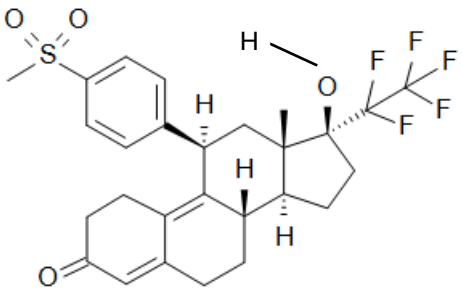
Claims

1. The compound (11β,17β)-17-Hydroxy-11-[4-(methylsulphonyl)phenyl]-17-(pentafluoroethyl)estra-4,9-dien-3-one of formula:



and salts thereof.

2. The compound according to Claim 1 or at least one salt thereof, for use in the treatment and prophylaxis of diseases.

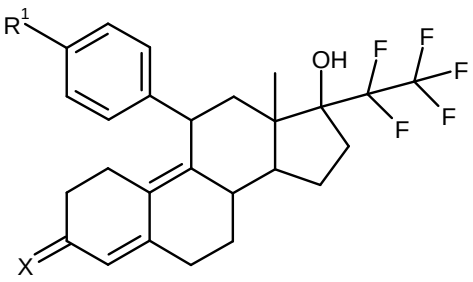
3. A medicinal product containing the compound according to Claim 1, or at least one salt thereof.

4. The medicinal product containing the compound according to Claim 3, or at least one salt thereof in combination with another active substance.

5. The medicinal product containing the compound according to Claim 3, or at least one salt thereof in combination with an inert, non-toxic, pharmaceutically suitable excipient.

6. The medicinal product containing the compound or at least one salt thereof according to Claim 3 or Claim 5, for use in the treatment and/or prophylaxis of diseases.

7. A compound of formula:



in which

R^1 stands either for a residue Y or for a phenyl ring substituted once or twice with a residue Y,

Y is selected from the group consisting of SR^2, $S(O)R^3$, $S(O)_2R^3$, $S(O)(NH)R^3$, $S(O)(NR^4)R^3$, and $S(O)_2NR^9R^{10}$,

R^2 stands for hydrogen, C_1-C_6-alkyl, C_7-C_{10}-aralkyl or aryl, when R^1 is $S(O)_2R^3$, or $S(O)R^3$ then R^3 is not methyl,

R^3 stands for C_1-C_6-alkyl or aryl,

R^4 stands for a group $S(O)_2R^6$,

R^6 stands for phenyl or 4-methylphenyl

X denotes an oxygen atom,

R^7 is selected from the group consisting of hydrogen, C_1-C_{10}-alkyl, and aryl

R^9, R^{10} independently of one another are selected from the group consisting of hydrogen, C_1-C_{10}-alkyl, C_1-C_{10}-aryl and alternatively represent, together with the nitrogen atom, a 3-8 membered, saturated or unsaturated heterocyclic ring

and their salts, solvates or solvates of the salts.

8. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which

R^1 stands either for a residue Y or for a phenyl ring substituted once with a residue Y,

Y is selected from the group consisting of SR^2, $S(O)R^3$, $S(O)_2R^3$, $S(O)(NH)R^3$, $S(O)(NR^4)R^3$, and $S(O)_2NR^9R^{10}$ and

R^2 stands for hydrogen or C_1-C_6-alkyl,

R^3 stands for C_1-C_6-alkyl, when R^1 is $S(O)_2R^3$, or $S(O)R^3$ then R^3 is not methyl,and

X represents an oxygen atom,

R^6 represents phenyl or 4-methylphenyl and

R^9, R^{10} independently of one another represent hydrogen or C_1-C_6-alkyl or phenyl

and their salts, solvates or solvates of the salts.

9. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which R^1 represents $S(O)_2R^3$ and X represents O.

10. The compound according to Claim 9, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents C_1-C_6-alkyl.

11. The compound according to Claim 10, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents methyl.

12. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which R^1 represents $S(O)(NH)R^3$ and X represents O.

13. The compound according to Claim 12, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents C_1-C_6-alkyl.

14. The compound according to Claim 13, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents.

15. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which R^1 represents SOR^3 and X represents O.

16. The compound according to Claim 15, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents C_1-C_6-alkyl.

17. The compound according to Claim 16, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents methyl.

18. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which R^1 represents SR^2 and X represents O.

19. The compound according to Claim 18, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents hydrogen.

20. The compound according to Claim 18, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents C_1-C_6-alkyl.

21. The compound according to Claim 20, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents methyl.

22. The compound according to Claim 18, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents aryl.

23. The compound according to Claim 22, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents phenyl.

24. The compound according to Claim 18, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents C_7-C_{10}-aralkyl.

25. The compound according to Claim 24, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents benzyl.

26. The compound according to Claim 8, or at least one of their salts, solvates or solvates of the salts, in which R^2 represents methyl, ethyl or hydrogen.

27. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents C_1-C_6-alkyl.

28. The compound according to Claim 10, or at least one of their salts, solvates or solvates of the salts, in which R^3 represents methyl or ethyl.

29. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which X is an oxygen atom.

30. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which Y stands for SR^2 or $S(O)_2R^3$ or $S(O)(NH)R^3$ with R^2 equal to hydrogen, methyl or ethyl and R^3 equal to methyl or ethyl.

31. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, in which Y stands for $S(O)_2R^3$.

32. The compound according to Claim 7, or at least one of their salts, solvates or solvates of the salts, wherein the compound is:

(11β,17β)-17-hydroxy-11-[4-(methylsulphanyl)phenyl]-17-(pentafluoroethyl)estra-4,9-dien-3-one;

(11β,17β)-11-[4-(ethylsulphanyl)phenyl]-17-hydroxy-17-(pentafluoroethyl)estra-4,9-dien-3-one;

(11β,17β)-17-hydroxy-11-{4-[(RS)-methylsulphinyl]phenyl}-17-(pentafluoroethyl)estra-4,9-dien-3-one;

(11β,17β)-11-[4-(ethylsulphonyl)phenyl]-17-hydroxy-17-(pentafluoroethyl)estra-4,9-dien-3-one;

(11β,17β)-11-[4-(benzylsulphanyl)phenyl]-17-hydroxy-17-(pentafluoroethyl)estra-4,9-dien-3-one;
N-[{4-[(11β,17β)-17-hydroxy-3-oxo-17-(pentafluoroethyl)estra-4,9-dien-11-yl]phenyl}(RS)(methyl) oxido-λ^6-sulphanylidene]-4-methylbenzene sulphonamide;
(11β,17β)-17-hydroxy-11-[4-(RS-methylsulphonimidoyl)phenyl]-17-(pentafluoroethyl)estra-4,9-dien-3-one;
(11β,17β)-17-hydroxy-11-[4'-(methylsulphanyl)biphenyl-4-yl]-17-(pentafluoroethyl)estra-4,9-dien-3-one;
(11β,17β)-17-hydroxy-11-[4'-(methylsulphonyl)biphenyl-4-yl]-17-(pentafluoroethyl)estra-4,9-dien-3-one;
N-[{4'-[(11β,17β)-17-hydroxy-3-oxo-17-(pentafluoroethyl)estra-4,9-dien-11-yl]biphenyl-4-yl}(RS)(methyl)oxido-λ^6-sulphanylidene]-4-methylbenzene sulphonamide;
(11β,17β)-17-hydroxy-11-[4'-(RS-methylsulphonimidoyl)biphenyl-4-yl]-17-(pentafluoroethyl)estra-4,9-dien-3-one;
(11β,17β)-17-hydroxy-17-(pentafluoroethyl)-11-(4'-sulphanylbiphenyl-4-yl)estra-4,9-dien-3-one;
4'-[(11β,17β))-17-hydroxy-3-oxo-17-(pentafluoroethyl)estra-4,9-dien-11-yl]-N,N-dimethylbiphenyl-4-sulphonamide; or
4-[(11β,17β)-17-hydroxy-3-oxo-17-(pentafluoroethyl)estra-4,9-dien-11-yl]-N,N-dimethylbenzene sulphonamide.

33. The compound according to any one of Claims 7-32, or at least one of their salts, solvates or solvates of the salts, for use in the treatment and prophylaxis of diseases.

34. The compound according to any one of Claims 7-32, or at least one of their salts, solvates or solvates of the salts, for use in the treatment and prophylaxis of anti-progesterone activity.

35. The use of a compound according to any one of Claims 7-32, or at least one of their salts, solvates or solvates of the salts, in the manufacture of a medicinal product for the treatment and/or prophylaxis of anti-progesterone activity.

36. A medicinal product containing a compound according to any one of Claims 7-32, or at least one of their salts, solvates or solvates of the salts, in combination with another active substance.

37. A medicinal product containing a compound according to any one of Claims 7-32, or at least one of their salts, solvates or solvates of the salts, in combination with an inert, non-toxic, pharmaceutically suitable excipient.

38. The medicinal product according to Claim 36 or Claim 37, or at least one of their salts, solvates or solvates of the salts, for the treatment and/or prophylaxis of anti-progesterone activity.