Claims:

1. A process for the hydroxylation of the carbon atom 21 of a steroid, comprising the steps of:

a) providing a cell expressing

(i) a heterologous mammalian CYP21A2 protein or a functional variant thereof, wherein the functional variant has at least 20% of the ability of the unaltered CYP21A2 protein to 21-hydroxylate a steroid,

(ii) at least one heterologous electron transfer system capable of transferring electrons to CYP21A2, and

(iii) one or more chaperones facilitating folding of CYP21A2; and

b) adding the steroid to the cell,

wherein the steroid is medrane or deltamedrane.

2. The process of claim 1, further comprising a step c) of extracting the 21-hydroxylated steroid from the supernatant of the cell.

3. The process of any one of claims 1-2, further comprising adding one or more cell permeabilizing agents to the cell after step b).

4. The process of any one of claims 1-3, wherein the cell is a resting cell.

5. The process of any one of claims 1-4, wherein the cell is a prokaryotic cell or a eukaryotic cell.

6. The process of claim 5, wherein the prokaryotic cell is *E. coli* cell or the eukaryotic cell is a yeast cell.

7. The process of any one of claims 1-6, wherein the at least one electron transfer system comprises

(i) a CYP21A2 reductase, and/or

(ii) a ferredoxin reductase and a ferredoxin.

8. The process of any one of claims 1-7, wherein the one or more chaperones are recombinantly expressed chaperones.

9. The process of any one of claims 1-8, wherein the expression of at least one tryptophanase gene is reduced or abolished in the cell.

10. The process of any one of claims 1-9, wherein the cell further expresses a heterologous gene encoding for an enzyme catalyzing a step in the heme biosynthesis pathway.

11. The process of claim 10, wherein the heterologous gene is a hemA gene.

12. The process of any one of claims 1-11, wherein the genes encoding for (i), (ii) and optionally (iii) are comprised in one or more expression cassettes which is/are integrated into the cell genome.

13. Use of a cell expressing
(i) a heterologous mammalian CYP21A2 protein or a functional variant thereof, wherein the functional variant has at least 20% of the ability of the unaltered CYP21A2 protein to 21-hydroxylate a steroid,
(ii) at least one heterologous electron transfer system capable of transferring electrons to CYP21A2, and
(iii) one or more chaperones facilitating folding of CYP21A2
for the hydroxylation of the carbon atom 21 of a steroid, wherein the steroid is medrane or deltamedrane.

14. Use of a multicistronic expression vector comprising (i) a nucleic acid encoding for a mammalian CYP21A2 protein or a functional variant thereof, wherein the functional variant has at least 20% of the ability of the unaltered CYP21A2 protein to 21-hydroxylate a steroid, (ii) one or more nucleic acids encoding for at least one heterologous electron transfer system capable of transferring electrons to CYP21A2, and optionally (iii) one or more nucleic acids encoding for chaperones facilitating folding of CYP21A2
for the hydroxylation of the carbon atom 21 of a steroid, wherein the steroid is medrane or deltamedrane.

15. Use of a kit comprising any one of:
- a cell as defined in claim 13, or
- a multicistronic expression vector as defined in claim 14, or
- (i) an expression vector comprising a nucleic acid encoding for a mammalian CYP21A2 protein or a functional variant thereof, wherein the functional variant has at least 20% of the

ability of the unaltered CYP21A2 protein to 21-hydroxylate a steroid, (ii) one or more expression vectors comprising one or more nucleic acids encoding for at least one heterologous electron transfer system capable of transferring electrons to CYP21A2, and optionally (iii) one or more expression vectors comprising one or more nucleic acids encoding for chaperones facilitating folding of CYP21A2

for the hydroxylation of the carbon atom 21 of a steroid, wherein the steroid is medrane or deltamedrane.