Technology Offer

REPROGRAMING CELLS INTO HEMOGENIC AND/OR HEMATOPOIETIC STEM CELL-LIKE CELLS

KEYWORDS

Cell Reprograming, Hematopoiethic Stem Cells, Viral Vector, Polycistronic vector, Hematotherapy, Immunotherapy

TECHNOLOGY DESCRIPTION

This technology comprises methods for reprogramming stem cells or differentiated cells into hemogenic and/or hematopoietic stem cell-like cells by expressing transcription factors in a polycistronic vector.

Problem to tackle:

- Treatment or diagnosis of blood disorders, cancer (especially haematological tumours) or infectious diseases

ADVANTAGES OVER ALTERNATIVE TECHNOLOGIES

- Simultaneous delivery of all the factors in the same cell
- Reduced amount of random integrations
- Increased reprogramming efficiency

APPLICATIONS

Treatment or therapy for diseases related to stem cell or bone marrow transplantation, immunotherapy or hemotherapy, especially blood disorders

Treatment or therapy of neurodegenerative diseases, disease modeling of blood-related diseases, or drug screening

Treatment or therapy of autoimmune diseases or immunodeficiencies

Treatment or therapy of cancer (especially hematological tumours)

Treatment or therapy of an infectious diseases

PATENT SPECIFICATIONS

Patent: PCT/IB2022/062924

Responsible Inventor: Carlos Filipe Pereira (Cell Reprogramming and Developmental Hematopoiesis)

Applicants: Centre for Neuroscience and Cell Biology

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