

CLAIMS

1. A method for producing a regenerative organ germ provided with a guide for transplantation, comprising:

preparing a regenerative organ germ by closely contacting a first cell mass which substantially consists of mesenchymal cells and a second cell mass which substantially consists of epithelial cells and culturing these cell masses within a support; and

inserting the guide into the regenerative organ germ.

2. The method according to claim 1, wherein the method further comprises culturing the regenerative organ germ for several days after inserting the guide.

3. The method according to claim 1 or 2, wherein at least one of the first and second cell masses is derived from an organ which is the target of regeneration.

4. The method according to claim 1 or 2, wherein the first cell mass and the second cell mass are both derived from an organ which is the target of regeneration.

5. The method according to any one of claims 1 to 4, wherein the regenerative organ germ is an epithelial appendage germ.

6. The method according to any one of claims 1 to 4, wherein the regenerative organ germ is any one of organ primordia selected from the group consisting of regenerative hair follicle germ, regenerative sweat gland germ, regenerative sebaceous gland germ, regenerative salivary gland germ, regenerative mammary gland germ, regenerative renal nephron germ, regenerative lacrimal gland germ, and regenerative endocrine gland germ.

7. The method according to claim 6, wherein the regenerative organ germ is a regenerative hair follicle germ, and the epithelial cells are bulge region epithelial cells or hair matrix basal epithelial cells.

8. The method according to claim 6 or 7, wherein the regenerative organ germ is a regenerative hair follicle germ, and the mesenchymal cells are hair papilla cells or

dermal root sheath cells.

9. The method according to claim 6, wherein the regenerative organ germ is a regenerative salivary gland germ, and the epithelial cells are salivary gland-derived epithelial cells and the mesenchymal cells are salivary gland-derived mesenchymal cells.

10. The method according to claim 6, wherein the regenerative organ germ is a regenerative lacrimal gland germ, and the epithelial cells are lacrimal gland-derived epithelial cells and the mesenchymal cells are lacrimal gland-derived mesenchymal cells.

11. The method according to any one of claims 1 to 10, wherein the guide is a chemical fiber.

12. The method according to any one of claims 1 to 11, wherein the guide is bioabsorbable.

13. The method according to any one of claims 1 to 10, wherein the guide is a nylon thread.

14. A composition comprising a regenerative organ germ provided with a guide for transplantation produced by the method according to any one of claims 1 to 13.

15. A method for transplantation of a regenerative organ germ provided with a guide for transplantation, comprising transplanting a regenerative organ germ provided with a guide for transplantation produced by the method according to any one of claims 1 to 13 into a target site.

16. The method for transplantation of a regenerative organ germ provided with a guide for transplantation according to claim 15, wherein a portion on the epithelial cell side of the transplanted regenerative organ germ and the epithelial cells of the target elongate and connect along the guide by maintaining the guide in a state in which it protrudes from a transplant site.

17. The method for transplantation of a regenerative organ germ provided with a

guide for transplantation according to claim 15, wherein the regenerative organ germ is an organ germ intended for regeneration of an organ having a conduit; and

during transplantation of the regenerative organ germ, the guide is inserted into a conduit existing in the target site and a portion on the epithelial cell side of the regenerative organ germ and the conduit are connected, and thereby the portion on the epithelial cell side of the regenerative organ germ elongates along the guide and connects to the conduit of the target site.

CLAIMS

1. A method for producing a regenerative organ germ provided with a guide for transplantation, comprising:
preparing a regenerative organ germ by closely contacting a first cell mass which substantially consists of mesenchymal cells and a second cell mass which substantially consists of epithelial cells and culturing these cell masses within a support; and
inserting the guide into the regenerative organ germ,
wherein the guide is a fiber made from a polymer, a metallic fiber, a carbon fiber, a chemical fiber, and a natural animal or plant fiber, and
wherein the regenerative organ germ is an epithelial appendage germ.
2. The method according to claim 1, wherein the method further comprises culturing the regenerative organ germ for several days after inserting the guide.
3. The method according to claim 1 or 2, wherein at least one of the first and second cell masses is derived from an organ which is the target of regeneration.
4. The method according to claim 1 or 2, wherein the first cell mass and the second cell mass are both derived from an organ which is the target of regeneration.
5. The method according to any one of claims 1 to 4, wherein the regenerative organ germ is any one of organ primordia selected from the group consisting of regenerative hair follicle germ, regenerative sweat gland germ, regenerative sebaceous gland germ, regenerative salivary gland germ, regenerative mammary gland germ, regenerative renal nephron germ, regenerative lacrimal gland germ, and regenerative endocrine gland germ.
6. The method according to claim 5, wherein the regenerative organ germ is a regenerative hair follicle germ, and the epithelial cells are bulge region epithelial cells or hair matrix basal epithelial cells.
7. The method according to claim 5 or 6, wherein the regenerative organ germ is a regenerative hair follicle germ, and the mesenchymal cells are hair papilla cells or dermal root sheath cells.
8. The method according to claim 5, wherein the regenerative organ germ is a

regenerative salivary gland germ, and the epithelial cells are salivary gland-derived epithelial cells and the mesenchymal cells are salivary gland-derived mesenchymal cells.

9. The method according to claim 5, wherein the regenerative organ germ is a regenerative lacrimal gland germ, and the epithelial cells are lacrimal gland-derived epithelial cells and the mesenchymal cells are lacrimal gland-derived mesenchymal cells.

10. The method according to any one of claims 1 to 9, wherein the guide is a chemical fiber.

11. The method according to any one of claims 1 to 10, wherein the guide is bioabsorbable.

12. The method according to any one of claims 1 to 9, wherein the guide is a nylon thread.

13. A composition comprising a regenerative organ germ provided with a guide for transplantation produced by the method according to any one of claims 1 to 12.