

Knock-in of Circular RNA gene in Hepatocellular Carcinoma cells via CRISPR/Cas9

Hepatocellular Carcinoma (HCC) is the leading cause of cancer deaths worldwide & ranked first among cancers in males and next to breast cancer among females in Egypt - based upon results of National Cancer Registry Program of Egypt-. "Grabbing the problem from the roots" is the best way to decently describe the use of CRISPR, a special gene editing technique that we will be using to modulate a certain circRNA and adjust its gene expression, which is down-regulated in hepatocellular carcinoma. This in consequence modifies miRNA expression thus amending the mRNA gene expression; which is the visible problem in our trials. This will lead us to adopt a novel strategy for miRNA suppression by using circRNAs. This is accomplished by utilizing a synthetic circuit to give rise to a springboard in our battle against cancer.