MATWIN
MATURATION & ACCELERATING TRANSLATION **WITH INDUSTRY**

TECHNOLOGY OFFER

SUPPORTING INNOVATION AND TECHNOLOGY TRANSFER IN ONCOLOGY

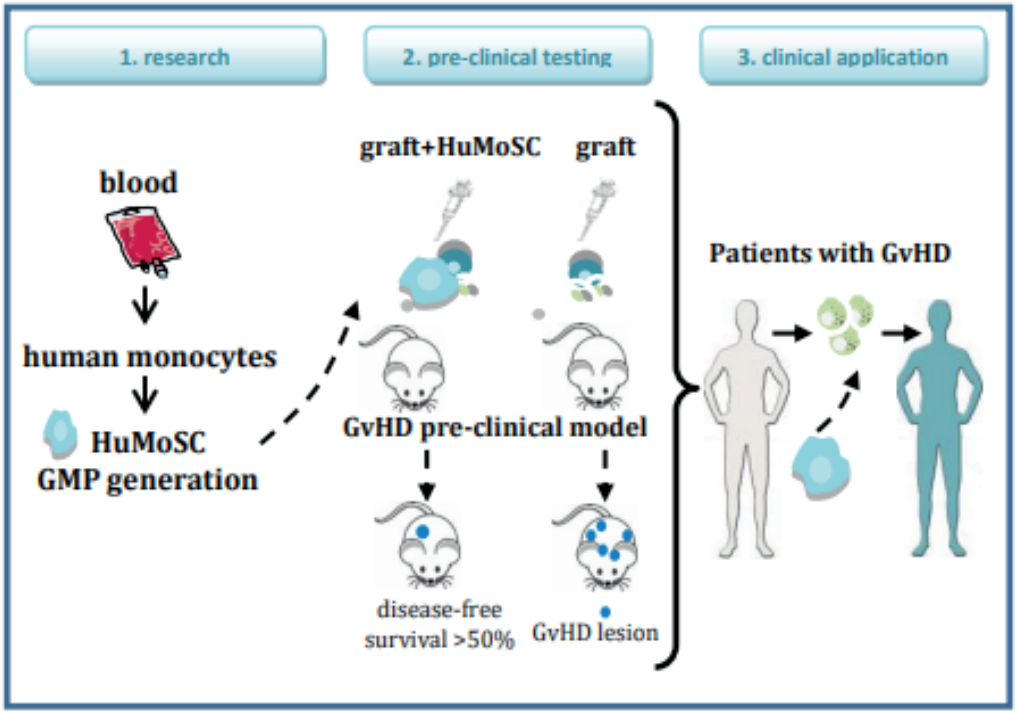
HuMoSC
Human Monocyte-derived Suppressor Cells

CONTEXT & BACKGROUND

Current treatments for Graft vs Host Disease (GvHD) are based on immunosuppressive drugs often leading to complete immunosuppression. This can result in opportunistic infections in up to 20% of the cases. Novel immunotherapies show low efficiency (less than 50%) and are negatively affected by the patient's inflammatory state and may promote tumor growth.

INNOVATIVE COMPONENT & TECHNOLOGY

HuMoSC are a novel cellular therapeutic approach developed as a prevention of graft rejection in hematologic malignancies with a significant efficiency and further potential application in solid organ transplantation and autoimmune disorders.



SCOPE

Cell therapy

KEYWORDS

GvHD - transplantation - autoimmunity - inflammation

OBJECTIVES

Development of a new cell therapy against GvHD based on an original suppressive cell population

DEVELOPMENT & MATURATION STAGE

efficiency validated in a **pre-clinical model of humanized mice**
- mechanism of action mostly elucidated
- GMP compatible generation protocol

INTELLECTUAL PROPERTY & PATIENT CO-OWNER(S)

- French application : 19/03/2014
- PCT application (WO2015140077)
- University of Burgundy and Dijon Hospital

TARGET POPULATION

Leukemia patients having an allogeneic hematopoietic stem cell transplantation
Patient developing GvHD and refractory to first-line treatment

TARGET PROFILE

Frozen allogenic or autologous batch of Human Monocyte-derived Suppressor Cells for cell therapy treatment against GvHD

STRENGHTS & COMPETITIVE ADVANTAGES

- **significant GvHD prevention**
- **can be generated from autologous or allogenic sources**
- **immunomodulating action** (no complete immunosuppression as with immunosuppressive drugs)
- **efficacy not altered** under inflammatory conditions or in presence of immunosuppressive drugs in vitro
- **easy to generate and ready** for use in clinical trials
- **very stable and can be cryopreserved**

INDUSTRIAL APPLICATIONS & OPPORTUNITIES

prevention of GvHD
- graft rejection
- autoimmune diseases

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