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EFFECT OF ANTAGONIS MIRNA TO REPPRESS MIR-324-5P FUNCTION AND DECREASE OVARIAN CANCER CELL LINE PROLIFERATION

Ysrafil

Gadjah Mada University, Indonesia

Abstract

Background MicroRNAs are short-sequence RNAs that regulate gene expression by targeting mRNAs. Recent studies reveal that there is a group miRNA that plays important role on worsening of ovarian cancer prognosis because the expression are very hight (oncomiRNA). miR-325-5p is an oncomiRNA that upregulated in ovarian cancer cell. The miRNA known play important role in apoptotic of ovarian cancer.

Objective: aim of this study is to develop microRNA targeted therapy by targeting miRNA-324-5p function use antimiR-324-5p.

Method: Chitosan nanoparticle was used to antimiR-324-5p delivery on SKOV3 cell line. Cytotoxicity effect of antimiRNA was assessed by MTT Assay. Anticancer mechanism study was conduct by in silico analysis use online bioinformatic tools miRTaRBase and StarmiRDB that combine with Genecard to predict target gene of antimiR and validate by qPCR.

Results: The results of qPCR analysis showed, endogenous miRNA-324-5p decreased after 24 hour transfection of antagonis miRNA. Furthermore, the MTT assay results showed that antimiRNA was able to inhibit SKOV3 cell proliferation (80 nM 31,87% $P < 0,05$). An Insilico analysis found that miR-324-5p can regulate BCL2 and prove by validation result reveal that antimiR can decrease mRNA BCL2 expression.

Conclution: In sumary we conclude that antimiR-324-5p can act as microRNA based therapy to decrease ovarian cancer proliferation.

Keyword: antimiR-324-5p, SKOV3, Ovarian Cancer, Chitosan Nanoparticle

Biography:

Ysrafil, S.Farm., M.Biomed has completed his Master program at the age of 25 years from in Master of iomedical Science Program, Gadjah mada University. He is the Researcher in Faculty of medicine Gadjah Mada University. In october 06, 2019he become best abstract in Jogja International Cardiovascular time Series Event who held in Yogyakarta, indonesia.

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