CLAIMS

1. A composition comprising an insulin and glucagon secreting cell population generated from non-insulin secreting pancreatic cells collected via needle biopsy from a Type 1 diabetic donor pancreas, a pancreatitis donor pancreas, or a combination thereof.

2. The composition of claim 1, wherein at least about 50% of the insulin and glucagon secreting cell population expresses CD133, glucagon, and insulin.

3. The composition of claim 1 or 2, wherein about 50% to about 100% of insulin and glucagon secreting cell population expresses CD133, glucagon, and insulin.

4. The composition of any one of claims 1 to 3, wherein the insulin and glucagon secreting cell population comprises from about $1.2x\ 10^6$ cells to about 25×10^6 cells per kg of body weight in a human recipient.

5. The composition of any one of claims 1 to 4, wherein the non-insulin secreting pancreatic cells collected via needle biopsy are obtained from a Type 1 diabetic donor pancreas.

6. The composition of any one of claims 1 to 4, wherein the non-insulin secreting pancreatic cells collected via needle biopsy are obtained from a pancreatitis donor pancreas.

7. The composition of any one of claims 1 to 6, wherein the non-insulin secreting pancreatic cells are isogenic, allogenic, or a combination thereof.

8. Use of a composition of any one of claims 1 to 7 in the manufacture of a medicament for treating a pancreatic disorder, wherein the pancreatic disorder comprises Type 1 diabetes, pancreatitis, or a combination thereof.

9. The use of claim 8, wherein the medicament is formulated for administration via

one or more of an injection, infusion, omental or peritoneal pouch, surgical implantation, or via packaging the composition as part of a device to a target site in the subject.

10. A method for preparing a composition comprising an insulin and glucagon secreting cell population, which comprises:

treating *in vitro* a population of non-insulin secreting Type 1 diabetic pancreatic cells with an islet cell culture medium comprising a base medium and an effective amount of a polypeptide comprising an amino acid sequence having at least 80% sequence identity to the amino acid sequence set forth in SEQ ID NO. 1 or 2, a polypeptide comprising SEQ ID NO. 1, an active fragment of SEQ ID NO. 1, SEQ ID NO. 2, an active fragment of SEQ ID NO. 2, or a combination thereof.

11. The method of claim 10, wherein the treating further comprises differentiating the population of non-insulin secreting Type 1 diabetic pancreatic cells and propagating the insulin and glucagon secreting cell population.

12. The method of claim 10 or 11 wherein the treating further comprises differentiating the population of non-insulin secreting Type 1 diabetic pancreatic cells and propagating the insulin and glucagon secreting cell population, wherein the insulin and glucagon secreting cell population at least about 50% of insulin and glucagon secreting cell population expresses CD133, glucagon, and insulin.

13. The method of any one of claims 10 to 12, wherein the treating further comprises differentiating the population of non-insulin secreting Type 1 diabetic pancreatic cells and propagating the insulin and glucagon secreting cell population, wherein the insulin and glucagon secreting cell population about 50% to about 100% of insulin and glucagon secreting cell population expresses CD133, glucagon, and insulin.

14. The method of any one of claims 10 to 13, wherein the treating further comprises differentiating the population of non-insulin secreting Type 1 diabetic pancreatic cells and propagating the insulin and glucagon secreting cell population, wherein the insulin and glucagon secreting cell population comprises from about 3 x 10^6 cells to about 25 x 10^6 cells per kg of body weight in a human recipient.

15. The method of any one of claims 10 to 14 further comprising extracting the population of non- insulin secreting Type 1 diabetic pancreatic cells from a donor.

16. The method of any one of claims 10 to 15 further comprising extracting the population of non- insulin secreting Type 1 diabetic pancreatic cells from a donor via needle biopsy.

17. The method of any one of claims 10 to 16 further comprising extracting the population of non- insulin secreting Type 1 diabetic pancreatic cells from an isogenic donor, and allogenic donor, or a combination thereof.

18. The method of any one of claims 10 to 17, wherein the islet cell culture medium comprises the polypeptide in amount that ranges from about 3 µg/mL to about 20 µg/mL.

19. Use of a composition comprising an insulin and glucagon secreting cell population prepared by the method of any one of claims 11 to 18, in the manufacture of a medicament for treating a subject in need thereof.

20. A composition comprising an insulin and glucagon secreting cell population generated from non-insulin secreting pancreatic cells collected via needle biopsy from a Type 1 diabetic donor pancreas for use in the treatment of Type 1 diabetes, pancreatitis, or a combination thereof.