CLAIMS

1. 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.

2. The method of enriching endocrine cell aggregates according to claim 1, 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.

3. The method of enriching endocrine cell aggregates according to claim 2, 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.

4. The method according to any one of claims 1 to 3, wherein said stem cells are embryonic stem cells, preferentially human embryonic stem cells or induced pluripotent stem cells.