

to claim 7 or 8, wherein the cells are cultured under a condition containing HGF, GDNF, b-FGF and BMP7 in a concentration each independently selected from 100 to 500 ng/mL and EGF in a concentration selected from 300 to 700 ng/mL in the culture medium.

10. The method for inducing the differentiation according to any one of claims 7 to 9, wherein serum is further contained in the culture medium in said step 2).

11. The method for inducing the differentiation according to any one of claims 7 to 10, wherein said cell mass is formed by a hanging drop method in said step 1).

~~12. A tissue cell induced and formed by the method for inducing the differentiation according to any one of claims 1 to 11.~~

~~13. The tissue cell according to claim 12, wherein the tissue cell induced and formed by the method for inducing the differentiation is a renal tissue cell.~~

~~14. A bioartificial organ comprising the tissue cell according to claims 12 or 13.~~

~~15. A material for medical purposes comprising the bioartificial organ according to claim 14.~~

~~16~~12. A method for producing a bioartificial organ comprising;

- 1) a step of forming a cell mass of stem cells;
- 2) a step of seeding the obtained cell mass on a scaffold;

and

3) a step of culturing said cell mass in a culture medium containing HGF, GDNF, b-FGF, BMP7 and EGF on the scaffold.
~~17~~13. The method for producing the bioartificial organ according to claim ~~16~~ 12, wherein the bioartificial organ is a bioartificial kidney.

~~18~~14. A method for inducing differentiation of stem cells into tissue cells having a polycystic kidney-like morphological feature, comprising;

1) a step of forming a three dimensional cell mass from the stem cells; and

2) a step of culturing the obtained three dimensional cell mass of the stem cells in a three dimensional manner in a culture medium containing BMP7 and EGF and not containing at least one of GDNF, b-FGF or HGF in the presence of a three dimensional scaffold.

~~19~~15. The method for inducing the differentiation according to claim ~~18~~ 14, wherein the culture medium in said step 2) contains BMP7 and EGF and contains none of GDNF, b-FGF or HGF.

~~20. Tissue cells having a polycystic kidney like morphological feature, which are induced and formed by the method for inducing the differentiation according to claim 18 or 19.~~