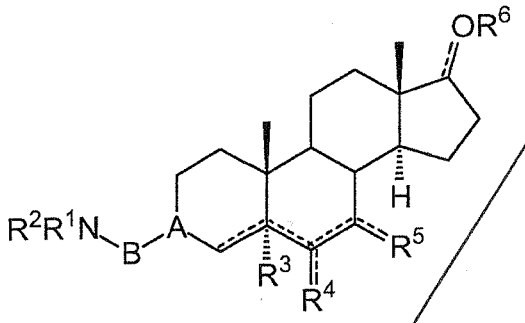
CLAIMS

1. Compounds of formula (I)



I

wherein:

A is CH ~ X, C=N ~ O, CR7 ~ CH=CH ~ , CR7 ~ CH2, CR8 ~ XC=O, CR8 ~ XC(=O)X', wherein the left end carbon atom in any of these groups is at position 3 of the androstane skeleton;

X and X', which can be the same or different, are O, $S(O)_x$ or NR^9;

R^7 is hydrogen or hydroxy;

R^8 and R^9 are, independently, H, C_1-C_6 alkyl group;

x is an integer number comprised between 0 and 2;

B is a C_1-C_6 straight or branched alkylene or a C_3-C_6 cycloalkylene, optionally containing a phenyl ring;

R^1 and R^2, which can be the same or different, are H, C_1-C_6 alkyl, phenyl - C_1-C_4 alkyl or when R^1 is hydrogen, R^2 can also be $C(=NR^{10})NHR^{11}$ or R^1 and R^2 can be taken together with the nitrogen atom to form an unsubstituted or substituted saturated or unsaturated

mono heterocyclic 4-, 5- or 6-membered ring optionally containing another heteroatom selected from the group consisting of oxygen, sulphur or nitrogen, and R^1 and R^2 can be optionally substituted by one or more hydroxy, methoxy, ethoxy groups;

R^{10} and R^{11}, which can be the same or different, are H, C_1-C_6 alkyl, or R^{10} and R^{11} can be taken together with the nitrogen atoms and the guanidinic carbon atom to form an unsubstituted or substituted saturated or unsaturated mono heterocyclic 5- or 6-membered ring optionally containing another heteroatom selected from the group consisting of oxygen, sulphur or nitrogen;

R^3 is H, C_1-C_6 alkyl, ONO_2, OR^{12};

R^{12} is H, C_1-C_6 alkyl, optionally substituted by one or more hydroxy, methoxy, ethoxy; or R^{12} is allyl or propargyl;

when the bond == linking the carbon atom in position 6 of the androstane skeleton with R^4 is a double bond, R^4 is N ~ OR^{13} or $CR^{14}R^{15}$;

when the bond == linking the carbon atom in position 7 of the androstane skeleton with R^5 is a double bond, R^5 is O, with the meaning of a keto group, or N ~ OR^{13} or $CR^{14}R^{15}$;

R^{13} is H, C_1-C_6 alkyl, optionally substituted by one or more hydroxy, methoxy, ethoxy; or R^{13} is allyl or propargyl;

R^{14} and R^{15}, which can be the same or different, are H, C_1-C_6 alkyl group, optionally substituted by one or more hydroxy, methoxy, ethoxy; or R^{14} and R^{15}, which can be the same or different, are allyl, propargyl, F, $COOR^{16}$, CN, $CONR^{17}R^{18}$, or R^{14} and R^{15} taken together form a cycloalkylene substituent;

R^{16} is H, C_1-C_6 alkyl group optionally substituted by one or more hydroxy, methoxy, ethoxy;

R^{17} and R^{18}, which can be the same or different, are H, C_1-C_6 alkyl groups or R^{17} and R^{18} can optionally be taken together with the nitrogen atom to form a heterocyclic group,

when the bond == linking the carbon atom in position 6 of the androstane skeleton with R^4 is a single bond, R^4 is H, C_1-C_6 alkyl group, vinyl, ethynyl, $COOR^{16}$, CN, $CONR^{17}R^{18}$, ONO_2, NHCHO, $NHCOCH_3$, CH=N ~ OH, spirocyclopropane, spirooxirane, where the alkyl group can be optionally substituted by one or more hydroxy, methoxy, ethoxy;

when the bond == linking the carbon atom in position 7 of the androstane skeleton with R^5 is a single bond, R^5 is H, C_1-C_6 alkyl group, vinyl, ethynyl, $COOR^{16}$, CN, $CONR^{17}R^{18}$, OR^{19}, ONO_2, NHCHO, $NHCOCH_3$, CH=N ~ OH, spirocyclopropane, spirooxirane, where the alkyl group can be optionally substituted by one or more hydroxy, methoxy, ethoxy;

R^{16}, R^{17}, and R^{18} are as above defined;

R^{19} is H, C_1-C_6 alkyl group optionally substituted by one or more hydroxy, methoxy, ethoxy;

R^6 is H, C_1-C_6 alkyl group or C_2-C_6 acyl group, when the bond == in position 17 of the androstane skeleton is a single bond and, as a consequence, the remaining substituent in position 17 is H, R^6 is not present when the bond == in position 17 is a double bond with the meaning of a keto group;

R^{16}, R^{17}, and R^{18}, when present in the same compound in different positions, can be the same or different;

the symbol ∿ represents an α or β single bond or an E or Z diastereoisomer when it is linked to a double bond;

the symbol ═ in positions 4, 5, 6, 7, and 17 represents, independently, a single or double bond, and when it is a single exocyclic bond in positions 6, 7, or 17, it can be an α or β single bond;

with the following provisos:

when the symbol ═ in position 5-6 only is a double bond while the others in position 4-5 and 6-7 are single bonds and R^4 is methyl with A meaning CH∿X wherein X is oxygen or sulphur, R^2R^1N is not dimethylamino or diethylamino or morpholino,

when A is CR^8∿XC=O or CR^8∿XC=OX', wherein R^8 is hydrogen, X is oxygen and X' is O or NH, and when A is CH∿X, wherein X is oxygen, when the symbol ═ in position 5-6 is a double bond R^5 is not oxygen, with the symbol ═ in position 7, linking R^5, meaning a double bond, or R^5 is not OR^{19}, with the symbol ═ in position 7, linking R^5, meaning a single bond,

that at least one of R^3, R^4 and R^5 are not hydrogen at the same time

their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

2. Compounds according to claim 1, wherein the symbols R^3 and R^5 represent H, the symbol R^4 represents methylene, hydroxyimino, methoxyimino, when the symbols ═ in position 6 linking R^4 and in position 17 represent double bonds, while the other symbols ═ represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N∿O or the symbol A is CR^8∿XC=O, where R^8 and X are as defined above or the symbol A is CR^7∿CH=CH∿, where R^7 is as defined above, their tautomers, stereoisomers, Z and E isomers,

optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

3. Compounds according to claim 2, wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-amino-butiroyloxy), 3β-(3-amino-2-methylpropionyloxy), 3α-(5-aminopent-1Z-enyl), 3α-(4-aminobut-1Z-enyl) their tautomers, stereoisomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

4. Compounds according to claim 1, wherein symbols R^3 and R^5 represent H, the symbol R^4 represents α-methyl, α-carbamoyl, α-methoxycarbonyl, α-hydroxymethyl, α-methoxymethyl, α-nitroxy, α-formylamino, α-ethynyl, when the symbol ═ in position 17 represents a double bond while the other symbols ═ represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N ∿ O, or the symbol A is CR^8 ∿ XC=O, where R^8 and X are as defined above, or the symbol A is CR^7 ∿ CH=CH ∿ , where R^7 is as defined above, their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

5. Compounds according to claim 4, wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-amino-butiroyloxy), 3β-(3-amino-2-methylpropionyloxy), 3α-(5-aminopent-1Z-enyl), 3α-(4-aminobut-1Z-enyl), their tautomers, stereoisomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

6. Compounds according to claim 1, wherein the symbol R^3 represents hydroxy, the symbol R^5 represents H, the symbol R^4

represents methylene, hydroxyimino, methoxyimino, when the symbols ═ in position 6 linking R^4 and in position 17 represent double bonds, while the other symbols ═ represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N ∿ O, or the symbol A is CR^8 ∿ XC=O, where R^8 and X are as defined above, or the symbol A is CR^7 ∿ CH=CH ∿, where R^7 is as defined above, their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

7. Compounds according to claim 6, wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-amino-butiroyloxy), 3β-(3-amino-2-methylpropionyloxy), 3α-(5-aminopent-1Z-enyl), 3α-(4-aminobut-1Z-enyl), their tautomers, stereoisomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

8. Compounds according to claim 1, wherein the symbols R^3 and R^4 represent H, the symbol R^5 represents methylene, hydroxyimino, methoxyimino, when the symbols ═ in position 7 linking R^4 and in position 17 represent double bonds, while the other symbols ═ represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N ∿ O, or the symbol A is CR^8 ∿ XC=O, where R^8 and X are as defined above, or the symbol A is CR^7 ∿ CH=CH ∿, where R^7 is as defined above, their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

9. Compounds according to claim 7, wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-amino-butiroyloxy), 3β-(3-amino-2-methylpropionyloxy), 3α-(5-amino-pent-1Z-

enyl), 3α-(4-aminobut-1Z-enyl), their tautomers, stereoisomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

10. Compounds according to claim 1, wherein the symbols R^3 and R^4 represent H, the symbol R^5 represents α-methyl, α-carbamoyl, α-methoxycarbonyl, α-hydroxymethyl, α-methoxymethyl, α-nitroxy, α-formylamino, α-ethynyl, β-methyl, β-carbamoyl, β-methoxycarbonyl, β-hydroxymethyl, β-methoxymethyl, β-nitroxy, β-formylamino, β-ethynyl, when the symbol == in position 17 represents a double bond while the other symbols == represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N ~ O, or the symbol A is CR^8 ~ XC=O, where R^8 and X are as defined above, or the symbol A is CR^7 ~ CH=CH ~, where R^7 is as defined above, their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

11. Compounds according to claim 10, wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-aminobutiroyloxy), 3β-(3-amino-2-methylpropionyloxy), in particular 3α-(5-aminopent-1Z-enyl), 3α-(4-aminobut-1Z-enyl), their tautomers, stereoisomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

12. Compounds according to claim 1, wherein the symbol R^3 represents hydroxy, the symbol R^4 represents H, the symbol R^5 represents methylene, hydroxyimino, methoxyimino, when the symbols == in position 7 linking R^5 and in position 17 represent double bonds, while the other symbols == represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N ~ O, or the symbol A is CR^8 ~ XC=O, where R^8 and X are as defined above, or the symbol A is CR^7 ~ CH=CH ~, where R^7 is as defined above, their tautomers,

stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

13. Compounds according to claim 12, wherein A is selected from the group consisting of in particular 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-aminobutiroyloxy), 3β-(3-amino-2-methylpropionyloxy), 3α-(5-aminopent-1Z-enyl), 3α-(4-aminobut-1Z-enyl), their tautomers, stereoisomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

14. Compounds according to claim 1, wherein the symbol R^3 represents hydroxy, the symbol R^4 represents H, the symbol R^5 represents α-methyl, α-carbamoyl, α-methoxycarbonyl, α-hydroxymethyl, α-methoxymethyl, α-nitroxy, α-formylamino, α-ethynyl, β-methyl, β-carbamoyl, β-methoxycarbonyl, β-hydroxymethyl, β-methoxymethyl, β-nitroxy, β-formylamino, β-ethynyl, when the symbol == in position 17 represents a double bond while the other symbols == represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N ~ O, or the symbol A is CR^8 ~ XC=O, where R^8 and X are as defined above, or the symbol A is CR^7 ~ CH=CH ~ , where R^7 is as defined above, their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

15. Compounds according to claim 14, wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-aminobutiroyloxy), 3β-(3-amino-2-methylpropionyloxy), 3α-(5-aminopent-1Z-enyl), 3α-(4-aminobut-1Z-enyl), their tautomers, stereoisomers, optical

isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

16. Compounds according to claim 1, wherein the symbol R^3 represents hydroxy, the symbols R^4 and R^5 represent H, when the symbol ═ in position 17 represents a double bond while the other symbols ═ represent single bonds, R^1R^2N and B are as defined above, and the symbol A is C=N ∿ O, or the symbol A is CR^8 ∿ XC=O, where R^8 and X are as defined above, or the symbol A is CR^7 ∿ CH=CH ∿, where R^7 is as defined above, their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

17. Compounds according to claim 16, wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-amino)cyclopentoxyimino, 3β-(3-aminopropionyloxy), 3β-(3-amino-butiroyloxy), 3β-(3-amino-2-methylpropionyloxy), 3α-(5-aminopent-1Z-enyl), 3α-(4-aminobut-1Z-enyl), their tautomers, stereoisomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

18. Compounds according to claim 1, selected from the group consisting of:

EZ 3-(2-aminoethoxyimino)-6-methyleneandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-6-methyleneandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-6-methyleneandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-6-methyleneandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-6-methyleneandrostan-17-one,
3β-(3-aminopropionyloxy)-6-methyleneandrostan-17-one,
3β-(3-aminobutirroyloxy)-6-methyleneandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-6-methyleneandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-6-methyleneandrostan-17-one,

3α-(4-aminobut-1Z-enyl)-6-methyleneandrostan-17-one,

and the corresponding 6-hydroxyimino and 6-methoxyimino derivatives;

EZ 3-(2-aminoethoxyimino)-6α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-6α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-6α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-6α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-6α-methylandrostan-17-one,
3β-(3-aminopropionyloxy)-6α-methylandrostan-17-one,
3β-(3-aminobutirroyloxy)-6α-methylandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-6α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-6α-methylandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-6α-methylandrostan-17-one,

and the corresponding 6α-carbamoyl, 6α-methoxycarbonyl, 6α-hydroxymethyl, 6α-methoxymethyl, 6α-nitroxy, 6α-formylamino, α-ethynyl derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
3β-(3-aminopropionyloxy)-5α-hydroxy-6α-methylandrostan-17-one,
3β-(3-aminobutirroyloxy)-5α-hydroxy-6α-methylandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-5α-hydroxy-6α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,

and the corresponding 6α-carbamoyl, 6α-methoxycarbonyl, 6α-hydroxymethyl, 6α-methoxymethyl, 6α-nitroxy, 6α-formylamino, α-ethynyl derivatives;

EZ 3-(2-aminoethoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-7-methyleneandrostan-17-one,
3β-(3-aminopropionyloxy)-7-methyleneandrostan-17-one,
3β-(3-aminobutirroyloxy)-7-methyleneandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-7-methyleneandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-7-methyleneandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-7-methyleneandrostan-17-one,

and the corresponding 7-hydroxyimino and 7-methoxyimino derivatives;

EZ 3-(2-aminoethoxyimino)-7α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-7α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-7α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-7α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-7α-methylandrostan-17-one,
3β-(3-aminopropionyloxy)-7α-methylandrostan-17-one,
3β-(3-aminobutirroyloxy)-7α-methylandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-7α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-7α-methylandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-7α-methylandrostan-17-one,

and the corresponding 7α-carbamoyl, 7α-methoxycarbonyl, 7α-hydroxymethyl, 7α-methoxymethyl, 7α-nitroxy, 7α-formylamino, α-ethynyl derivatives and the corresponding 7β-methyl, 7β-carbamoyl, 7β-methoxycarbonyl, 7β-hydroxymethyl, 7β-methoxymethyl, 7β-nitroxy, 7β-formylamino, β-ethynyl derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,
3β-(3-aminopropionyloxy)-5α-hydroxy-6-methyleneandrostan-17-one,
3β-(3-aminobutirroyloxy)-5α-hydroxy-6-methyleneandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-5α-hydroxy-6-methyleneandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxy-6-methyleneandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-5α-hydroxy-6-methyleneandrostan-17-one,

and the corresponding 6-hydroxyimino and 6-methoxyimino derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,
3β-(3-aminopropionyloxy)-5α-hydroxy-7-methyleneandrostan-17-one,
3β-(3-aminobutirroyloxy)-5α-hydroxy-7-methyleneandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-5α-hydroxy-7-methyleneandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxy-7-methyleneandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-5α-hydroxy-7methyleneandrostan-17-one,

and the corresponding 7-hydroxyimino and 7-methoxyimino derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
3β-(3-aminopropionyloxy)-5α-hydroxy-6α-methylandrostan-17-one,
3β-(3-aminobutirroyloxy)-5α-hydroxy-6α-methylandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-5α-hydroxy-6α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,

and the corresponding 6α-carbamoyl, 6α-methoxycarbonyl, 6α-hydroxymethyl, 6α-methoxymethyl, 6α-nitroxy, 6α-formylamino, α-ethynyl derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,
3β-(3-aminopropionyloxy)-5α-hydroxy-7α-methylandrostan-17-one,
3β-(3-aminobutirroyloxy)-5α-hydroxy-7α-methylandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-5α-hydroxy-7α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxy-7α-methylandrostan-17-one,

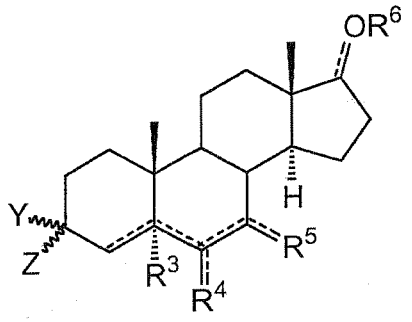
3α-(4-aminobut-1Z-enyl)-5α-hydroxy-7α-methylandrostan-17-one,

and the corresponding 7α-carbamoyl, 7α-methoxycarbonyl, 7α-hydroxymethyl, 7α-methoxymethyl, 7α-nitroxy, 7α-formylamino, 7α-ethynyl derivatives and the corresponding 7β-methyl, 7β-carbamoyl, 7β-methoxycarbonyl, 7β-hydroxymethyl, 7β-methoxymethyl, 7β-nitroxy, 7β-formylamino, 7α-ethynyl derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxyandrostan-17-one,
3β-(3-aminopropionyloxy)-5α-hydroxyandrostan-17-one,
3β-(3-aminobutirroyloxy)-5α-hydroxyandrostan-17-one,
3β-(3-amino-2-methylpropionyloxy)-5α-hydroxyandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxyandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-5α-hydroxyandrostan-17-one;

their tautomers, stereoisomers, Z and E isomers, optical isomers and their mixtures, the metabolites and the metabolic precursors and the pharmaceutically acceptable salts.

19. A process for the preparation of compounds of claim 1, where the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is C=N ∿ O, comprising the reaction of a compound of general formula (II)



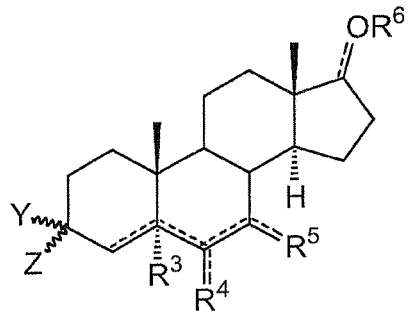
II

where the symbols R^3, R^4, R^5, R^6, and ═ have the meanings defined above and Y and Z represent together a keto group (=O) with a compound of general formula **(III)**,

$R^2R^1N–B–ONH_2$ **(III)**

where R^2, R^1, and B have the meanings defined above.

20. A process for the preparation of compounds of claim 1, where the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CR^7〰$CH=CH$〰, CR^7〰CH_2, where R^7 is hydroxy, comprising the reaction of a compound of general formula **(II)**



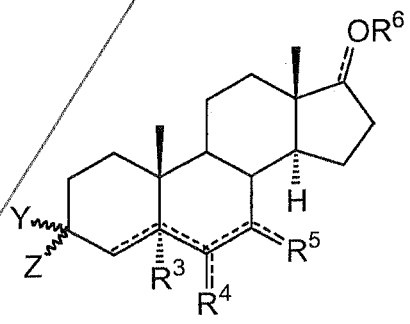
II

where the symbols R^3, R^4, R^5, R^6, and ═ have the meanings defined above and Y and Z represent together a keto group (=O) with a compound of general formula (**IV**) or (**V**)

W–B–CH=CHMetT (**IV**) W–B–CH_2MetT (**V**)

where B have the meanings defined above, Met is a metal atom and T is nothing, halogen or a different metal atom depending on the oxidation state of the Met metal atom, and W is R^2R^1N, R^1PGN, PG_2N, N_3, where R^1 and R^2 are alkyl or phenylalkyl, and PG is a protective group, to give compounds of general formula (**I**) directly or after transformation of the groups R^1PGN, PG_2N, N_3.

21. A process for the preparation of compounds of claim 1, where the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CH ~ X, where X is NR^9, comprising the reaction of a compound of general formula (**II**)



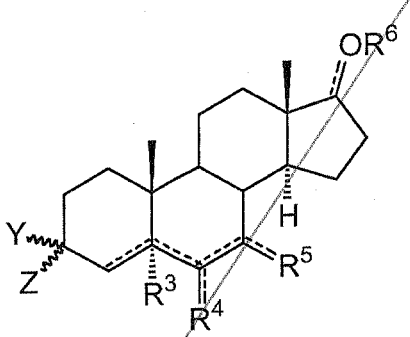
II

where the symbols R^3, R^4, R^5, R^6, and ═ have the meanings defined above and Y and Z represent together a keto group (=O) with a compound of general formula (**VI**),

W–B–NHR^9 (**VI**)

where W, R^9, and B have the meanings defined above.

22. A process for the preparation of compounds of claim 1, R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CH ~ X, where X is O, S or NR^9, comprising the reaction of a compound of general formula (**II**)



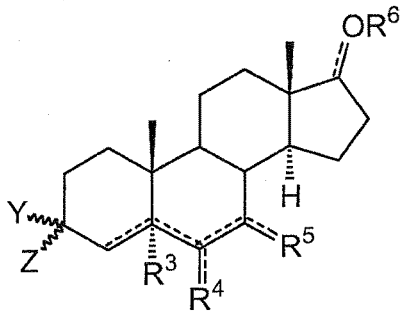
II

where Y is hydroxy, mercapto, NHR^9, when Z is hydrogen by reaction with compounds of general formula (**VII**),

W–B–LG (**VII**)

where W is R^2R^1N, R^1PGN, PG_2N, N_3, where R^1, R^2, and B are as defined above, PG is a protective group, to give compounds of general formula (**I**) directly or after transformation of the groups R^1PGN, PG_2N, N_3, and LG is a leaving group.

23. A process for the preparation of compounds of claim 1, where R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CH ~ X, where X is O, S or NR^9, comprising the reaction of a compound of general formula (**II**)



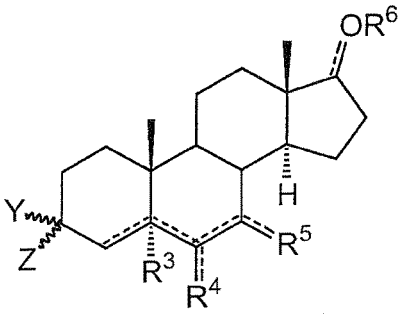
II

where Y is Y is a leaving group with compounds of general formula **(VIII)**,

W–B–X–H **(VIII)**

where W is R^2R^1N, R^1PGN, PG_2N, N_3, where R^1, R^2, and B are as defined above, PG is a protective groupand X is O, S or NR^9, where R^9 is as defined above, to give compounds of general formula **(I)** directly or after transformation of the groups R^1PGN, PG_2N, N_3.

24. A process for the preparation of compounds of claim 1, R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CR^7 ~ CH=CH ~ , where R^7 is hydrogen, comprising the reaction of a compound of general formula **(II)**



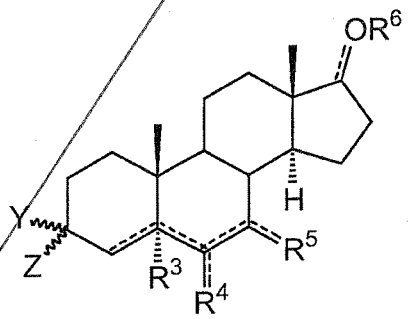
II

where Y is CHO and Z is hydrogen with compounds of general formula (IX),

$$W\text{–}B\text{–}P^{+}R_3^{20}\ Hal^{-} \quad \textbf{(IX)}$$

where W is R^2R^1N, R^1PGN, PG_2N, N_3, where R^1, R^2, and B are as defined above, PG is a protective group, R^{20} is a C_1-C_6 alkyl or aryl and Hal is a halogen.

25. A process for the preparation of compounds of claim 1, wherein the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CR^8 ~ $XC{=}O$, where R^8 is hydrogen or C_1-C_6 alkyl group, X is O, S, or NR^9, comprising the reaction of a compound of general formula (II)



II

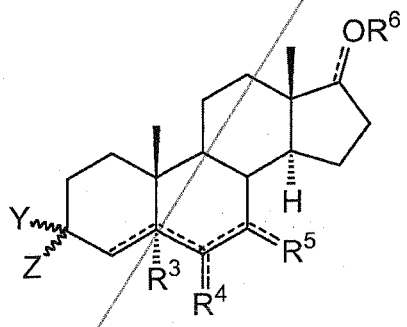
where Y is hydroxy, mercapto, NHR^9 and Z is hydrogen or C_1-C_6 alkyl group with a compound of general formula (X),

$$W\text{–}B\text{–}COOH \quad \textbf{(X)}$$

where W is R^2R^1N, R^1PGN, PG_2N, N_3, where R^1, R^2, and B are as defined above, PG is a protective group, to give compounds of general

formula (I) directly or after transformation of the groups R^1PGN, PG_2N, N_3.

26. A process for the preparation of compounds of claim 1, wherein the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CR^8 ∿ X(C=O)X', where R^8 is hydrogen or C_1-C_6 alkyl group, X is O, S, or NR^9, and X' is NH, comprising the reaction of a compound of general formula (II)



II

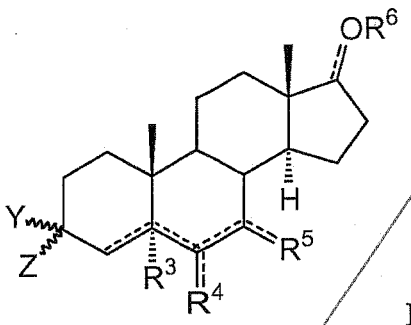
where Y is hydroxy, mercapto, NHR^9 and Z is hydrogen or C_1-C_6 alkyl group with a compound of general formula (XI),

W–B–NCO (XI)

where W is R^2R^1N, R^1PGN, PG_2N, N_3, where R^1, R^2, and B are as defined above, PG is a protective group, to give compounds of general formula (I) directly or after transformation of the groups R^1PGN, PG_2N, N_3.

27. A process for the preparation of compounds of claim 1, wherein the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CR^8 ∿ X(C=O)X', where R^8 is hydrogen or C_1-C_6 alkyl

group, X is O, S, or NR^9, and X' is O, S, NR^9, comprising the reaction of a compound of general formula (**II**)



II

where Y is hydroxy, mercapto, NHR^9 and Z is hydrogen or C_1-C_6 alkyl group with a compound of general formula (**XII**),

$$W\text{–}B\text{–}X'\text{–}H \qquad \textbf{(XII)}$$

where W is R^2R^1N, R^1PGN, PG_2N, N_3, where R^1, R^2, B and X' are as defined above, PG is a protective group, to give compounds of general formula (**I**) directly or after transformation of the groups R^1PGN, PG_2N, N_3.

28. A process for the preparation of compounds of claim 1, wherein the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CH ~ X, CR^8 ~ XC=O, CR^8 ~ XC(=O)X', where X and X' are NR^9, and R^9 is C_1-C_6 alkyl group, comprising the alkylation of a compound of general formula (**I**), as specified in claim 1, wherein A is CH ~ X, CR^8 ~ XC=O, CR^8 ~ XC(=O)X', where X and X' are NH, with a C_1-C_6 alkyl-LG, where LG is a leaving group.

29. A process for the preparation of compounds of claim 1, wherein the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and ═ have the meanings defined above and A is CH ~ X, where X is NR^9, and R^9 is C_1-C_6 alkyl group, comprising the reaction of a compound of general formula (**I**), as

specified in claim 1, wherein A is CH ~ X, and X is NH, with CH_2O, or C_1-C_5 alkyl-CHO.

30. A process for the preparation of compounds of claim 1, wherein the symbols R^1, R^2, R^3, R^4, R^5, R^6, B and = have the meanings defined above and A is CH ~ X, where X is $S(O)_x$ and x is 1 or 2, comprising the transformation of a compound of general formula (**I**), as specified in claim 1, wherein A is CH ~ X, where X is $S(O)_x$ and x is 0, with an oxidant.

31. A process for the preparation of compounds of claim 1, wherein the symbols A, B, R^1, R^2, R^3, R^4, R^5, R^6, and = have the meanings defined above, comprising the transformation of a compound of general formula (**I**), as specified in claim 1, wherein symbol = is double bond, with a reducing agent.

32. A process for the preparation of compounds of claim 1, wherein the symbols B, R^1, R^2, R^3, R^4, R^5, R^6, and = have the meanings defined above, and A is CR^7 ~ CH=CH ~, CR^7 ~ CH_2, where R^7 is hydrogen, comprising the deoxygenation of a compound of general formula (**I**), as specified in claim 1, wherein R^7 is hydroxy.

33. A process for the preparation of compounds of claim 1, wherein the symbols A, B, R^1, R^2, R^3, R^4, R^5, R^6, and = have the meanings defined above, R^1 is hydrogen and R^2 is $C(=NR^{10})NHR^{11}$, where R^{10} and R^{11} have the meanings reported above, comprising the reaction of a compound of general formula (**I**), as specified in claim 1, wherein R^1 and R^2 are hydrogen with a compound of general formula (**XIII**)

$$TC(=NR^{10})NHR^{11} \quad \textbf{(XIII)}$$

where R^{10} and R^{11} have the meanings reported above and T is a leaving group.

34. A process for the preparation of compounds of claim 1, wherein the symbols A, B, R^1, R^2, R^3, R^6, and ═ have the meanings defined above, and R^4 and R^5, independently, are N ∿ OR^{13} when the bonds ═ linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5, independently, are double bonds, comprising the reaction of a compound of general formula (**I**), as specified in claim 1, wherein R^4 and R^5, being R^4 and R^5 the same or different, are O, with the meaning of a keto group, with a compound of general formula H_2NOR^{13} where R^{13} has the meanings defined above.

35. A process for the preparation of compounds of claim 1, wherein the symbols A, B, R^1, R^2, R^3, R^6, and ═ have the meanings defined above, and R^4 and R^5, independently, are $CR^{14}R^{15}$ when the bonds ═ linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5 are double bonds, comprising the reaction of a compound of general formula (**I**), as specified in claim 1, wherein R^4 and R^5, being R^4 and R^5 the same or different, are O, with the meaning of a keto group, with a compound of general formula (**XIV**) or (**XV**),

$$R^{14}R^{15}CH-P^{+}R_3^{20}\cdot Hal^{-} \qquad \textbf{(XIV)}$$

$$R^{14}R^{15}CH-P(=O)(OR^{20})_2 \qquad \textbf{(XV)}$$

where R^{14}, R^{15}, and R^{20} are as defined above and Hal is a halogen.

36. A process for the preparation of compounds of claim 1, wherein the symbols A, B, R^1, R^2, R^3, R^6, and ═ have the meanings defined above, and R^4 and R^5, independently, are C_1-C_6 alkyl groups substituted with a hydroxy group, when the bonds ═ linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5 are single bonds, comprising the transformation of a compound of general formula (**I**), as specified in claim 1, wherein R^4 and R^5, being R^4 and R^5 the same or different, are

$CR^{14}R^{15}$, where R^{14} and R^{15} are hydrogens, when the bonds == linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5 are double bonds, with a well-known method.

37. A process for the preparation of compounds of claim 1, wherein the symbols A, B, R^1, R^2, R^3, R^6, and == have the meanings defined above, and R^4 and R^5, independently, are C_1-C_6 alkyl groups substituted with a hydroxy group, when the bonds == linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5 are single bonds, comprising the transformation of a compound of general formula (**I**), as specified in claim 1, where R^4 and R^5, being R^4 and R^5 the same or different, are vinyl, when the bonds == linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5 are single bonds, with a well-known method.

38. A process for the preparation of compounds of claim 1, wherein the symbols A, B, R^1, R^2, R^3, R^6, and == have the meanings defined above, and R^4 and R^5, independently, being R^4 and R^5 the same or different, are O, with the meaning of a keto group, when the bonds == linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5 are double bonds, comprising the oxidation of a compound of general formula (**I**), as specified in claim 1, R^4 and R^5, being R^4 and R^5 the same or different, are hydroxy, when the bonds == linking the carbon atom in position 6 of the androstane skeleton with R^4 and the carbon atom in position 7 with R^5 are single bonds.

39. Pharmaceutical composition comprising at leat a compound of claims 1-19 in admixture with at elast one pharmaceutically acceptable vehicle and/or excipient.

40. Use of the compounds of claims 1-19 as medicaments.

41. Use of the compounds of claims 1-19 for the preparation of a medicament for the treatment of cardiovascular disorders.

42. Use according to claim 41, wherein said cardiovascular disorders is heart failure.

43. Use according to claim 41, wherein said cardiovascular disorders is hypertension.

44. Use according to claim 41, wherein said cardiovascular disorders is heart failure and/or hypertension.

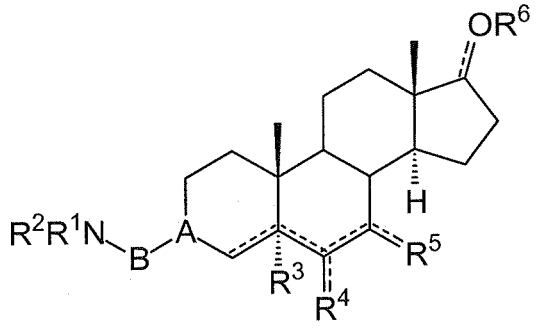
45. Use of the compounds of claims 1-19 for the preparation of a medicament for the inhibition of the enzymatic activity of the Na^+,K^+-ATPase.

46. Use of the compounds of claims 1-19 for the preparation of a medicament for the treatment of a disease caused by the hypertensive effects of endogenous ouabain.

47. Use according to claim 46, in which the disease caused by the hypertensive effects of endogenous ouabain comprise renal failure progression in autosomal dominant polycystic renal disease (ADPKD), preeclamptic hypertension and proteinuria and renal failure progression in patients with adducin polymorphisms.

CLAIMS

1. A compound of formula (I)



I

wherein:

A is C=N ~ O or CR^7 ~ CH=CH ~ wherein the left end carbon atom in any of these groups is at position 3 of the androstane skeleton;

R^7 is hydrogen or hydroxy;

B is a C_1-C_6 straight or branched alkylene or a C_3-C_6 cycloalkylene, optionally containing a phenyl ring;

R^1 and R^2, which can be the same or different, are H, C_1-C_6 alkyl, phenyl - C_1-C_4 alkyl or when R^1 is Hydrogen, R^2 can also be $C(=NR^{10})NHR^{11}$ or R^1 and R^2 can be taken together with the nitrogen atom to form an unsubstituted or substituted saturated or unsaturated mono heterocyclic 4-, 5- or 6-membered ring optionally containing another heteroatom selected from the group consisting of oxygen, sulphur or nitrogen, and R^1 and R^2 can be optionally substituted by one or more hydroxy, methoxy, ethoxy groups;

R^{10} and R^{11}, which can be the same or different, are H, C_1-C_6 alkyl, or R^{10} and R^{11} can be taken together with the nitrogen atoms and the guanidinic carbon atom to form an unsubstituted or substituted saturated or unsaturated mono heterocyclic 5- or 6-membered ring optionally containing another heteroatom selected from the group consisting of oxygen, sulphur or nitrogen;

R^3 is H, C_1-C_6 alkyl, ONO_2, OR^{12};

R^{12} is H, C_1-C_6 alkyl, optionally substituted by one or more hydroxy, methoxy, ethoxy; or R^{12} is allyl or propargyl;

when the bond ═ linking the carbon atom in position 6 of the androstane skeleton with R^4 is a double bond, R^4 is N ~ OR^{13} or $CR^{14}R^{15}$;

when the bond ═ linking the carbon atom in position 7 of the androstane skeleton with R^5 is a double bond, R^5 is O, with the meaning of a keto group, or N ~ OR^{13} or $CR^{14}R^{15}$;

R^{13} is H, C_1-C_6 alkyl, optionally substituted by one or more hydroxy, methoxy, ethoxy; or R^{13} is allyl or propargyl;

R^{14} and R^{15}, which can be the same or different, are H, C_1-C_6 alkyl group, optionally substituted by one or more hydroxy, methoxy, ethoxy; or R^{14} and R^{15}, which can be the same or different, are allyl, propargyl, F, $COOR^{16}$, CN, $CONR^{17}R^{18}$, or R^{14} and R^{15} taken together form a cycloalkylene substituent;

R^{16} is H, C_1-C_6 alkyl group optionally substituted by one or more hydroxy, methoxy, ethoxy;

R^{17} and R^{18}, which can be the same or different, are H, C_1-C_6 alkyl groups or R^{17} and R^{18} can optionally be taken together with the nitrogen atom to form a heterocyclic group,

when the bond ≡ linking the carbon atom in position 6 of the androstane skeleton with R^4 is a single bond, R^4 is H, C_1-C_6 alkyl group, vinyl, ethynyl, $COOR^{16}$, CN, $CONR^{17}R^{18}$, ONO_2, NHCHO, $NHCOCH_3$, CH=N ∿ OH, spirocyclopropane, spirooxirane, where the alkyl group can be optionally substituted by one or more hydroxy, methoxy, ethoxy;

when the bond ≡ linking the carbon atom in position 7 of the androstane skeleton with R^5 is a single bond, R^5 is H, C_1-C_6 alkyl group, vinyl, ethynyl, $COOR^{16}$, CN, $CONR^{17}R^{18}$, OR^{19}, ONO_2, NHCHO, $NHCOCH_3$, CH=N ∿ OH, spirocyclopropane, spirooxirane, where the alkyl group can be optionally substituted by one or more hydroxy, methoxy, ethoxy;

R^{16}, R^{17}, and R^{18} are as above defined;

R^{19} is H, C_1-C_6 alkyl group optionally substituted by one or more hydroxy, methoxy, ethoxy;

R^6 is H, C_1-C_6 alkyl group or C_2-C_6 acyl group, when the bond ≡ in position 17 of the androstane skeleton is a single bond and, as a consequence, the remaining substituent in position 17 is H, R^6 is not present when the bond ≡ in position 17 is a double bond with the meaning of a keto group;

R^{16}, R^{17}, and R^{18}, when present in the same compound in different positions, can be the same or different;

the symbol ∿ represents an α or β single bond or an E or Z diastereoisomer when it is linked to a double bond;

the symbol ≡ in positions 4, 5, 6, 7, and 17 represents, independently, a single or double bond, and when it is a single exocyclic bond in positions 6, 7, or 17, it can be an α or β single bond;

with the proviso

that R^3, R^4 and R^5 are not hydrogen at the same time,

and the pharmaceutically acceptable salts.

2. A compound according to claim 1, wherein the symbols R^3 and R^5 represent H; R^1R^2N and B are as defined in claim 1, the symbol ≡ in position 17 represents a double bond, and wherein R^4 is methylene,

hydroxyimino, or methoxyimino when the symbol ═ in position 6 linking R^4 represents a double bond, or R^4 is α-methyl, α-carbamoyl, α-methoxycarbonyl, α-hydroxymethyl, α-methoxymethyl, α-nitroxy, α-formylamino or α-ethynyl, when the symbol ═ in position 6 represents a single bond; and R^7 and R^8 are as defined in claim 1, and the pharmaceutically acceptable salts.

3. A compound according to claim 1, wherein the symbol R^3 represents hydroxy, the symbol R^5 represents H, the symbol ═ in position 17 represents a double bond, and R^4 represents methylene, hydroxyimino or methoxyimino, when the symbol ═ in position 6 linking R^4 represents a double bond, and all other symbols ═ represent a single bond, or R^4 represents H when the symbol ═ in position 6 linking R^4 represents a single bond, the symbol ═ in position 17 represents a double bond, and all other symbols ═ represents a single bond, and the pharmaceutically acceptable salts.

4. A compound according to claim 1, wherein the symbols R^3 and R^4 represent H, the symbol ═ in position 17 represents a double bond, and the symbol R^5 represents methylene, hydroxyimino or methoxyimino, when the symbol ═ in position 7 linking R^5 represents a double bond meanwhile the other symbols ═ represent a single bond; or the symbol R^5 represents α-methyl, α-carbamoyl, α-methoxycarbonyl, α-hydroxymethyl, α-methoxymethyl, α-nitroxy, α-formylamino, α-ethynyl, β-methyl, β-carbamoyl, β-methoxycarbonyl, β-hydroxymethyl, β-methoxymethyl, β-nitroxy, β-formylamino or β-ethynyl when all the symbols ═ represent a single bond except the one in position 17, and the pharmaceutically acceptable salts.

5. A compound according to claim 1, wherein the symbol R^3 represents hydroxy, the symbols R^4 and R^5 represent H, the symbol ═ in position 17 represents a double bond while the other symbols ═ represent single bonds and wherein A is selected from the group consisting of 2-aminoethoxyimino, 3-aminopropoxyimino, 2-(N-methylamino)ethoxyimino, 3-(N-methylamino)propoxyimino, 3-(2-aminocyclopentyloxyimino), 3α-(5-aminopent-1-Z-enyl), 3α-(4-aminobut-1-Z-enyl), and the pharmaceutically acceptable salts.

6. A compound according to claim 1, selected from the group consisting of:
EZ 3-(2-aminoethoxyimino)-6-methyleneandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-6-methyleneandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-6-methyleneandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-6-methyleneandrostan-17-one,

EZ 3-(2-aminocyclopentoxyimino)-6-methyleneandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-6-methyleneandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-6-methyleneandrostan-17-one,
and the corresponding 6-hydroxyimino and 6-methoxyimino derivatives;
EZ 3-(2-aminoethoxyimino)-6α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-6α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-6α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-6α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-6α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-6α-methylandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-6α-methylandrostan-17-one,
and the corresponding 6α-carbamoyl, 6α-methoxycarbonyl, 6α-hydroxymethyl, 6α-methoxymethyl, 6α-nitroxy, 6α-formylamino, 6α-ethynyl derivatives;
EZ 3-(2-aminoethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,
and the corresponding 6α-carbamoyl, 6α-methoxycarbonyl, 6α-hydroxymethyl, 6α-methoxymethyl, 6α-nitroxy, 6α-formylamino, α-ethynyl derivatives;
EZ 3-(2-aminoethoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-7-methyleneandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-7-methyleneandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-7-methyleneandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-7-methyleneandrostan-17-one,
and the corresponding 7-hydroxyimino and 7-methoxyimino derivatives;
EZ 3-(2-aminoethoxyimino)-7α-methylandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-7α-methylandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-7α-methylandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-7α-methylandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-7α-methylandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-7α-methylandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-7α-methylandrostan-17-one,
and the corresponding 7α-carbamoyl, 7α-methoxycarbonyl, 7α-hydroxymethyl, 7α-methoxymethyl, 7α-nitroxy, 7α-formylamino, α-ethynyl derivatives

and the corresponding 7β-methyl, 7β-carbamoyl, 7β-methoxycarbonyl, 7β-hydroxymethyl, 7β-methoxymethyl, 7β-nitroxy, 7β-formylamino, β-ethynyl derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,

EZ 3-(3-aminopropoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,

EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,

EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,

EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-6-methyleneandrostan-17-one,

3α-(5-aminopent-1Z-enyl)-5α-hydroxy-6-methyleneandrostan-17-one,

3α-(4-aminobut-1Z-enyl)-5α-hydroxy-6-methyleneandrostan-17-one,

and the corresponding 6-hydroxyimino and 6-methoxyimino derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,

EZ 3-(3-aminopropoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,

EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,

EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,

EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-7-methyleneandrostan-17-one,

3α-(5-aminopent-1Z-enyl)-5α-hydroxy-7-methyleneandrostan-17-one,

3α-(4-aminobut-1Z-enyl)-5α-hydroxy-7methyleneandrostan-17-one,

and the corresponding 7-hydroxyimino and 7-methoxyimino derivati-ves;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,

EZ 3-(3-aminopropoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,

EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,

EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,

EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-6α-methylandrostan-17-one,

3α-(5-aminopent-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,

3α-(4-aminobut-1Z-enyl)-5α-hydroxy-6α-methylandrostan-17-one,

and the corresponding 6α-carbamoyl, 6α-methoxycarbonyl, 6α-hydroxymethyl, 6α-methoxymethyl, 6α-nitroxy, 6α-formylamino, α-ethynyl derivatives;

EZ 3-(2-aminoethoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,

EZ 3-(3-aminopropoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,

EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,

EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,

EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxy-7α-methylandrostan-17-one,

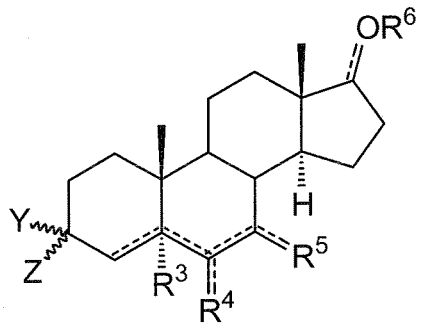
3α-(5-aminopent-1Z-enyl)-5α-hydroxy-7α-methylandrostan-17-one,

3α-(4-aminobut-1Z-enyl)-5α-hydroxy-7α-methylandrostan-17-one,

and the corresponding 7α-carbamoyl, 7α-methoxycarbonyl, 7α-hydroxymethyl, 7α-methoxymethyl, 7α-nitroxy, 7α-formylamino, 7α-ethynyl derivatives and the corresponding 7β-methyl, 7β-carbamoyl, 7β-methoxycarbonyl, 7β-

hydroxymethyl, 7β-methoxymethyl, 7β-nitroxy, 7β-formylamino, 7α-ethynyl derivatives;
EZ 3-(2-aminoethoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(3-aminopropoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(2-(N-methylamino)ethoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(3-(N-methylamino)propoxyimino)-5α-hydroxyandrostan-17-one,
EZ 3-(2-aminocyclopentoxyimino)-5α-hydroxyandrostan-17-one,
3α-(5-aminopent-1Z-enyl)-5α-hydroxyandrostan-17-one,
3α-(4-aminobut-1Z-enyl)-5α-hydroxyandrostan-17-one;
and the pharmaceutically acceptable salts.

7. A process for the preparation of A compound of claim 1, where A is C=N ~ O, comprising the reaction of a compound of general formula (**II**)



II

where the symbols R^3, R^4, R^5, R^6, and ═ are as defined in claim 1 and Y and Z represent together a keto group (=O)
with a compound of general formula (**III**),

$$R^2R^1N–B–ONH_2 \quad \textbf{(III)}$$

where R^2, R^1, and B are as defined in claim 1.

8. A process for the preparation of a compound of claim 1, wherein R^4 and R^5 being the same or different, are N ~ OR^{13} with the meaning of oxime, comprising the reaction of a compound of general formula (**I**), as specified in claim 1, wherein R^4 and R^5, being R^4 and R^5 the same or different, are O with the meaning of a keto group with a compound of general formula H_2NOR^{13} where R^{13} has the meanings defined in claim 1.

9. Pharmaceutical composition comprising at least a compound of claims 1-6 in admixture with at least one pharmaceutically acceptable vehicle and/or excipient.

10. The compounds of claims 1-6 for use as medicaments.

11. Use of a compound of claims 1-6 for the preparation of a medicament for the treatment of cardiovascular disorders.

12. Use according to claim 11, wherein said cardiovascular disorders is heart failure and/or hypertension.

13. Use of a compound of claims 1-6 for the preparation of a medicament for the inhibition of the enzymatic activity of the Na^+, K^+-ATPase.

14. Use of a compound of claims 1-6 for the preparation of a medicament for the treatment of a disease caused by the hypertensive effects of endogenous ouabain.

15. Use according to claim 14, in which the disease caused by the hypertensive effects of endogenous ouabain comprises renal failure progression in autosomal dominant polycystic renal disease (ADPKD), preeclamptic hypertension and proteinuria and renal failure progression in patients with adducin polymorphisms.