

DIAGNOSIS AND/OR PROGNOSIS OF HER2+ CANCERS USING MOESIN AS A BIOMARKER

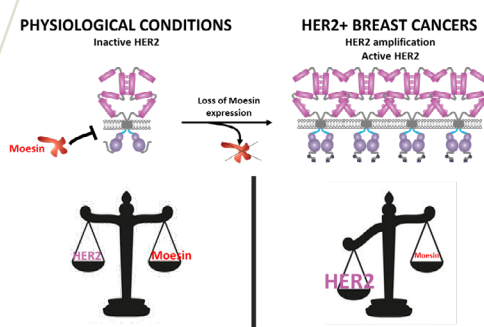
Moesin is a new biomarker for the diagnosis/prognosis of HER2-dependent cancer

ERG\NEO

L'AVENIR EST FAIT D'AUDACE

PRESENTATION

About 25% of primary human breast cancers are due to the deregulated expression of ErbB2/HER2. HER2-targeted therapies have improved patient survival, but both de novo and acquired resistance remain a challenge, as only 25% of treated patients respond to the current therapies. The inventors have identified that Moesin, a member of the ERM (Ezrin, Radixin and Moesin) protein family, is an allosteric inhibitor of HER2 activity. Moesin expression level is inversely correlated with HER2 expression level in human breast cancers. Besides, a low Moesin expression level is associated with a bad prognosis of HER2+ breast cancer patients. This allows further stratification of HER2+ breast cancer patients thereby offering novel personalized treatment options based on the administration of Moesin mimicking compounds (e.g. Zuclopenthixol derivatives) for HER2 inhibition.



ERBB2 - HER2+ breast cancers

Diagnostic/prognostic biomarkers

Moesin - Equivocal HER2 status

COMPETITIVE ADVANTAGES

- New biomarkers to classify breast cancer cases with equivocal HER2 status (4-12% cases)
- New biomarkers to evaluate the prognosis of HER2+ breast cancer patients

APPLICATIONS

- Diagnosis of HER2+ breast cancer
- Evaluation of the prognosis of HER2+ breast cancer patients
- HER2+ breast cancer patient stratification

DEVELOPMENT PHASE

- Screening of more than 70 human breast cancer cell lines, 529 breast tumor samples and 58 breast cancer patients-derived xenografts showing negative correlation between HER2 and Moesin expression levels.
- Kaplan-Meier analysis validating Moesin prognostic value in HER2+ breast cancer patients

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INTELLECTUAL PROPERTY

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