Claims

1. A method of producing a cell sheet comprising a retinal pigment epithelial cell layer and a vascular forming cell layer, comprising a step of laminating the retinal pigment epithelial cell layer and the vascular forming cell layer.

2. The production method according to claim 1, wherein the retinal pigment epithelial cell layer and the vascular forming cell layer are laminated such that the vascular forming cell layer contacts a basal surface of the retinal pigment epithelial cell layer.

3. The production method according to claim 1 or 2, wherein the vascular forming cell layer is composed of at least one cell selected from the group consisting of hemangioblast, vascular endothelial progenitor cell, and vascular endothelial cell.

4. The production method according to claim 1 or 2, wherein the vascular forming cell layer is composed of a tissue or cell derived from a patient to be transplanted with the cell sheet, or a cell derived from a donor having an HLA type matched with the patient's HLA type.

5. The production method according to any one of claims 1 to 4, wherein the retinal pigment epithelial cell layer is a cell sheet produced by a method comprising the following steps:
(1) seeding and culturing retinal pigment epithelial cells on a tendon-derived collagen gel to form a cell sheet composed of the retinal pigment epithelial cells, and
(2) decomposing the tendon-derived collagen gel with collagenase to detach the cell sheet composed of the retinal pigment epithelial cells.

~~6. The production method according to any one of claims 1 to 5,~~

~~inducing differentiation of ES cell, iPS cell or progenitor cell.~~

6. The production method according to any one of claims 1 to 5, wherein the retinal pigment epithelial cell is obtained by inducing differentiation of ES cell, iPS cell or progenitor cell.

7. A cell sheet produced by the method according to any one of claims 1 to 6.

8. A cell sheet for transplantation, comprising a cell layer formed with retinal pigment epithelial cells obtained by inducing differentiation of stem cells or progenitor cells ex vivo, a basement membrane secreted from said cells, and a vascular forming cell layer.