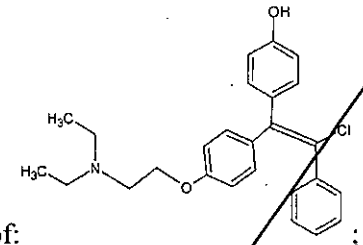
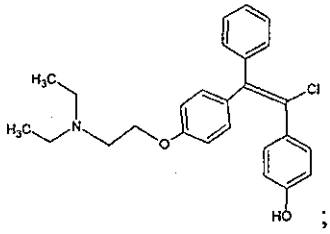
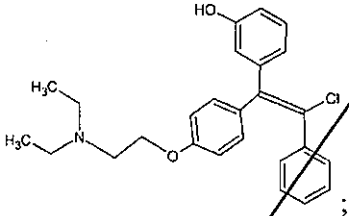
CLAIMS

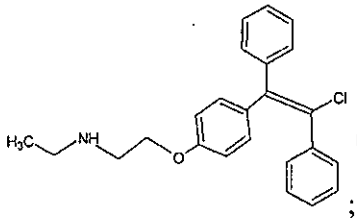
1. A substantially pure compound having a chemical formula selected from the group consisting of: $C_{26}H_{30}NO_3Cl$, $C_{26}H_{28}NO_2Cl$, $C_{27}H_{30}NO_3Cl$,and $C_{24}H_{24}NOCl$, or a pharmaceutically acceptable salt thereof.

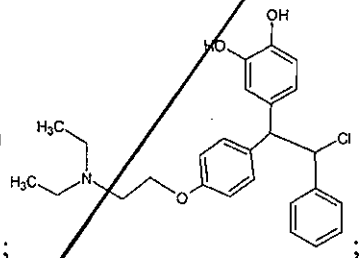
2. A substantially pure compound according to claim 1 having a structural formula selected from the group consisting of:

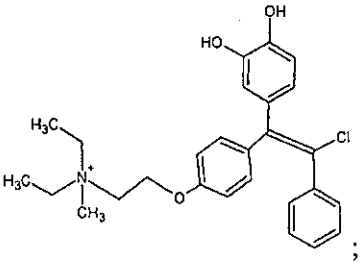

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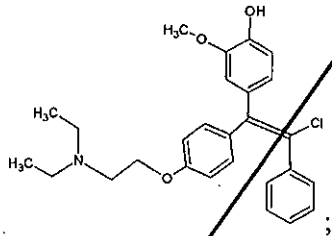

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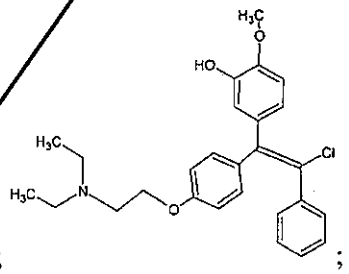

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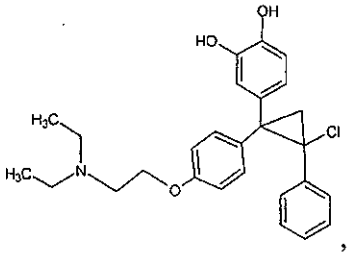

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; and


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or a pharmaceutically acceptable salt thereof.

3. A pharmaceutical composition comprising one or more compounds according to claim 2 and a pharmaceutically acceptable carrier.

4. A method for treating secondary hypogonadism or a disorder associated therewith in a human male patient in need thereof, comprising administering to the patient an effective amount of the pharmaceutical composition of claim 3.

5. The method of claim 4 wherein the composition is administered intermittently.

6. The method of claim 5 wherein the composition is administered to the patient once per 3-30 day interval.

7. The method of claim 6 wherein a serum testosterone level of at least 300 ng/DL is maintained during said interval.

8. The method of claim 4 wherein the disorder associated with secondary hypogonadism is selected from reduction of muscle mass, reduction of bone density, reduction of libido, oligospermia, and azoospermia.

9. A method for treating infertility in a human female, comprising administering to the female an effective amount of the pharmaceutical composition of claim 3.

10. The method of claim 9 wherein the composition is administered to the female as a daily dose for a period of five consecutive days.

11. The method of claim 9 wherein the female is anovulatory.

12. The method of claim 9 wherein the composition is administered during the early follicular phase of the menstrual cycle.

13. The method of claim 10 wherein the administration period of five consecutive days begins on the second to fifth day after the onset of spontaneous or induced menstruation

14. A method for preventing the transition from metabolic syndrome to type 2 diabetes in a human male comprising administering to a human male with metabolic syndrome an effective amount of the composition of claim 3.

15. A method for reducing fasting blood glucose levels in a human male comprising administering to a male in need thereof an effective amount of the composition of claim 3.

16. A method for treating type 2 diabetes in a human male comprising administering to the human male with type 2 diabetes an effective amount of the composition of claim 3.

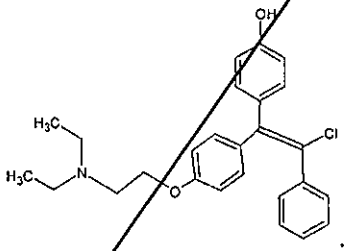
17. A method for preventing breast cancer in a human female comprising administering to a female with an increased risk of developing breast cancer an effective amount of the composition of claim 3.

18. A method for treating breast cancer in a human female comprising administering to a female with breast cancer an effective amount of the composition of claim 3.

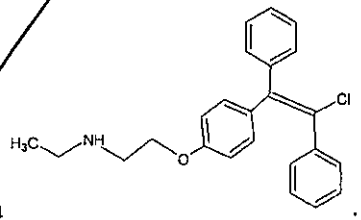
19. A method for treating endometrial, uterine or ovarian cancer in a human female comprising administering to a female in need thereof an effective amount of the composition of claim 3.

20. The compound or pharmaceutically acceptable salt thereof according to claim 2, wherein the salt of the compound is a citrate salt.

21. The compound or pharmaceutically acceptable salt thereof according to claim 2, having the formula



22. The compound or pharmaceutically acceptable salt thereof according to claim 2, having the formula



Claims:

1. An invention not claimed in any divisional application.