

USE OF AN MNK KINASE INHIBITOR FOR THE TREATMENT OF TRIPLE-NEGATIVE BREAST CANCER

The findings from researchers from CIBER, IQS and VHIR opens the door to the development of specific inhibitors of a new therapeutic target that will increase the effects of cytotoxic treatments and reduce side effects

The Need

Breast cancer is the most common cancer in women worldwide and the second leading cause of cancer-related death. Despite global advances in cancer treatment, the lethality in some poorly prognostic subtypes of breast cancer has not improved substantially in recent years. Among the different subtypes of poor-prognosis breast cancer is triple-negative breast cancer (TNBC).

The Solution

The present treatment refers to a repositioning of a selective MNK inhibitor with potential use in the treatment of triple negative breast cancer and other cancers with p-eIF4E overexpression due to increased MNK activity.

Innovative Aspects

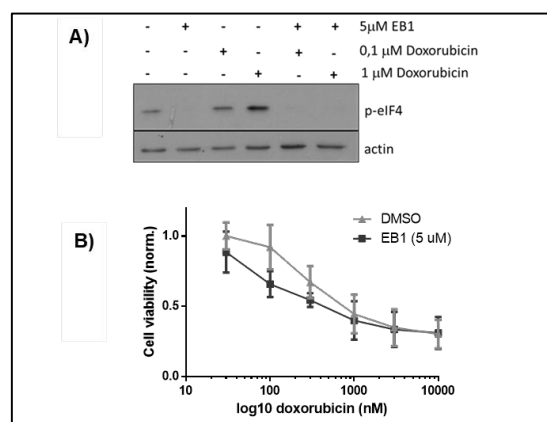
The present treatment is based on a drug repositioning. The main innovative aspect of the inhibitor compound is that complete inhibition of eIF4E phosphorylation is achieved without cytotoxic effects and with high selectivity. Also, results are independent of cell line.

In addition, the compound does not affect the cell growth of tumor and non-tumor cells at the concentrations required to inhibit MNK activity, which supports the selective mode of action towards MNK and provides a first indication of a safe mode of action in future clinical studies.

The combination of doxorubicin with the compound increases the efficacy of the chemotherapy drug (B) and reverses the increase in p-eIF4E caused by cell stress related to doxorubicin treatment (A).

Intellectual Property:

- Spanish patent application filed (July 10, 2019)
- Suitable for international extension (PCT application)



Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.



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