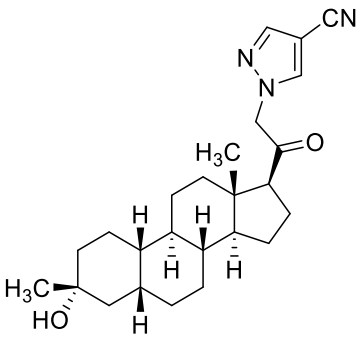
devices, penile implants), sex therapy, behavioral treatments, psychotherapy, and education and communication. Current methods used for treating or reducing treatment-induced SD include waiting for spontaneous remission or tolerance, dose reduction, drug holiday, non-pharmacologic interventions (*e.g.*, exercise, psychotherapy), switching to a different antidepressant, and/or adding a medication to treat sexual adverse effects.

[0006] New and improved methods for treating SD, including treatment-induced SD are needed. Also of need are agents that prevent and treat CNS-relate diseases while exhibiting reduce or no side effects typically associated with antidepressants, particularly sexual dysfunction. Agents and methods using said agents described herein are directed toward this end.

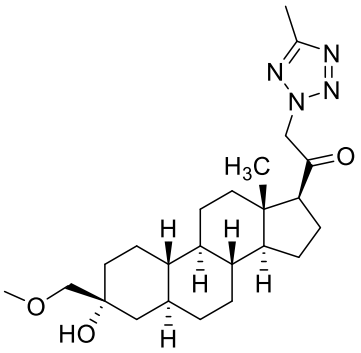
SUMMARY

[0006a] In a first aspect of the present disclosure, there is provided a use of a compound, or a pharmaceutically acceptable salt of a compound, of the formula selected from the group consisting of:



Compound (**1**)

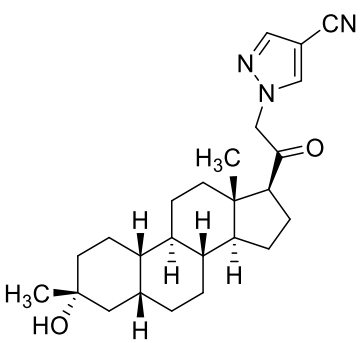
and



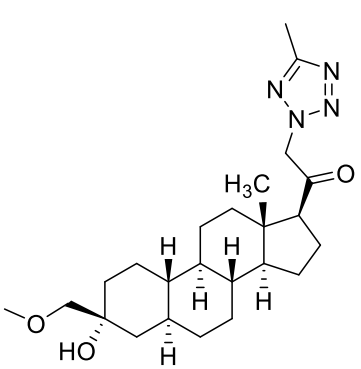
Compound (**2**)

in the manufacture of a medicament for treating sexual dysfunction in a patient having major depressive disorder.

[0006b] In another aspect of the present disclosure, there is provided a use of a compound, or a pharmaceutically acceptable salt of a compound, of the formula selected from the group consisting of:



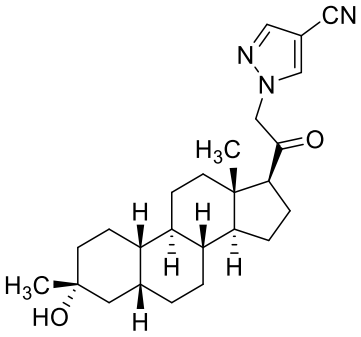
and



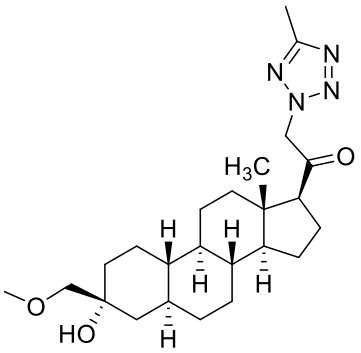
Compound (**1**) Compound (**2**)

in the manufacture of a medicament for maintaining sexual function in a patient who has a mood disorder.

[0006c] In a further aspect of the present disclosure, there is provided a use of a compound, or a pharmaceutically acceptable salt of a compound, of the formula selected from the group consisting of:



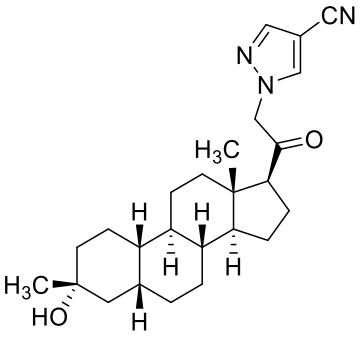
and



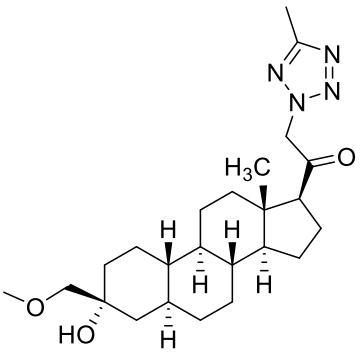
Compound (**1**) Compound (**2**)

in the manufacture of a medicament for treating treatment-induced sexual dysfunction in a patient who is currently receiving or has received a course of chemical psychotherapy.

[0007] The present disclosure provides methods of treating sexual dysfunction in a patient in need thereof, comprising administering to the patient a therapeutically effective amount of a compound of the formula selected from the group consisting of:

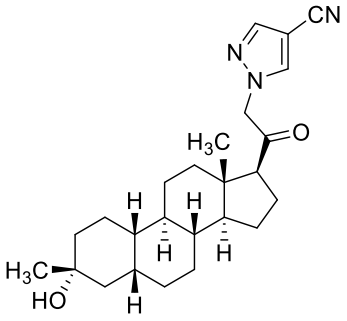


and

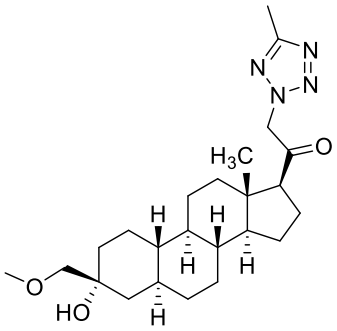


Compound (**1**) Compound (**2**).

[0008] Another example of the disclosure provides methods of treating sexual dysfunction in a patient in need thereof, comprising administering to the patient a therapeutically effective amount of a pharmaceutically acceptable salt of a compound of the formula selected from the group consisting of:

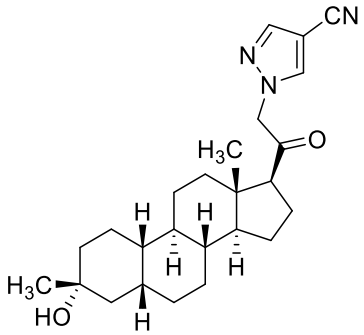


and



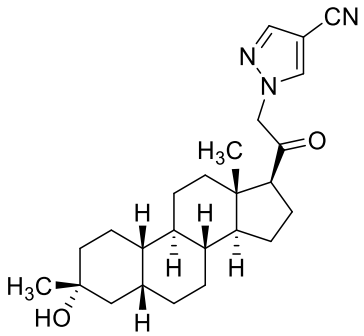
Compound (**1**) Compound (**2**).

[0009] In some examples, the compound administered is a compound of the formula:



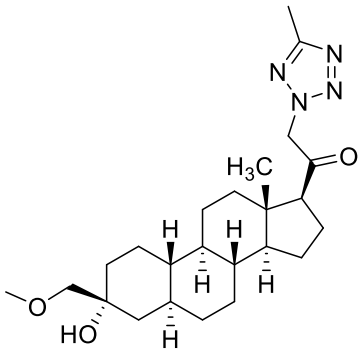
Compound (**1**).

[0010] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



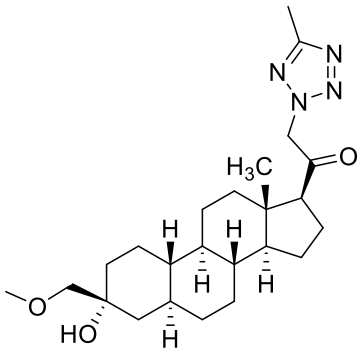
Compound (**1**).

[0011] In some examples, the compound administered is a compound of the formula:



Compound (**2**).

[0012] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



Compound (**2**).

[0013] In some examples, the patient has (or suffers from) a CNS-related disorder. In some examples, the CNS-related disorder is selected from the group consisting of a sleep disorder, a mood disorder, a schizophrenia spectrum disorder, a convulsive disorder, a disorder of memory and/or cognition, a movement disorder, a personality disorder, autism spectrum disorder, pain, traumatic brain injury, a vascular disease, a substance abuse disorder and/or withdrawal syndrome, tinnitus, and status epilepticus. In some examples, the CNS-related disorder is a mood disorder. In some examples, the mood disorder is major depressive disorder.

[0014] In some examples, the compound is administered at a dose of about 20 mg to about 60 mg once a day. In some examples, the compound is administered at a dose of about 50 mg once a day for about 14 days. In some examples, the compound is administered at a dose of about 60 mg once a day for about 14 days.

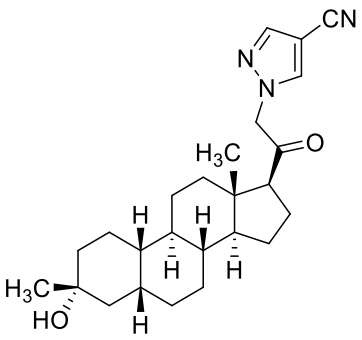
[0015] In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 20 mg to 60 mg of the free base compound once a day. In some examples, the pharmaceutically acceptable salt of the compound is

administered at a dose equivalent of about 50 mg of the free base compound once a day for about 14 days. In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 60 mg of the free base compound once a day for about 14 days.

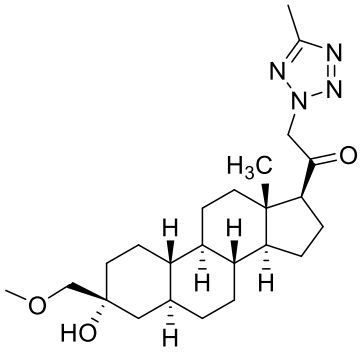
[0016] In some examples, the sexual dysfunction is assessed by the Changes in Sexual Functioning Questionnaire-14. In some examples, the Changes in Sexual Functioning Questionnaire-14 score at day 42 is not greater than about the Changes in Sexual Functioning Questionaire-14 score at baseline. In some examples, the patient is a female having a Changes in Sexual Functioning Questionnaire-14 score of no greater than 41 at 15 days, 28 days, or 42 days following the administration. In some examples, the patient is a male having a Changes in Sexual Functioning Questionnaire-14 score of no greater than 47 at 15 days, 28 days, or 42 days following the administration.

[0017] In some examples, the sexual dysfunction comprises decrease in or loss of one or more of sexual pleasure, sexual desire, sexual frequency, sexual interest, sexual arousal, sexual excitement, and orgasm.

[0018] Another example of the present disclosure provides methods of treating sexual dysfunction in a patient having major depressive disorder, the method comprising administering a therapeutically effective amount of a compound of the formula selected from the group consisting of:

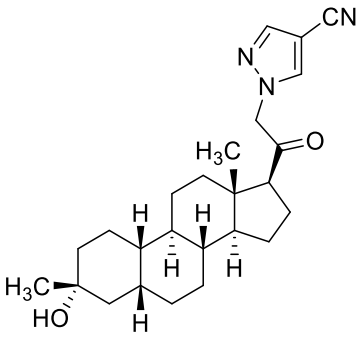


and

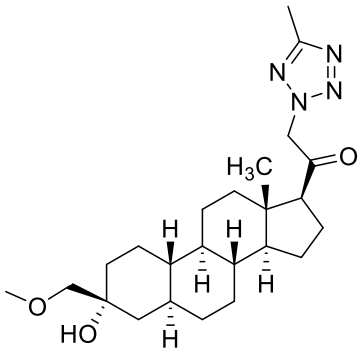


Compound (**1**) Compound (**2**).

[0019] Another example of the present disclosure provides methods of treating sexual dysfunction in a patient having major depressive disorder, the method comprising administering a therapeutically effective amount of a pharmaceutically acceptable salt of a compound of the formula selected from the group consisting of:

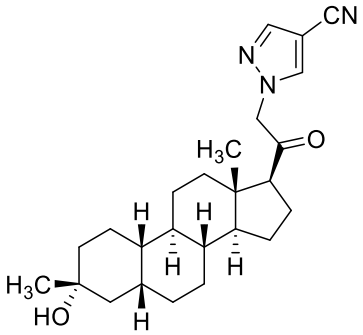


and



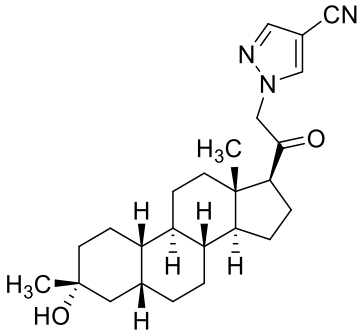
Compound (**1**) Compound (**2**).

[0020] In some examples, the compound administered is a compound of the formula:



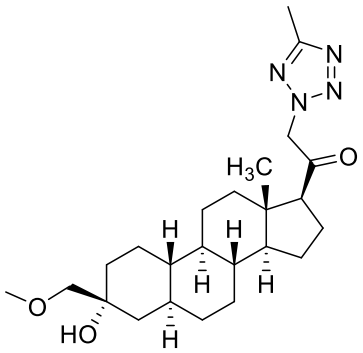
Compound (**1**).

[0021] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



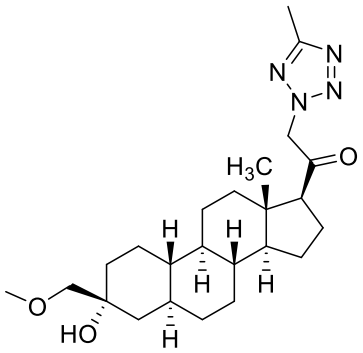
Compound (**1**).

[0022] In some examples, the compound administered is a compound of the formula:



Compound (**2**).

[0023] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



Compound (**2**).

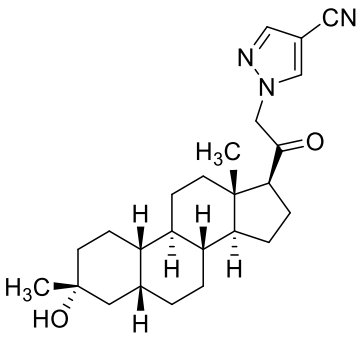
[0024] In some examples, the compound is administered at a dose of about 20 mg to 60 mg once a day. In some examples, the compound is administered at a dose of about 50 mg once a day for about 14 days. In some examples, the compound is administered at a dose of about 60 mg once a day for about 14 days.

[0025] In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 20 mg to about 60 mg of the free base compound once a day. In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 50 mg of the free base compound once a day for about 14 days. In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 60 mg of the free base compound once a day for about 14 days.

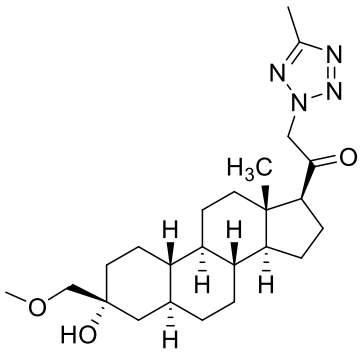
[0026] In some examples, the sexual dysfunction is assessed by the Changes in Sexual Functioning Questionnaire-14. In some examples, the Changes in Sexual Functioning Questionnaire-14 score at day 42 is not greater than about the Changes in Sexual Functioning Questionaire-14 score at baseline. In some examples, the patient is a female having a

Changes in Sexual Functioning Questionnaire-14 score of no greater than 41 at 15 days, 28 days, or 42 days following the administration. In some examples, the patient is a male having a Changes in Sexual Functioning Questionnaire-14 score of no greater than 47 at 15 days, 28 days, or 42 days following the administration.

[0027] Another example of the present disclosure provides a method of maintaining sexual function in a patient who has a mood disorder, comprising administering to the patient a therapeutically effective amount of a compound of the formula selected from the group consisting of:

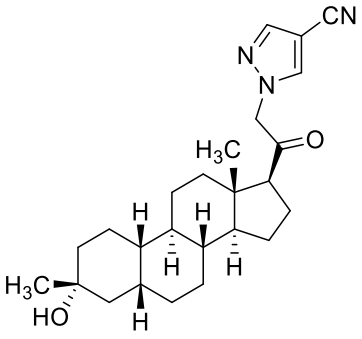


and

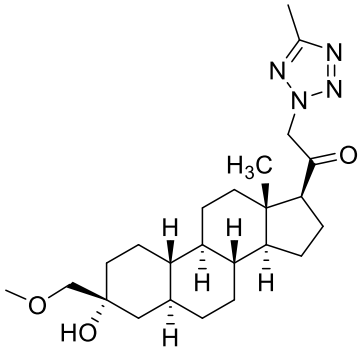


Compound (**1**) Compound (**2**).

[0028] Another example of the present disclosure provides a method of maintaining sexual function in a patient who has a mood disorder, comprising administering to the patient a therapeutically effective amount of a pharmaceutically acceptable salt of a compound of the formula selected from the group consisting of:

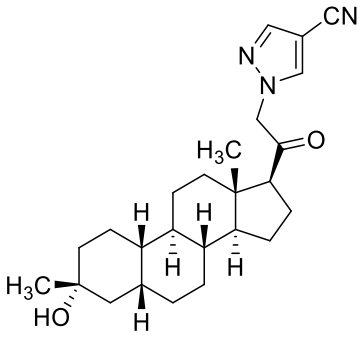


and



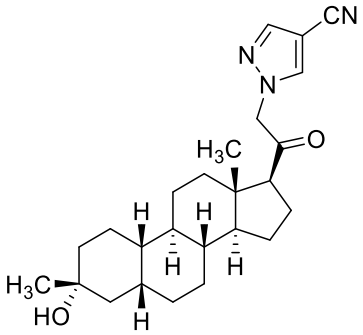
Compound (**1**) Compound (**2**).

[0029] In some examples, the compound administered is a compound of the formula:



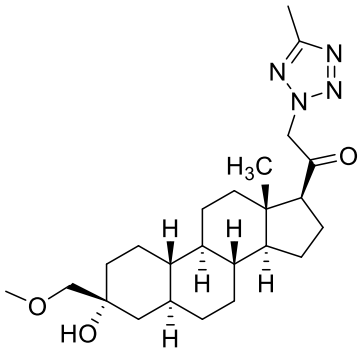
Compound (**1**).

[0030] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



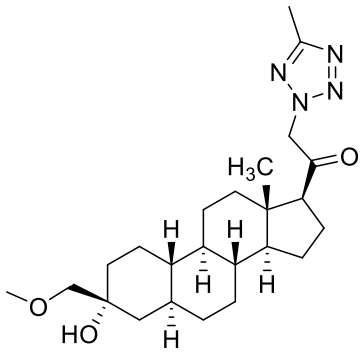
Compound (**1**).

[0031] In some examples, the compound administered is a compound of the formula:



Compound (**2**).

[0032] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



Compound (**2**).

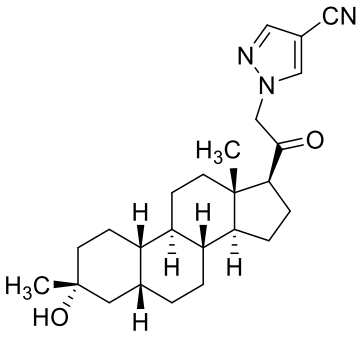
[0033] In some examples, the mood disorder is major depressive disorder.

[0034] In some examples, the compound is administered at a dose of about 20 mg to about 60 mg once a day. In some examples, the compound is administered at a dose of about 50 mg once a day for about 14 days. In some examples, the compound is administered at a dose of about 60 mg once a day for about 14 days.

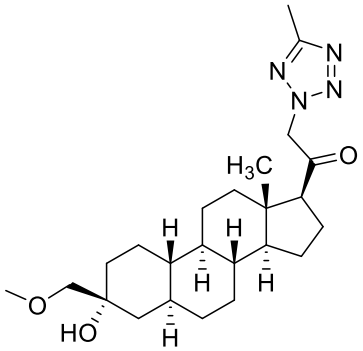
[0035] In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 20 mg to about 60 mg of the free base compound once a day. In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 50 mg of the free base compound once a day for about 14 days. In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 60 mg of the free base compound once a day for about 14 days.

[0036] In some examples, the sexual dysfunction is assessed by the Changes in Sexual Functioning Questionnaire-14. In some examples, the Changes in Sexual Functioning Questionnaire-14 score at day 42 is not greater than about the Changes in Sexual Functioning Questionaire-14 score at baseline. In some examples, the patient is a female having a Changes in Sexual Functioning Questionnaire-14 score of no greater than 41 at 15 days, 28 days, or 42 days following the administration. In some examples, the patient is a male having a Changes in Sexual Functioning Questionnaire-14 score of no greater than 47 at 15 days, 28 days, or 42 days following the administration.

[0037] Another example of the present disclosure provides a method of treating treatment-induced sexual dysfunction in a patient who is currently receiving or has received a course of chemical psychotherapy, comprising administering to the patient a therapeutically effective amount of a compound of the formula selected from the group consisting of:

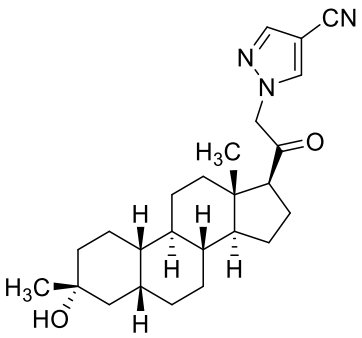


and

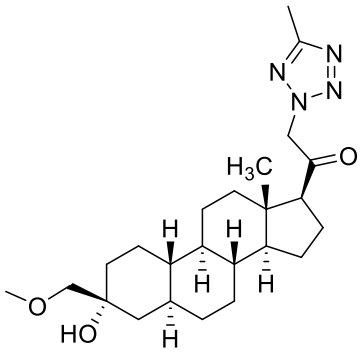


Compound (**1**) Compound (**2**).

[0038] Another example of the present disclosure provides a method of treating treatment-induced sexual dysfunction in a patient who is currently receiving or has received a course of chemical psychotherapy, comprising administering to the patient a therapeutically effective amount of a pharmaceutically acceptable salt of a compound of the formula selected from the group consisting of:

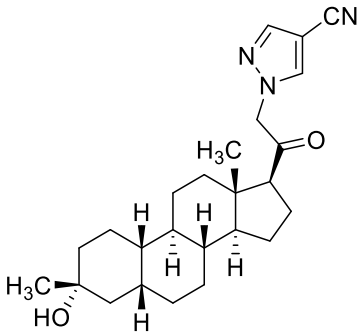


and



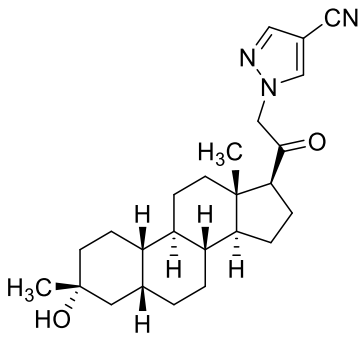
Compound (**1**) Compound (**2**).

[0039] In some examples, the compound administered is a compound of the formula:



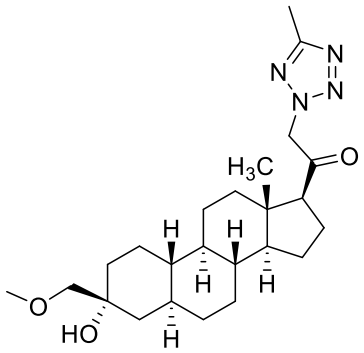
Compound (**1**).

[0040] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



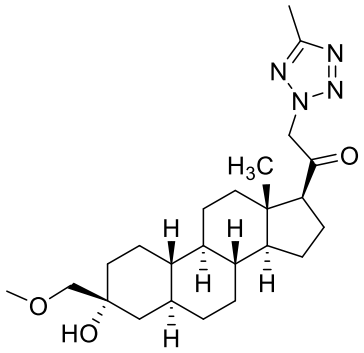
Compound (**1**).

[0041] In some examples, the compound administered is a compound of the formula:



Compound (**2**).

[0042] In some examples, the pharmaceutically acceptable salt administered is a pharmaceutically acceptable salt of a compound of the formula:



Compound (**2**).

[0043] In some examples, the chemical psychotherapy is an antidepressant. In some examples, the antidepressant is selected from a selective serotonin reuptake inhibitor, a selective norepinephrine reuptake inhibitor, a tricyclic, a monoamine oxidase inhibitor, or an atypical antidepressant.

[0044] In some examples, the patient has (or suffers from) a CNS-related disorder. In some examples, the CNS-related disorder is selected from the group consisting of a sleep disorder, a mood disorder, a schizophrenia spectrum disorder, a convulsive disorder, a

disorder of memory and/or cognition, a movement disorder, a personality disorder, autism spectrum disorder, pain, traumatic brain injury, a vascular disease, a substance abuse disorder and/or withdrawal syndrome, tinnitus, and status epilepticus. In some examples, the CNS-related disorder is a mood disorder. In some examples, the mood disorder is major depressive disorder.

[0045] In some examples, the compound is administered at a dose of about 20 mg to about 60 mg once a day. In some examples, the compound is administered at a dose of about 50 mg once a day for about 14 days. In some examples, the compound is administered at a dose of about 60 mg once a day for about 14 days.

[0046] In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 20 mg to about 60 mg of the free base compound once a day. In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 50 mg of the free base compound once a day for about 14 days. In some examples, the pharmaceutically acceptable salt of the compound is administered at a dose equivalent of about 60 mg of the free base compound once a day for about 14 days.

[0047] In some examples, the sexual dysfunction is assessed by the Changes in Sexual Functioning Questionnaire-14. In some examples, the Changes in Sexual Functioning Questionnaire-14 score at day 42 is not greater than about the Changes in Sexual Functioning Questionaire-14 score at baseline. In some examples, the patient is a female having a Changes in Sexual Functioning Questionnaire-14 score of no greater than 41 at 15 days, 28 days, or 42 days following the administration. In some examples, the patient is a male having a Changes in Sexual Functioning Questionnaire-14 score of no greater than 47 at 15 days, 28 days, or 42 days following the administration.

BRIEF DESCRIPTION OF THE FIGURES

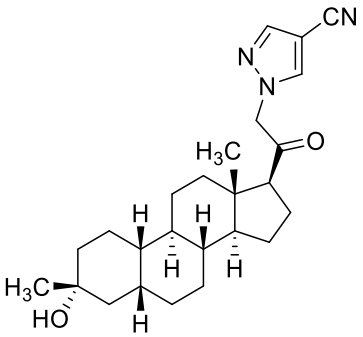
[0048] **FIG. 1** is a schematic showing the MOUNTAIN study design according to Example 1.

[0049] **FIG. 2** is a graph showing mean Changes in Sexual Functioning Questionaire-14 (CSFQ-14) total score change from baseline (±standard error) in patients who received 30 mg of Compound (**1**) or placebo at baseline and Days 15, 28, and 42 according to Example 1.

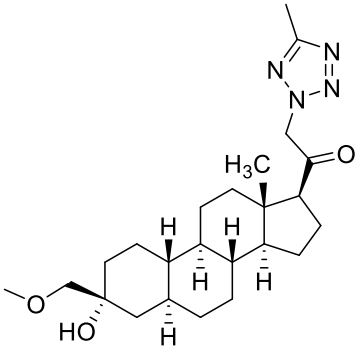
[0050] **FIG. 3** is a graph showing percentage of patients with sexual dysfunction across treatment arms (Compound (**1**) vs placebo) at baseline and Days 15, 28, and 42 according to Example 1.

WHAT IS CLAIMED IS:

1. Use of a compound, or a pharmaceutically acceptable salt of a compound, of the formula selected from the group consisting of:



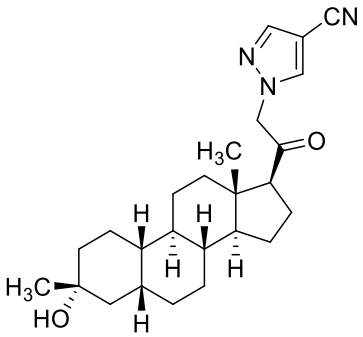
and



Compound (**1**) Compound (**2**)

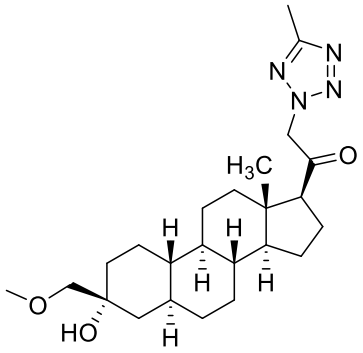
in the manufacture of a medicament for treating sexual dysfunction in a patient having major depressive disorder.

2. The use of claim 1, wherein the compound, or the pharmaceutically acceptable salt of the compound, is:



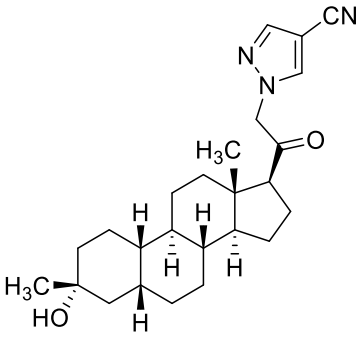
Compound (**1**).

3. The use of claim 1, wherein the compound, or the pharmaceutically acceptable salt of the compound, is:



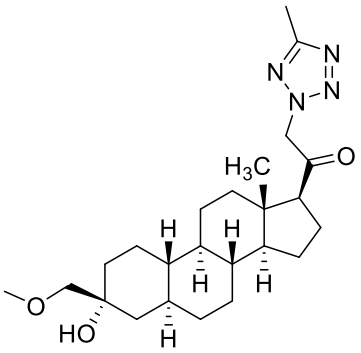
Compound (**2**).

4. Use of a compound, or a pharmaceutically acceptable salt of a compound, of the formula selected from the group consisting of:



Compound (**1**)

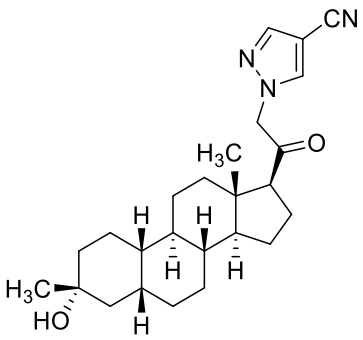
and



Compound (**2**)

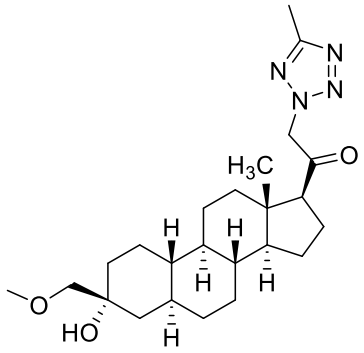
in the manufacture of a medicament for maintaining sexual function in a patient who has a mood disorder.

5. The use of claim 4, wherein the compound, or the pharmaceutically acceptable salt of the compound, is:



Compound (**1**).

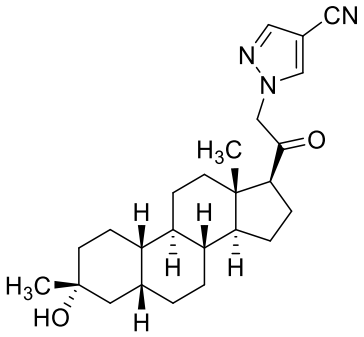
6. The use of claim 4, wherein the compound, or the pharmaceutically acceptable salt of the compound, is:



Compound (**2**).

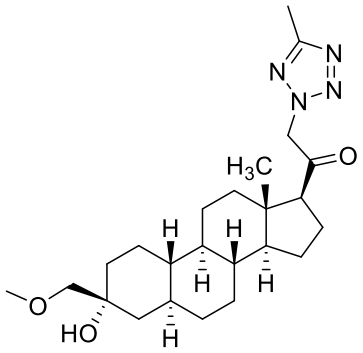
7. The use of any one of claims 4-6, wherein the mood disorder is major depressive disorder.

8. Use of a compound, or a pharmaceutically acceptable salt of a compound, of the formula selected from the group consisting of:



Compound (**1**)

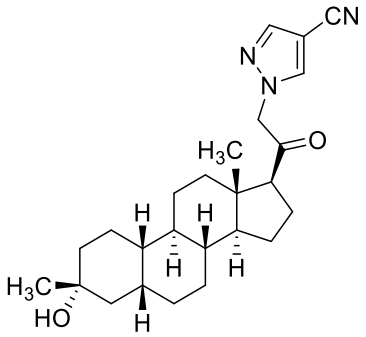
and



Compound (**2**)

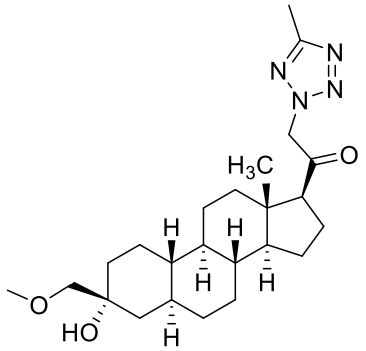
in the manufacture of a medicament for treating treatment-induced sexual dysfunction in a patient who is currently receiving or has received a course of chemical psychotherapy.

9. The use of claim 8, wherein the compound, or the pharmaceutically acceptable salt of the compound, is:



Compound (**1**).

10. The use of claim 8, wherein the compound, or the pharmaceutically acceptable salt of the compound, is:



Compound (**2**).

11. The use of any one of claims 8-10, wherein the chemical psychotherapy is an antidepressant.

12. The use of claim 11, wherein the antidepressant is selected from a selective serotonin reuptake inhibitor, a selective norepinephrine reuptake inhibitor, a tricyclic, a monoamine oxidase inhibitor, or an atypical antidepressant.

13. The use of any one of claims 8-12, wherein the patient has a CNS-related disorder.

14. The use of claim 13, wherein the CNS-related disorder is selected from the group consisting of a sleep disorder, a mood disorder, a schizophrenia spectrum disorder, a convulsive disorder, a disorder of memory and/or cognition, a movement disorder, a personality disorder, autism spectrum disorder, pain, traumatic brain injury, a vascular disease, a substance abuse disorder and/or withdrawal syndrome, tinnitus, and status epilepticus.

15. The use of claim 14, wherein the CNS-related disorder is a mood disorder.

16. The use of claim 15, wherein the mood disorder is major depressive disorder.

17. The use of any one of claims 1-16, wherein the compound is to be administered
(A) at a dose of about 20 mg to about 60 mg once a day;
(B) at a dose of about 50 mg once a day for about 14 days; or
(C) at a dose of about 60 mg once a day for about 14 days.

18. The use of any one of claims 1-16, wherein the pharmaceutically acceptable salt of the compound is to be administered
(A) at a dose equivalent to about 20 mg to about 60 mg of the free base compound once a day;
(B) at a dose equivalent to about 50 mg of the free base compound once a day for about 14 days; or
(C) at a dose equivalent to about 60 mg of the free base compound once a day for about 14 days.

19. The use of any one of claims 1-18, wherein the sexual dysfunction comprises decrease in or loss of one or more of sexual pleasure, sexual desire, sexual frequency, sexual interest, sexual arousal, sexual excitement, and orgasm.