

Laboratory material

Cryoprotective solutions based on human platelet lysate for cryopreservation of cells and tissue

A research group of the Andalusian Network for the Design and Translation of Advanced Therapies in collaboration with the the Andalusian Public Foundation for the Management of Health Research in Seville, have developed different formulations of cryoprotective solutions based on platelet lysate (PL) in combination with other compounds, with the advantages of being xeno-free and inactivated products, among others.

Oficina de
**TRANSFERENCIA
DE TECNOLOGÍA**
Sistema Sanitario Público de Andalucía



Description

Cryopreservation is a cornerstone at the market of Advanced Therapies and Regenerative Medicine, both for cell therapy and for the field of tissue bioengineering. In the latter, an efficient cryopreservation solution that preserves the biological and biomechanical properties of tissues has not yet been achieved.

A research group of the Andalusian Network for the Design and Translation of Advanced Therapies in collaboration with the Andalusian Public Foundation for the Management of Health Research in Seville has developed different formulations of cryoprotective solutions based on platelet lysate (PL) in combination with other compounds that meet these demands.



Advantages

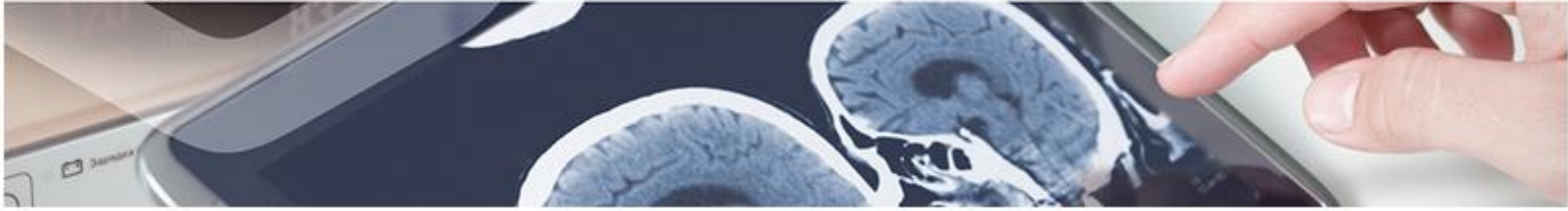
1. It is Xeno-free: it does not contain any animal products. This is an advantage over other cryopreservation solutions available on the market, making it a useful tool for the manufacture of advanced therapy drugs as it does not contain animal products that can cause cross-contamination with adventitious agents of non-human origin and rejection in the patient.
2. They are primarily inactivated products, as the platelet lysate has undergone a pathogen inactivation process using the Mirasol® Pathogen Reduction Technology (PRT) System, TerumoBCT, in order to comply with monograph 5.2.12 Raw materials of biological origin for the production of cell-based gene therapy products of the European Pharmacopoeia.

3. The cryopreservation solution has a lower concentration of DMSO than that commonly used for cryopreservation.
4. Part of the components (total proteins, albumin and immunoglobulins) as well as the pH of the cryopreservation solutions remain stable when stored at -20°C for at least 18 months.
5. Maintains cell viability and preserves the integrity of the artificial tissue structure after thawing, which has not been demonstrated with other solutions used for cryopreservation of artificial tissue.
6. Maintains viability and recovery in cryopreserved cells after a thawing process, when compared to other commercially available media.
7. Maintains the phenotype of cryopreserved cells when compared to other commercially available media.
8. Specifically, two of them show a higher cell stability after thawing and maintenance in cryopreservation solutions allowing a wider therapeutic window.



Intellectual Property

This technology is currently protected by a Spanish National Patent with the possibility of international extension.



Aims

The research group is looking for a licensing agreement for exploitation and/or collaboration.



Classification

Area: Transversal
Technology: Laboratory material
Pathology: General