



CVT VALORISATION SUD

Health & Cosmetology

Novel Synthetic Compounds for Treating Tropical Diseases

CONTACT

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Technology's description

Three main groups of small molecules: two of them naturally occurring, chalcones and polyacetylenes, the other thieno[2,3-d] pyrimidines [Exo2], were found after phenotypic screening of small molecule libraries by high throughput cell imaging for their synthesis and biological activities targeting tuberculosis, malaria, leishmaniasis, and Chagas disease.

Using the results of the screening, University of Louisville (UofL) synthesized a series of chalcones and dihydrochalcones which were tested in Perou for their antiprotozoa activities against *Leishmania amazonensis*, *Trypanosoma cruzi* and *Trypanosoma brucei*. These tests have identified the minimum chemical requirements for the compounds to be active with strong potency and low cytotoxicity.

UofL has also synthesized a series of Exo2 compounds, from which two of them showed high-selective and moderate-selective activities against *Mycobacterium tuberculosis* – including a multidrug resistant (MDR) strain with promising low cytotoxicity against normal cells.

Advantages

- Shelf stable in hot, humid climates of developing countries, where these diseases are prevalent
- Inexpensive starting materials, and easy preparation
- Novel synthetic compound
- Designed to reduce effective dose, thereby reducing the cost of price and production

Applications

- Human Therapeutics (*Leishmania*, Chagas)
- Animal Therapeutics (bovin trypanosomiasis)

Intellectual property

Patent

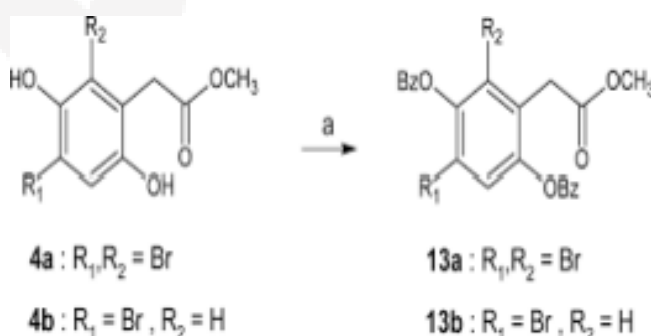
Development level

Technology concept formulated



Technology transfer

- License
- Co-development with licensing agreement



Source :