Claims

[Claim 1]

A method for developing a secondary organ of a pancreas by using a non-human animal in which pancreas formation is inhibited, wherein the inhibition of pancreas formation is performed by overexpressing a Hes1 gene under the control of a Pdx1 promoter, comprising the step of:

(1) raising a newborn or a fetus of the non-human animal in which pancreas formation is inhibited by insulin and a digestive enzyme thereto.

[Claim 2]

The method according to claim 1, wherein the secondary organ of a pancreas develops in such a manner that at least a part of the function of producing insulin and a digestive enzyme is impaired.

[Claim 3]

The method according to claim 1 or 2, wherein the secondary organ of a pancreas is a pancreas lacking a specific functional cell.

[Claim 4]

The method according to claim 3, wherein the functional cell is a β cell.

[Claim 5]

The method according to any one of claims 1 to 4, wherein the non-human animal is a pig.

[Claim 6]

A non-human animal obtained by raising a newborn or a fetus of a non-human animal in which pancreas formation is inhibited

by administering insulin and a digestive enzyme thereto, wherein the inhibition of pancreas formation is performed by overexpressing a Hes1 gene under the control of a Pdx1 promoter; and the non-human animal has a secondary organ of a pancreas, the secondary organ lacking a specific functional cell.

[Claim 7]

The non-human animal according to claim 6, wherein the functional cell is a β cell.

[Claim 8]

The non-human animal according to claim 6 or 7, wherein the non-human animal is a pig.

[Claim 9]

A secondary organ of a pancreas developed by raising a newborn or a fetus of a non-human animal in which pancreas formation is inhibited by administering insulin and a digestive enzyme thereto, wherein the inhibition of pancreas formation is performed by overexpressing a Hes1 gene under the control of a Pdx1 promoter; and the secondary organ of a pancreas lacks a specific functional cell.

[Claim 10]

The secondary organ of a pancreas according to claim 9, wherein the functional cell is a β cell.

[Claim 11]

The secondary organ of a pancreas according to claim 9 or 10, wherein the non-human animal is a pig.

[Claim 12]

The secondary organ of a pancreas according to any one of claims 9 to 11, wherein a transplanted cell established itself in the secondary organ of a pancreas.

[Claim 13]

A method for producing a cell within the body of a non-human animal, comprising the step of raising the non-human animal according to claim 1 or 2.