Jingjia Ye et al., Madridge J Cancer Stud Res. 2016
http://dx.doi.org/10.18689/2640-5180.a1.003

Over expression of eIF3g associates with breast cancer cell invasiveness

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Eukaryotic translation initiation factors (eIFs) primarily form the translation initiation complex to start the synthesis of proteins. Aberrant expressions/subcellular distributions of many subunits of different eIFs have been shown to be associated with malignant phenotypes of cancer. Previously we found that eIF3g is up-regulated in multidrug resistant leukemia K562/ADR cells by proteomic approach. In this study, we analyzed the clinical significance of altered expression of eIF3g in human breast cancer, which showed strong association between high-level expression of eIF3g and lymph node metastasis. We further investigated the roles eIF3g plays on malignant phenotypes of breast cancer cell in vitro. Enforced expression of eIF3g in breast cancer cell Bcap 37 had no significant impact on the proliferation of the cells in vitro, but markedly enhanced the motility/invasiveness of the cancer cells. Knockdown of eIF3g in Bcap37 inhibited the proliferation of the cells but no influence on the survival of the cells. In conclusion, over-expression of eIF3g in breast cancer cells may contribute to a more aggressive phenotype.

(Sponsored by grant from National Natural Science Foundation of China 81172516)

Biography:

Jingjia Ye obtained her PhD from Miyazaki University, Japan, majoring in oncology. She has worked in Cancer Institute, Zhejiang University and Clinical Research Center, the 2nd AffiliatedHospital, Zhejjiang University School of Medicine. Her research interest is on molecular mechanisms of tumor development and progression, early diagnosis for tumor micro metastasis and biotherapy of cancer. Now she works in Chu Kochen Honors College, Zhejiang University.