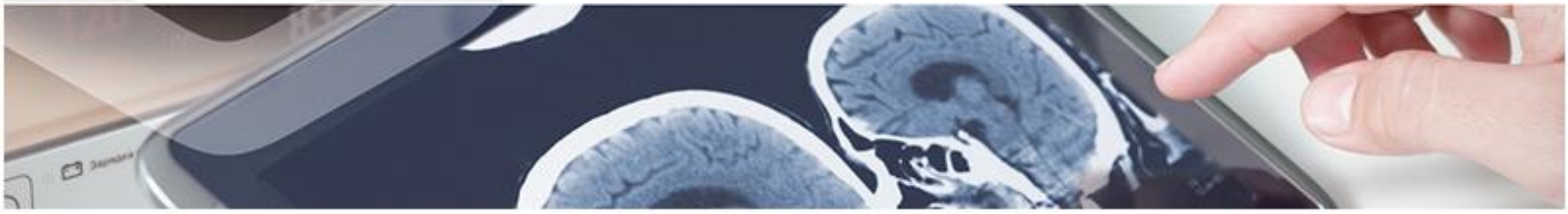
Therapy

New cannabinoid- based compounds for the treatment of multiple myeloma & acute myeloblastic leukemia

TECHNOLOGY TRANSFER OFFICE
Andalusian Public Health System

A research group from the Andalusian Public Health System,in collaboration with CSIC, has synthesized and assayed some cannabinoid-derived compounds that have shown very promising safety and efficacy results in the treatment of multiple myeloma (MM) and acute myeloblastic leukemia (AML).



Description

MM and AML represent the two hematologic malignancies with the worse outcome. The incidence of both MM and AML increases with age, which will represent a challenge for the Health Systems considering the increasing median age of the population in developed countries. Accordingly, the overall incidence of MM is in the range of 6 patients/ 100.000 inhabitants for MM and 5 / 100.000 inhabitants and year for AML but their incidence is higher than 25 cases/ 100.000 inhabitants/ year in the older population. Although relatively high rates of initial response are obtained in MM, patients eventually develop refractory disease. Moreover, treatment against AML has scarcely experienced changes during the last decades. Thus, there is a clear medical need to develop new therapeutic strategies focused on the development of new effective proprietary compounds which are effective in the treatment of these diseases.

Despite being rare diseases, in the eight major markets[1], GlobalData's analysts valued the MM market at $8.9 billion in 2014, and expect it to increase to $22.4 billion in 2023 at a CAGR of 11.2%. GlobalData estimates the 2014 sales for AML at approximately $342 million reaching $932 million in 2024 at a CAGR of 10.5%.

Mechanism of action, *in vitro* toxicity and efficacy studies (both *in vitro* and *in vivo*), have been successfully completed with promising preliminary results. Thus, these compounds may be especially used as maintenance therapy and can be safely combined with other available drugs in a clinical scenario where all patients invariably relapse after initial treatment strategies. Accordingly, new therapeutic strategies both effective in terms of disease control but with a low toxicity profile, in order to be used in this elderly and fragile population, are required in order to favorably influence on the outcome of these patients.

[1] US, FR, DE, IT, ES, UK, JP, and urban CN

Advantages

1. Innovative MoA (specific CB-agonist).
2. Improved efficacy: (i) Completely abolish already established tumor growth with complete regression of the tumor mass; (ii) High cytotoxic effect tumoral cells whilst do not hamper viability of normal cells.
3. Maintained quality of life: (i) Orally available vs. IV administration (bortezomib & carfilzomib); (ii) High expected patient compliance in maintenance therapy.
4. Toxicity: (i) Low toxicity profile which allows maintenance therapy; (ii) Allow combining our compounds with currently available drugs.
5. Possibility of organ drug designation.
6. Low production cost (compared with mAbs).

Intellectual Property

This technology is covered by three patent families.

Aims

We are looking for a partner interested in a license and/or a collaboration agreement to further develop and exploit this innovative technology.

Classification

Area: Biotech-Pharma (Therapy); Technology: Small molecules; Pathology: Oncology & Hematology

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