CLAIMS

1.- A genetically modified bacterium ~~wherein expression of a gene coding a~~ devoid of 20-beta-hydroxysteroid dehydrogenase (20β-HSDH) ~~is~~activity or having reduced ~~or suppressed~~20β-HSDH activity due to genetic modification in a gene coding a 20β-HSDH , compared to a corresponding unmodified bacterium, wherein the corresponding unmodified bacterium has Δ1-dehydrogenase activity and 20-β-dehydrogenase activity.

2.- The genetically modified bacterium according to claim 1, wherein the gene coding a 20β-HSDH is inactivated or deleted.

3.- The genetically modified bacterium according to claim 1 or 2, wherein the gene coding a 20β-HSDH is mutated.

4.- The genetically modified bacterium according to any one of claims 1 to 3, wherein the gene coding a 20β-HSDH is truncated.

5~~.~~. The genetically modified bacterium according to ~~any one of claims~~claim 1 ~~to 4~~, wherein expression of the ~~bacterium~~gene coding a 20β-HSDH is ~~from the family *Nocardioidaceae*~~reduced or suppressed.

6.- The genetically modified bacterium according to any one of claims 1 to 5, wherein the bacterium is from the family *Nocardioidaceae*.

7.- The genetically modified bacterium according to any one of claims 1 to 6, wherein the genetically modified bacterium has Δ1-dehydrogenase activity~~, but has reduced or is devoid of 20-β-dehydrogenase activity compared to the unmodified bacterium~~.

~~7~~8.- A method for production of a genetically modified bacterium according to any one of claims 1 to ~~6~~7 comprising:

a) providing a bacterium which has Δ1-dehydrogenase activity and 20-β-dehydrogenase activity; and

b) inactivating or deleting the gene coding a 20β-HSDH.

~~8~~9.- A method for the production of 1,2-dehydrogenated steroid comprising:

a) providing a steroid which is not 1,2-dehydrogenated;

b) contacting said steroid which is not 1,2-dehydrogenated with a bacterium according to any one of claims 1 to ~~6 or an extract thereof~~7 under conditions sufficient to obtain 1,2-dehydrogenated steroid.

~~9.- The~~10..- A method for the production of 1,2-dehydrogenated steroid comprising:

a) providing a steroid which is not 1,2-dehydrogenated;

b) preparing an extract of a bacterium according to any one of claims 1 to 7 by cell lysis;

c) contacting the bacterium extract obtained at step b) under conditions sufficient to obtain 1,2-dehydrogenated steroid.

11.- The method according to claim ~~8~~9 or 10, wherein the steroid which is not 1,2-dehydrogenated is a corticosteroid.

~~10~~12.- The method according to ~~claim 8 or~~an one of claims 9 to 11, wherein said steroid which is not 1,2-dehydrogenated is hydrocortisone and said method is for the production of prednisolone.

~~11~~13.- The method according to any one of claims ~~8~~9 to ~~10~~14, wherein said method further comprises recovering and purifying said 1,2-dehydrogenated steroid.

~~12~~14.- The method according to claim ~~11~~13, which does not comprise a step of elimination of 20 β-dehydrogenated steroid.

~~13~~15.- The method according to any one of claims ~~8~~9 to ~~12~~14, which further comprises formulating the 1,2-dehydrogenated steroid into a pharmaceutical composition.

~~14~~16.- The method according to any one of claims ~~8~~9 to ~~13~~15, wherein said extract has Δ1-dehydrogenase activity.

~~15~~17.- The method according to any one of claims ~~8~~9 to ~~13~~15, wherein said extract is obtained by cell-lysis of the bacterium according to one of claims 1 to ~~6~~7 and optionally fractionation of the cell-lysis product in order to concentrate Δ1-dehydrogenase activity or to facilitate purification of Δ1-dehydrogenase activity.

18.- The method according to claim 8, wherein step b) is realized by mutation, truncation or deletion of the gene coding a 20β-HSDH.

19.- The method according to claim 8 or 18, wherein the obtained genetically modified bacterium does not comprise any exogenous DNA.