

Within the lectures of the cultural season for [Biology Department](#) Dr.Ahmed Salim Kadom Al Khafaji PhD specialty at Molecular Biology

Liverpool University/United Kingdom delivered the academic titled lecture:

"Investigating of Partial Modification in Treatment of Respiratory Cancers by the (Taxanes) Drug via Differential Expression for Gene Associated in Spindle of Mitotic Division"

Respiratory Cancers are regarded as most deadly among all of malignant diseases, the (Taxanes) are Drug targeted to Mitotic Spindle, they used as a part of regime therapies for these cancers, the main problem is in the resistance which developed by the tumor cells against these drug, the defect, in coded genetic expression (AURKA, AURKB, AURKC, CKAP5, DLGAP5, KIF11, TPX2, TUBB, TUBB3 and TTK) for order protein complexes to make Mitotic Spindle, is the main factor in getting the worst case of the lung cancer disease, so the aim of this study is to investigate the possibility of predicating the respond of the lung tumors to the (Taxanes) via partial modification to the code of the above mentioned genes, then they used as partial markers to treat lung cancer.

One of the important results for this study is to explore the potential ability for two of these genes AURKA & AURKB as partial indicators and genetic sings for the response of two important drug of (Taxanes) and they are respectively Docetaxel and Paclitaxel, while the reduction of genetic expression for AURKA by using shRNA Knock-down technology leads to the respond increasing of Docetaxel, besides that the increasing of the genetic expression of AURKB by using cDNA Over-expression technology leads to the respond increasing for Paclitaxel .

This study proved clearly that excessing of genetic expression for AURKA may be predicating the clinical results for the patients of lung cancer, consequently Docetaxel with the inhibitors coded proteins via this gene may show the required targets for treating those patients, as well as the study revealed the unique role for AURKB gene by the response of lung cancer cells Paclitaxel then the ability of this gene to be as indicator for the treatment kind and as a predicating partial guide in this field.