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BIOTECH-
NOLOGIES

AN INNOVATIVE PROCEDURE FOR PRESERVING CELLS, TISSUES OR ORGANS IN HYPOTHERMIA

Cryopreservation is the most common method used for cells preservation. Nowadays, there is no procedure for short- to mid-term cells preservation before transplantation without freezing step.
The EFS proposes a new procedure which extends cell conservation time to 72h in hypothermia conditions improving the quality of preserved cells, tissues and organs.

INVENTION:

An innovative procedure for short- mid-preservation of cells, tissues or organs.
This procedure was developed by the EFS Laboratory located in Bordeaux.

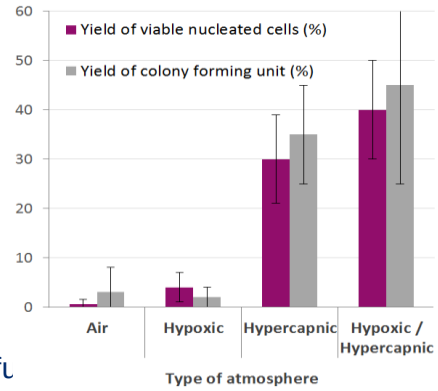
KEYWORDS:

Preservation/conservation procedure, graft, transplantation, hypothermic, cell and tissue therapy, cells tissues and/or organs preservation, hypoxic and/or hypercapnic atmosphere, storage, transportation, stem cells

DESCRIPTION:

A conservation procedure which improves the cell survival and maintains functional capacities of cells, tissues and organs without freezing step.
This procedure improves the quality of graft.
This procedure involves a pre-incubation of cells, in moderate hypothermia, under an hypoxic and/or hypercapnic atmosphere, before being transferred into strict hypothermia.

Proof of the concept:
CD34⁺ cells of cord blood



ADVANTAGES:

- The quality of preserved cells is improved: The fu proliferation capacity of preserved cells is superior compared to those cryopreserved.
- Compatible with cells transportation and storage.
- Useful for various types of cells, tissues or organs.
- Short- to mid-term preservation of cells, tissues or organs.
- Avoiding freezing step.
- Cryoprotective agents are not required.
- Compatible with human cell therapy requirements.

APPLICATIONS:

- Short- to mid-term cells preservation
- Storage and transport of cells, tissues or organs

References

Gerby et al., 2019 Cytotherapy

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