Claims

What is claimed is:

1. A method of producing an allogeneic cultured postnatal thymus tissue-derived product suitable for implantation into a human, comprising the steps of:

(a) slicing a donor thymus into slices, placing the donor thymus slices on a support structure , and culturing the donor thymus tissue slices in a thymus organ medium for a period of from about 6 days to about 21 days to produce partially T-cell depleted donor thymus tissue slices;

(b) detecting a level of CCL21 in the thymus organ medium during the culturing step and comparing the level of CCL21 to a baseline level determined at day 0 of the culturing step; and

(c) if the level of CCL21 is increased as compared to the baseline level and if the thymus tissue slices show areas positive for cytokeratin (CK) staining, the presence of at least one Hassall body, and the presence of intact nuclei of thymic epithelial cells and other stromal cells, recovering the partially T-cell depleted donor thymus tissue slices as the allogeneic cultured postnatal thymus tissue-derived product suitable for implantation.

2. The method according to claim 1, the method further comprising detecting the levels of one or more of L-selectin, M-CSF, galectin-7 or IL-16 in the thymus organ medium during the culturing step, comparing the levels of one or more of L-selectin, M-CSF, galectin-7 or IL-16 with baseline levels determined at day 0 of the culturing step for L-selectin, M-CSF, galectin-7 or IL-16, wherein the levels of one or more of L-selectin, M-CSF, galectin-7 or IL-16 are decreased as compared to the baseline levels.

3. The method according to claim 2, the method further comprising detecting the levels of one or more of CXCL12, CXCL16 or CCL11 in the thymus organ medium during the culturing step, comparing the levels of one or more of CXCL12, CXCL16, or CCL11 with baseline levels determined at day 0 of the culturing step for XCL12, CXCL16, or CCL11, wherein the levels of one or more of CXCL12, CXCL16, or CCL11 are increased as compared to the baseline levels.

4. The method according to claim 1, wherein the culturing step is for a period of six days, or seven days, or eight days, or nine days, or 10 days, or 11 days, or 12 days, or 13 days, or 14 days, or 15 days, or 16 days, or 17 days , or 18 days or 19 days, or 20 days, or 21 days; or for a period of 5-6 days, or 5-7 days, or 5-8 days, or 5-9 days, or 5-10 days, or 6 to 7 days, or 6 to 8 days, or 6 to 9 days, or 6 to 10 days, or 6 to 11 days, or 6 to 12 days, or 6 to 21 days, or 7 to 21 days, or 8 to 21 days, or 9 to 21 days, or 10 to 21 days, or 11 to 21 days, or 12 to 21 days, 13 to 21 days or 14 to 21 days, or 15 to 21 days, or 16 to 21 days or 17 to 21 days or 18 to 21 days, or 19 to 21 days, or 20 to 21 days.

5. The method according to claim 1, wherein the thymus tissue slices of step (c) show cytokeratin 14 (CK 14) staining.

6. The method according to claim 1, wherein the thymus tissue slices show areas positive for CK staining in a lacy pattern.

7. The method according to claim 5, wherein the thymus tissue slices show areas positive for CK14 staining in a lacy pattern.