

CLAIMS

1. A method to restore and maintain the function of a mammalian organ or tissue for transplantation from a donor who died to cardiac arrest that employs perfusion by a perfusate, comprising each of the following steps of:

(a) connecting a perfusate instream cannula for streaming said perfusate into said organ or tissue,

(b) connecting a perfusate outstream cannula for streaming said perfusate out from said organ or tissue, and

(c) perfusing a perfusate comprising an oxygen carrier and a blood coagulation inhibitor into said organ or tissue while maintaining the temperature of the organ or tissue in a state of 20°C - 25°C,

wherein the oxygen carrier is 0.5×10^{11} cells/L – 50.0×10^{11} cells /L of erythrocytes.

2. The method according to claim 1, characterized in that the perfusate in said step (c) is circulated.

3. The method according to claim 2, characterized in that it further comprises a further subsequent step of:

(d) before said step (c), perfusing said organ or tissue with a perfusate comprising an oxygen carrier and a blood coagulation inhibitor to wash said organ or tissue, and then removing the perfusate employed for said washing.

4. The method according to any one of claims 1 to 3, characterized in that in said step (c), said organ or tissue is isolated together with a second organ or tissue that is continuous in vivo to said organ or tissue, and

perfusion is performed with said organ or tissue in a suspended state by immobilizing said second organ or tissue.

5. The method according to claim 4, characterized in that in said step (c), said organ or tissue is immersed in a liquid so that at least a part thereof receives buoyancy.

6. The method according to any one of claims 1 to 5, characterized in that said blood coagulation inhibitor is heparin.

7. The method according to any one of claims 1 to 6, wherein said organ or tissue is selected from the group consisting of the liver, the kidney, the pancreas, the heart, the lung, the stomach, the testis, the ovary, and the eyeball.