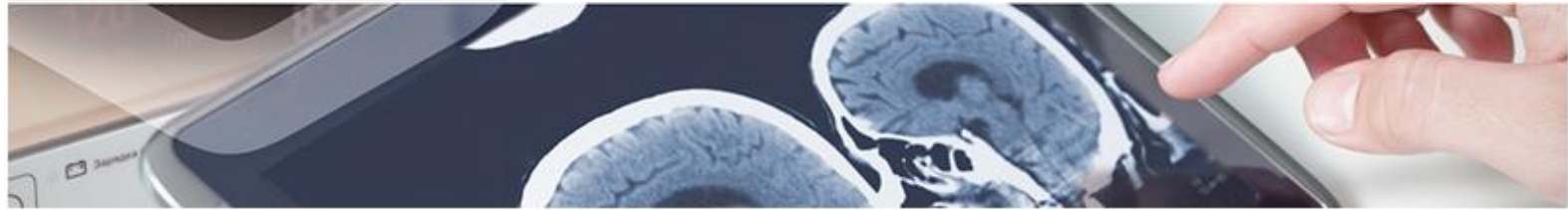




Therapies

Process for selecting antigen-specific T lymphocytes

A research group from the Andalusian Public Health System (APHS) has developed a new process for selecting antigen-specific T lymphocyte useful in therapy, specifically in transplant treatments.



Description

Allogeneic transplantation of hematopoietic progenitor cells represents the only option of cure for many patients with hematologic malignancies. However, said procedure can provoke 20-50% mortality. Specifically, the graft versus host disease (GVHD), which is due to the cytotoxic effect of the donor T lymphocytes on patient vital organs, is the most serious complication following transplantation.

However, precisely at this cytotoxic effect of donor lymphocytes also resides curative effect of allogeneic transplantation, since donor cells trigger an immune response against the hematopoietic tissue and tumour cells from the patient, causing the graft-versus-leukemia effect (GVLE).

Currently, there is no an approach within the allogeneic transplant setting which allows to avoid GVHD without hampering either GVLE of the immune recovery after transplant. Thus, in practice, the most effective procedures for the prevention of GVHD, such as depletion of donor T lymphocytes, also induce a more severe immunosuppression and, therefore, pose a higher risk of relapse (i.e. lower GVLE) or of potentially fatal infections in the post-transplant period.

There is therefore a need to develop a new process for GVHD prophylaxis which, instead of eliminating all the immune response by non-specifically T lymphocyte depletion as a method for preventing alloimmune response, enables to remove only the lymphocyte populations responsible of GVHD or alloreactive lymphocytes.

- 1- Suppress alloreactive lymphocytes while maintaining adequate cytotoxic response against tumour cells.
- 2- Avoids the "cross-reactivity" and GVHD that occurs after infusion of "specific" lymphocytes against pathogen, selected through the currently available methods in the market.
- 3- Culture procedure optimized for identifying patients who are developing GVHD after transplant.



Intellectual Property

This technology is covered by an International Patent Application which claims priority from a Spanish patent application.



Aims

We are looking for a partner interested in a license and/ or a collaboration agreement to further develop and exploit this innovative technology.



Classification

Area: Therapy
Technology: Cell therapy
Pathology: Oncology and Hematology



Advantages