CLAIMS

1. A method of cryopreserving pancreatic endocrine cell aggregates derived *in vitro* from stem cells comprising the following steps:
   (i) dissociating said pancreatic endocrine cell aggregates into single cells;
   (ii) treating said single cells with cryopreservation medium and lowering temperature to obtain cryopreserved single cells.

2. The method of cryopreserving pancreatic endocrine cell aggregates according to claim 1, wherein said endocrine cells are endocrine cells co-expressing NKX6.1 and C-peptide or endocrine progenitor cells co-expressing NKX2.2 and NKX6.1.

3. A method of enriching endocrine cell aggregates derived *in vitro* from stem cells with endocrine cells co-expressing NKX6.1 and C-peptide or with endocrine progenitor cells co-expressing NKX2.2 and NKX6.1 said method comprising the following steps:
   (i) dissociating said endocrine cell aggregates into single cells;
   (ii) treating said single cells with cryopreservation medium and lowering temperature to obtain cryopreserved endocrine cells,
   (iii) thawing said cryopreserved endocrine cells; and
   (iv) re-aggregating said endocrine cells obtained after thawing;

4. The method of enriching endocrine cell aggregates according to claim 3, wherein said endocrine cells of step (i) are endocrine cells co-expressing NKX6.1 and C-peptide or endocrine progenitor cells co-expressing NKX2.2 and NKX6.1.

5. The method of enriching endocrine cell aggregates according to claim 4, wherein when said endocrine cells of step (i) are endocrine progenitor cells co-expressing NKX2.2 and NKX6.1, said method further comprises a step (v) of differentiating said endocrine progenitor cells co-expressing NKX2.2 and NKX6.1 into endocrine cell aggregates co-expressing NKX6.1 and C-peptide.

6. The method according to any one of claims 1 to 5, wherein said stem cells are embryonic stem cells, preferentially human embryonic stem cells or induced pluripotent stem cells.

7. Cryopreserved single endocrine cells obtained according to the method of cryopreserving according to claim 1 or claim 2.

8. Cryopreserved single endocrine cells according to claim 7 for use in the transplantation into a subject or for use in treating diabetes.

9. Re-aggregated endocrine cells obtained according to the method of enriching endocrine cell aggregates according to any one of claims 3 to 6.

10. Re-aggregated endocrine cells according to claim 9 for use in the transplantation into a subject or for use in treating diabetes or for use as a medicament.

11. Composition containing re-aggregated endocrine cells according to claim 9 for use in the transplantation into a subject or for use in treating diabetes or for use as a medicament.

12. Medicament containing re-aggregated endocrine cells according to claim 9 or claim 11.

13. A device comprising cryopreserved single endocrine cells according to claim 7 or claim 8, or re-aggregated endocrine cells co-expressing NKX6.1 and C-peptide according to claim 9 or claim 10, or a composition according to claim 11, or a medicament according to claim 12.

14. Use of the cryopreserved single endocrine cells according to claim 7 or the reaggregated endocrine cells according to claim 9 in the manufacture of a medicament for treating diabetes.