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Bridging Knowledge and the Economy

Anti-cancer therapy

Reference: VAL-248-UM

Keywords: cancer, therapy

Background

Chemotherapy resistance by tumour cells presents a great challenge for cancer treatment. Until now, attempts to treat some type of cancer were hampered by chemotherapy resistance in most existent therapies.

An increased glycolysis is a universal characteristic of solid tumors that represent adaptation to a hypoxic microenvironnement and are correlated with tumor invasion, metastasis, and lethality. Inhibiting glycolysis by targeting enzymatic activity is thus a promising therapeutic strategy, which bypass chemotherapy resistance problem.

Technology

The technology relates to novel aldolase-inhibiting compounds that can be advantageously used as medicaments, especially for treating certain cancers, due to there inhibition efficacy. The aldolase is a main enzyme of the glycolytic cycle.

Results

Several inhibitors of glycolytic aldolase are at various stages of development. These compounds are assesse in terms of number of cancer cell lines inhibited and low IC_{50} values. The data shows that some are within striking distance of achieving potency.

Applications

- Anti-cancer therapy
- Anti-protozoa therapy

Competitive Advantages

This technology has the following advantages over existing technologies

1. The compounds can be use in association with other anti-tumoral therapies, especially with neovascularization inhibitors because of their capacities to increase the sensibility of aldolase inhibition and attack at the hearth of solid tumors.
2. The mechanism of action of the drugs is known.
3. Strong preliminary data using ARNi in several cancer cell lines, validating further work.
4. A promising therapeutic strategy, which bypass chemotherapy resistance problem and provides for unmet medical needs.
5. Simple Chemical Entity – will facilitate optimization of “lead” compound and its development.
6. Incremental approach - complementary to accepted anti-tumoral therapies, to increase overall treatment effectiveness.
7. Potential for fast track designation in several indications where chemotherapy has failed.

Patent Status

Unreleased structures – Patent will be filed in due date.

Business Opportunity

Univalor is seeking for licensing agreements with major commercial partners.

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