MATWIN
MATURATION & ACCELERATING TRANSLATION **WITH INDUSTRY**

TECHNOLOGY OFFER

SUPPORTING INNOVATION AND TECHNOLOGY TRANSFER IN ONCOLOGY

THERAPY

NUCANTHERM

NEW NUCLEOSIDE ANALOGUES FOR THE TREATMENT OF AZACITIDINE-RESISTANT MDS AND AML PATIENTS

CONTEXT & BACKGROUND

This program concerns the development of new nucleotide analogues for the treatment of Azacitidine-resistant MDS and AML patients. We developed a series of new compounds with anti-leukemic activities in MDS and AML. The mechanism of action of these compounds has been partly elucidated and involves both apoptosis and autophagic cell death. The compounds are effective in vitro on Azacitidine-sensitive and resistant MDS/AML cell lines as well and on MDS and AML bone marrow patient's samples ex vivo with a high efficiency on bone marrow samples of Azacitidine-resistant patients. The compounds are also efficient in grafted models of MDS or AML in mice.

INNOVATIVE COMPONENT & TECHNOLOGY

New nucleoside analogues for cancer therapy

OBJECTIVES

To treat patients suffering MDS/AML

DEVELOPMENT & MATURATION STAGE

A licence may be established which concerns, firstly the use of these new nucleoside analogues for the treatment of MDS / AML and secondly a compagnon test for the evaluation of azacytidine resistant in newly diagnosed MDS and AML patients. Two products have been tested in animal studies. Our results indicated a beneficial effect of these compounds in mice xeno-transplanted with azacytidineresistant SKM1 cells. However, both molecules seem to act as pro-drugs. Taking into account the difficulties encountered to identify the active compounds, they were not further developed. We are currently validating new analogues for in vivo assays in mice, before a possible clinical phase I trial in humans

SCOPE

ONCOHEMATOLOGY / MYELODYSPLATIC SYNDROM /ACUTE MYELOID LEUKEMIA

KEYWORDS

KEYWORDS Azacitidine / Resistance / Nucleoside Analogues / Acadesine/ Apoptosis /Autophagy

TARGET POPULATION

Azacitidine-resistant MDS/AML Patients

TARGET PROFILE

Apoptosis/Autophagic cell death

STRENGHTS & COMPETITIVE ADVANTAGES

These compounds are effective on Aza-resistant cell lines and patient's samples

INDUSTRIAL APPLICATIONS & OPPORTUNITIES

Phase I study to be scheduled after validation of new analogues for in vivo assays

INTELLECTUAL PROPERTY & PATIENT CO-OWNER(S)

- Patent on «triazole nucleoside analogs for cancer therapy» : WPT/2012/143624
- license on the companion diagnostic test (patent : FR12/00584/PCT10669) can be considered

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