conferenceseries.com

J Proteomics Bioinform 2016, 9:11(Suppl)
http://dx.doi.org/10.4172/0974-276X.C1.092



# Sensitivity of Palb2-null tumor cells to an oxidative stress inducing agent

**Yanhong Gao**
Chinese PLA General Hospital, China

*PALB2* gene mutations, as the newly discovered breast cancer associated gene, has brought new direction for the prevention and treatment of breast cancer. To better understand the function of *PALB2* and whether it can be used for drug, we generated p53-single-null (as control) and Palb2; p53-double-null cell lines from the mouse mammary tumors obtained and we found that Palb2-null tumor cells were hypersensitive to DNA damaging agents in previous study. To explore new ways to selectively kill Palb2-null tumor cells, we tested the potential of targeting oxidative stress in the cells. For this purpose, we chose phenethyl isothiocyanate (PEITC) and L-sulforaphane. We tested the sensitivity of five different Palb2-null tumor cell lines and three different control lines to the drugs. Cells were seeded in 96 well plates and treated with different concentrations of the two drugs for 72 hours. Then, cell viability was measured by CellTiterGlo® assay. Comparing with L-sulforaphane, we found Palb2-null tumor cells were hypersensitive to PEITC. PEITC is a natural compound rich in vegetables such as watercress and broccoli, etc. PEITC has long been known to possess anti-cancer activity, has been extensively studied. According to the result, it is raising an tempting prospect of preventing or treating *PALB2*-associated cancers with the inexpensive drug.

gyh25cn@126.com