[Document Name] Claims

[Claim 1]

A method for producing enteric neural precursors, comprising the steps of:

(A1) providing ~~enteric neural precursors~~neural crest cells; and

(A2) culturing the neural crest cells~~enteric neural precursors~~ in a medium comprising an ERBB3 agonist and/or an ERBB4 agonist, a TGFβ inhibitor and a GSK3β inhibitor, GDNF, and retinoic acid and/or a derivative thereof.

~~[Claim 2]~~

~~The production method according to claim 1, wherein the medium further comprises a TGFβ inhibitor and a GSK3β inhibitor.~~

~~[Claim 3]~~

~~The production method according to claim 1 or 2, wherein the medium further comprises retinoic acid and/or a derivative thereof.~~

~~[Claim 4]~~

~~The production method according to any one of claims 1 to 3, wherein the medium further comprises GDNF.~~

[Claim 2~~5~~]

The production method according to ~~any one of~~ claim~~s~~ 1 ~~to 4~~, wherein the medium further comprises Matrigel.

[Claim 3~~6~~]

The production method according to ~~any one of~~ claim~~s~~ 1 ~~to 5~~or 2, wherein the ERBB3 agonist and/or the ERBB4 agonist is NRG1.

~~[Claim 7]~~

~~Enteric neural precursors obtained by a production method according to any one of claims 1 to 6.~~

~~[Claim 8]~~

~~A frozen stock comprising enteric neural precursors according to claim 7.~~

~~[Claim 9]~~

~~A cell medicament comprising enteric neural precursors according to claim 7.~~

~~[Claim 10]~~

~~A method for producing enteric neural precursors, comprising the steps of:~~

~~(B1) providing neural crest cells; and~~

~~(B2) culturing the neural crest cells in a medium comprising an ERBB3 agonist and/or an ERBB4 agonist, and retinoic acid and/or a derivative thereof.~~

[Claim 4~~11~~]

The production method according to claim 1~~0~~, wherein the neural crest cells are vagal neural crest cells.

[Claim 5~~12~~]

The production method according to claim 4~~11~~, wherein

the vagal neural crest cells are SOX10-positive, HOXB5-positive, HOXB9-negative and PHOX2B-negative, and

the enteric neural precursors are SOX10-positive and PHOX2B-positive.

~~[Claim 13]~~

~~An enteric neural precursor medium comprising an ERBB3 agonist and/or an ERBB4 agonist.~~

~~[Claim 14]~~

~~The medium according to claim 13, further comprising a TGFβ inhibitor and/or a GSK3β inhibitor.~~

~~[Claim 15]~~

~~The medium according to claim 13 or 14, further comprising retinoic acid and/or a derivative thereof.~~

~~[Claim 16]~~

~~The medium according to any one of claims 13 to 15, further comprising GDNF.~~

~~[Claim 17]~~

~~The medium according to any one of claims 13 to 16, further comprising Matrigel.~~

~~[Claim 18]~~

~~The medium according to any one of claims 13 to 17, wherein the ERBB3 agonist and/or the ERBB4 agonist is NRG1.~~

[Claim 6~~19~~]

An expansion culture method for enteric neural precursors, comprising the steps of:

(C1) providing enteric neural precursors; and

(C2) culturing the enteric neural precursors in a medium comprising an ERBB3 agonist and/or an ERBB4 agonist, GDNF, and retinoic acid and/or a derivative thereof.

[Claim 720]

A method for producing an intestinal organoid, comprising the step of coculturing enteric neural precursors and hindgut cells, wherein the enteric neural precursors are enteric neural precursors obtained by a production method according to any one of claims 1 to 5.

[Claim 821]

A method for producing an artificial intestinal tract, comprising the steps of:

coculturing enteric neural precursors and hindgut cells to obtain an intestinal organoid, wherein the enteric neural precursors are enteric neural precursors obtained by a production method according to any one of claims 1 to 5; and

transplanting the intestinal organoid into a living body to form an artificial intestinal tract.

~~[Claim 22]~~

~~The production method according to claim 20 or 21, wherein the enteric neural precursors are enteric neural precursors obtained by a production method according to any one of claims 1 to 6.~~