



SUPPORTING INNOVATION AND TECHNOLOGY TRANSFER IN ONCOLOGY

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. An exclusive licence for the use of these analogues in MDS/AML has been assigned to CleveXel Pharma.



INNOVATIVE COMPONENT & TECHNOLOGY

New nucleoside analogues for cancer therapy



OBJECTIVES

To treat patients suffering MDS/AML



DEVELOPMENT & MATURATION STAGE

A licence has been established with CleveXel Pharma which concerns, firstly the use of these new nucleoside analogues for the treatment of MDS / AML and secondly a companion test for the evaluation of azacytidine resistant in newly diagnosed MDS and AML patients. The license for the companion test is now the property of the SATT SUD-EST. 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



STRENGTHS & 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)

SATT SUD-EST / CleveXel Pharma / INSERM / UNS / CNRS