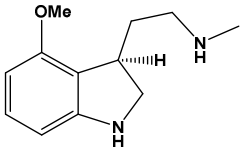
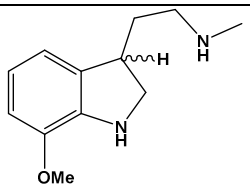
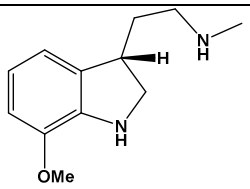
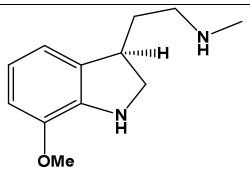
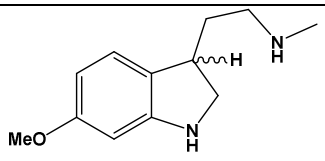
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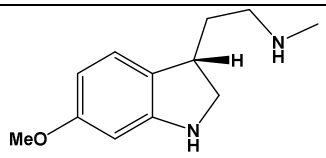
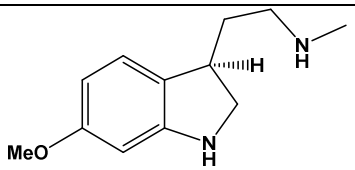
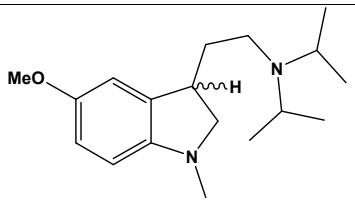
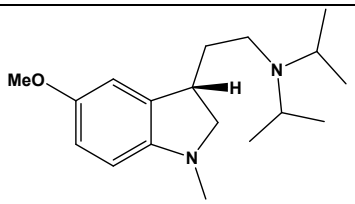
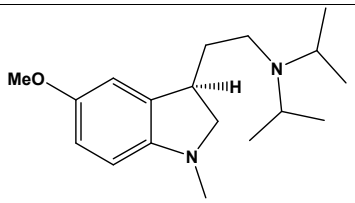
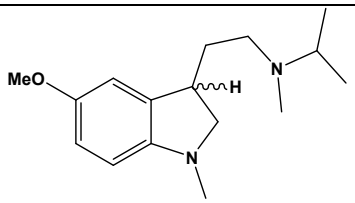
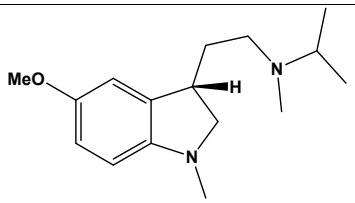
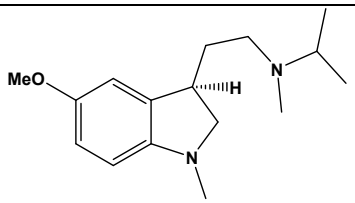
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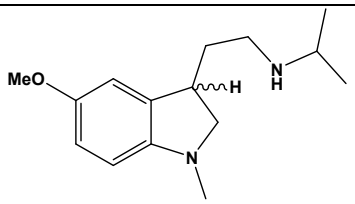
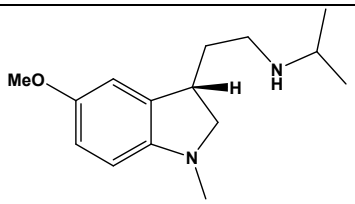
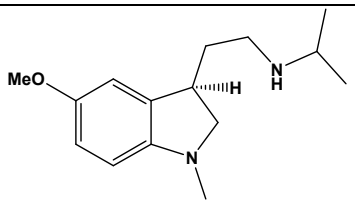
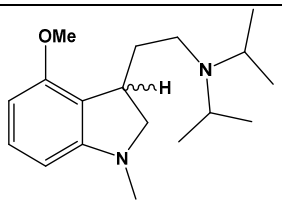
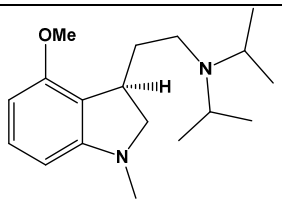
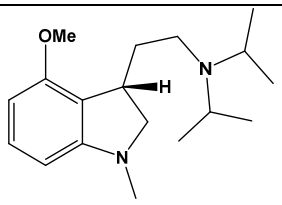
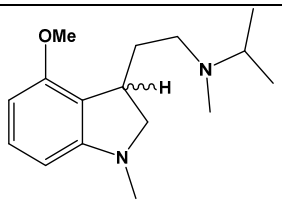
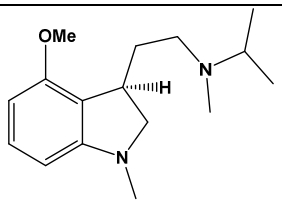
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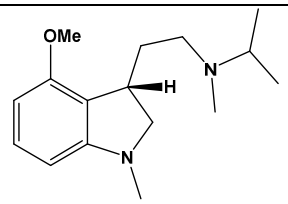
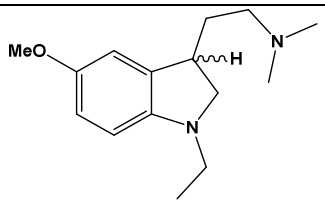
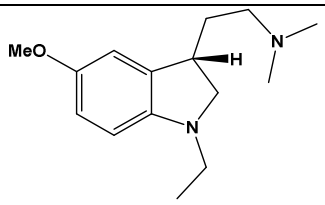
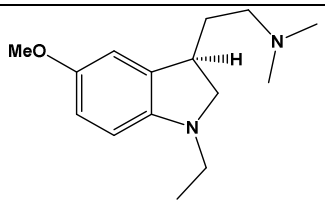
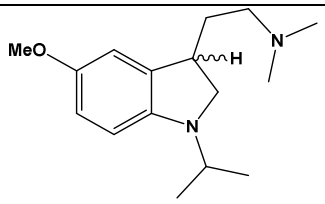
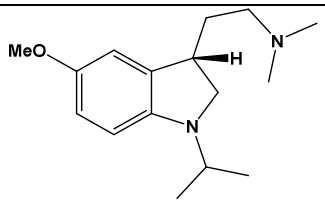
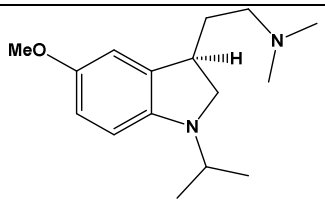
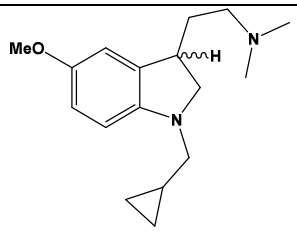
I-111	
I-112	
I-113	
I-114	
(S)-I-114	
(R)-I-114	
I-115	
(S)-I-115	
(R)-I-115	
I-116	

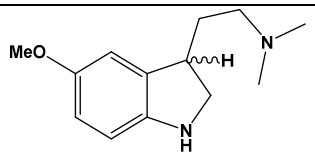
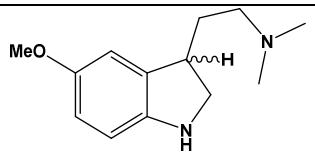
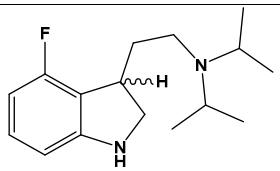
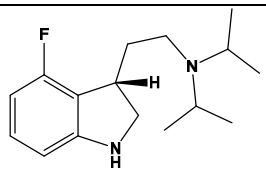
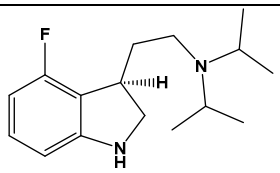
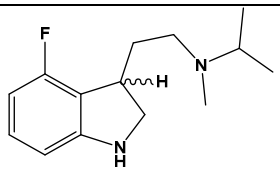
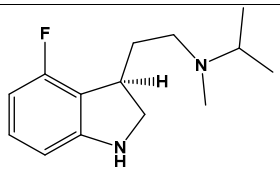
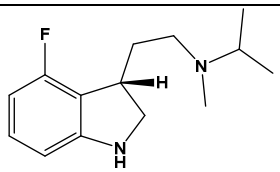
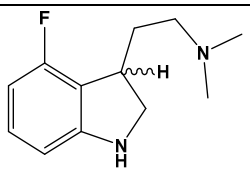
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(R)-I-116	
I-117	
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(R)-I-117	
I-118	
(S)-I-118	
(R)-I-118	
I-119	

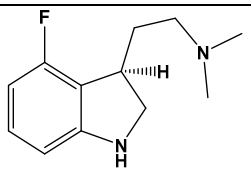
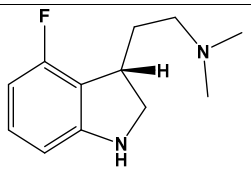
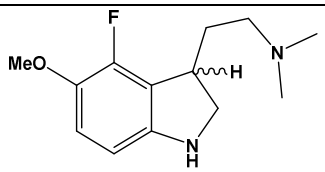
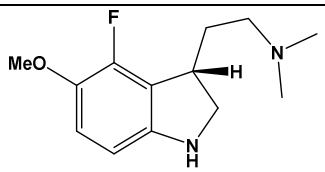
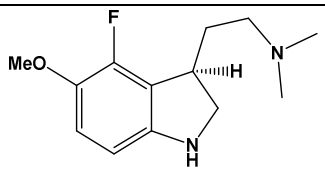
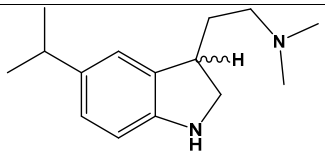
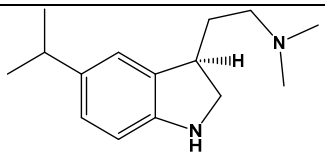
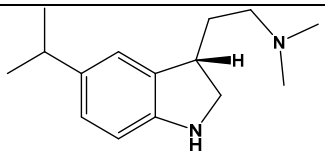
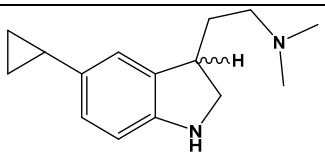
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I-121	
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(R)-I-121	
I-122	

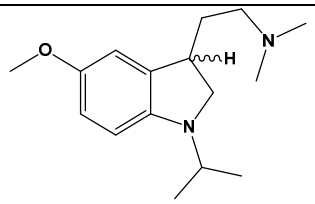
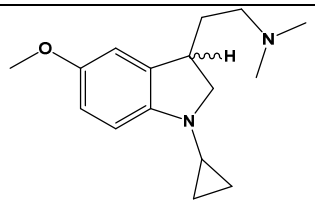
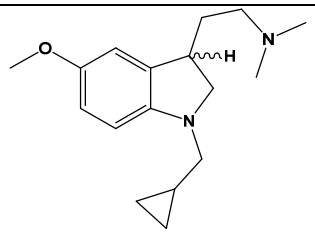
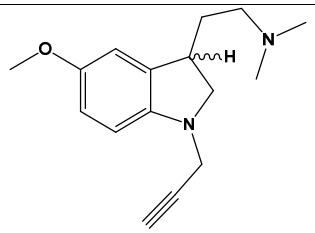
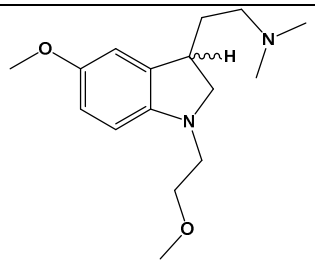
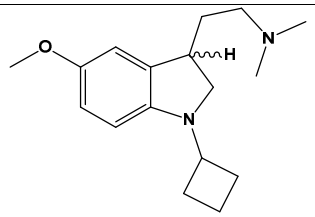
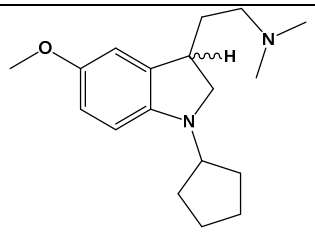
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(R)-I-123	
I-124	
(S)-I-124	
(R)-I-124	

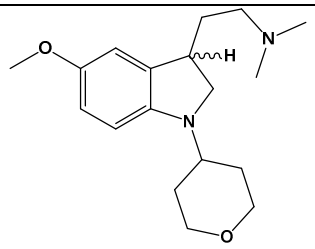
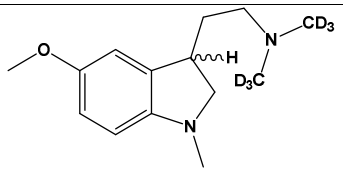
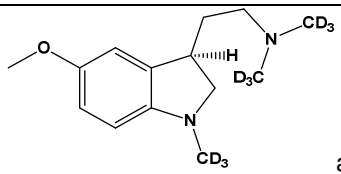
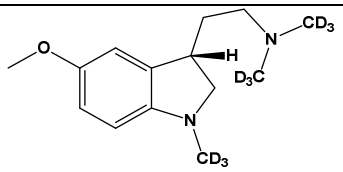
I-125	
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(R)-I-125	
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(R)-I-126	
(S)-I-126	
I-127	
(R)-I-127	

(S)-I-127	
I-128	
(S)-I-128	
(R)-I-128	
I-129	
(S)-I-129	
(R)-I-129	
I-130	

I-131	
I-132	
I-133	
(S)-I-133	
(R)-I-133	
I-134	
(R)-I-134	
(S)-I-134	
I-135	

(R)-I-135	
(S)-I-135	
I-136	
(S)-I-136	
(R)-I-136	
I-137	
(R)-I-137	
(S)-I-137	
I-138	

I-139	
I-140	
I-141	
I-142	
I-143	
I-144	
I-145	

I-146	
I-147	
(R)-I-147	 and
(S)-I-147	

or a pharmaceutically acceptable salt, solvate, and/or prodrug thereof.

18. A pharmaceutical composition comprising one or more compounds of any one of claims 1 to 17 or a pharmaceutically acceptable salt, solvate, and/or prodrug thereof and a pharmaceutically acceptable carrier.

19. Use of one or more compounds of any one of claims 1 to 17 in the manufacture of a medicament for treating a central nervous system (CNS) disease, disorder, or condition in a subject in need thereof.

20. Use of one or more compounds of any one of claims 1 to 17 in the manufacture of a medicament for treating a central nervous system (CNS) disease, disorder, or condition and/or a neurological disease, disorder, or condition in a subject in need thereof.