Claims:

[Claim 1]

A culture method of liver-derived cells, comprising the step of co-culturing the liver-derived cells intestine-derived cells, and/or lung-derived cells, wherein the intestine-derived cells and the lung-derived cells have been obtained from an avian embryo.

[Claim 2]

A culture method of liver-derived cells, comprising the step of co-culturing the liver-derived cells with one or more types of cells selected from a group consisting of intestine-derived cells, lung-derived cells, and embryonic membrane-derived cells, wherein head-derived cells and/or kidney-derived cells are further co-cultured.

[Claim 3]

A culture method for liver-derived cells, comprising the step of culturing the liver-derived cells in the presence of a culture supernatant obtained by culturing intestine-derived cells, and/or lung-derived cells, wherein the intestine-derived cells and the lung-derived cells have been obtained from an avian embryo.

[Claim 4]

A culture method for liver-derived cells, comprising the step of culturing the liver-derived cells in the presence of a culture supernatant obtained by culturing one or more types of cells selected from the group consisting of intestine-derived cells, lung-derived cells, and embryonic membrane-derived cells, wherein the culture supernatant comprises a culture supernatant obtained by culturing the one or more types of cells further with head-derived cells and/or kidney-derived cells.

[Claim 5]

The culture method of Claim 3 or 4, wherein the culture supernatant comprises a culture supernatant obtained by culturing the one or more types of cells further with liver-derived cells.

[Claim 6]

The culture method of any one of Claims 3 to 5, wherein the culture is a co-culture.

[Claim 7]

The culture method of any one of Claims 1 to 6, wherein the liver-derived cells are one or more types of cells selected from the group consisting of parenchymal cells (hepatocytes), non-parenchymal cells (sinusoidal wall cells, myofibroblasts, bile duct epithelial cells, connective tissue cells, and hepatic stellate cells), and progenitor cells or stem cells thereof.

[Claim 8]

The culture method of any one of Claims 1 to 6, wherein the intestine-derived cells are one or more types of cells selected from the group consisting of intestinal epithelial cells, CBC cells, Paneth cells, enteroendocrine cells, goblet cells, absorptive epithelial cells, M

cells, intestinal wall cells, connective tissue cells, muscle cells, fibroblasts, vascular endothelial/pericyte cells, and progenitor cells or stem cells thereof.

[Claim 9]

The culture method of any one of Claims 1 to 6, wherein the lung-derived cells are one or more types of cells selected from the group consisting of alveolar macrophages, type II alveolar epithelial cells, type I alveolar epithelial cells, basal cells, ciliated cells, goblet cells, mucous cells, serous cells, connective tissue cells, muscle cells, fibroblasts, endothelial/epithelial cells of blood vessels, and progenitor cells or stem cells thereof.

[Claim 10]

The culture method of any one of Claims 1 to 6, wherein the embryonic membrane-derived cells are one or more types of cells selected from the group consisting of amnion, serous membrane, allantois, and yolk sac.

[Claim 11]

The culture method of Claim 2 or 4, wherein the head-derived cells are one or more types of cells selected from the group consisting of retinal cells, neuronal cells, glial cells, pituitary cells, muscle cells, connective tissue cells, fibroblasts, vascular endothelial/endothelial cells, and progenitor cells or stem cells thereof.

[Claim 12]

The culture method of Claim 2 or 4, wherein the kidney-derived cells are one or more types of cells selected from the group consisting of the glomerulus-constituting epithelial cells, endothelial cells, mesangial cells, visceral epithelial cells, and parietal visceral cells; tubule-constituting endothelial cells and epithelial cells; connective tissue cells filling in other tissues; fibroblasts; endothelial/endothelial cells; and progenitor cells or stem cells thereof.

[Claim 13]

The culture method of any one of Claims 1 to 6, wherein the cells are cultured using a serum-free medium.

[Claim 14]

A culture system for cells wherein

liver-derived cells, and

intestine-derived cells and/or lung-derived cells,

are co-cultured, wherein the intestine-derived cells and the lung-derived cells have been obtained from an avian embryo.

[Claim 15]

A culture system for cells, wherein

liver-derived cells, and

one or more types of cells selected from the group consisting of intestine-derived cells, lung-derived cells, and embryonic membrane-derived cells, and

wherein head-derived cells and/or kidney-derived cells are further co-cultured.

[Claim 16]

A culture system for liver-derived cells, comprising

a culture supernatant obtained by culturing intestine-derived cells, and/or lung-derived cells, wherein the intestine-derived cells and the lung-derived cells have been obtained from an avian embryo.

[Claim 17]

A culture system for liver-derived cells, comprising

a culture supernatant obtained by culturing one or more types of cells selected from a group consisting of intestine-derived cells, and/or lung-derived cells, and embryonic membrane-derived cells, and

a culture supernatant obtained by culturing head-derived cells and/or kidney-derived cells.

[Claim 18]

The culture system of claim 16 or 17 further comprising a culture supernatant obtained by culturing liver-derived cells.

[Claim 19]

The culture system of any one of claims 16 to 18, wherein the culture is a co-culture.

[Claim 20]

The culture system of any one of claims 16 to 19, wherein the liver-derived cells are one or more types of cells selected from the group consisting of parenchymal cells (hepatocytes), non-parenchymal cells (sinusoidal wall cells, myofibroblasts, bile duct epithelial cells, connective tissue cells, and hepatic stellate cells), and progenitor cells or stem cells thereof.

[Claim 21]

The culture system of any one of claims 16 to 19, wherein the intestine-derived cells are one or more types of cells selected from the group consisting of intestinal epithelial cells, CBC cells, Paneth cells, enteroendocrine cells, goblet cells, absorptive epithelial cells, M cells, intestinal wall cells, connective tissue cells, muscle cells, fibroblasts, vascular endothelial/pericyte cells, and progenitor cells or stem cells thereof.

[Claim 22]

The culture system of any one of claims 16 to 19, wherein the lung-derived cells are one or more types of cells selected from the group consisting of alveolar macrophages, type II alveolar epithelial cells, type I alveolar epithelial cells, basal cells, ciliated cells, goblet cells, mucous cells, serous cells, connective tissue cells, myocytes, fibroblasts, endothelial/epithelial cells of blood vessels, and progenitor cells or stem cells thereof.

[Claim 23]

The culture system of any one of claims 16 to 19, wherein the embryonic membrane-derived cells are one or more types of cells selected from the group consisting of amnion, serous membrane, allantois, and yolk sac.

[Claim 24]

The culture system of claim 17 or 19, wherein the head-derived cells are one or more types of cells selected from the group consisting of retinal cells, neuronal cells, glial cells, pituitary cells, myocytes, connective tissue cells, fibroblasts, endothelial/epithelial cells, and progenitor cells or stem cells thereof.

[Claim 25]

The culture system of claim 17 or 19, wherein the kidney-derived cells are one or more types of cells selected from the group consisting of the glomerulus-constituting epithelial cells, endothelial cells, mesangial cells, visceral epithelial cells, and parietal visceral cells; tubule-constituting endothelial cells and epithelial cells; connective tissue cells filling in other tissues; fibroblasts; endothelial/endothelial cells; and progenitor cells or stem cells thereof.

[Claim 26]

The culture system of any one of claims 16 to 19, comprising a serum-free medium.