

## MicroRNA-155-5p Diminishes in Vitro Ovarian Cancer Cell Viability by Targeting HIF1 $\alpha$ Expression

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<b>Title</b>	MicroRNA-155-5p Diminishes in Vitro Ovarian Cancer Cell Viability by Targeting HIF1 $\alpha$ Expression
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<b>Authors</b>	Ysrafil, Y; Astuti, I; Anwar, SL; Martien, R; Sumadi, FAN; Wardhana, T; Haryana, SM;
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<b>Abstract</b>	<p>a:4:{i:0;s:503:"Purpose: Ovarian cancer is the most lethal of gynecological malignancies. Recently, the development of microRNA (miRNA) -based therapeutics that could impact broad cellular programs, leading to inhibition of cancer cell viability, is gaining attention in the therapeutic landscape. The therapy is based on the presence of aberrant expressions of miRNA in cancer cells. Decreasing of tumor suppressor miRNA expression causes upregulation of oncoprotein, which worsens the prognosis of the ovarian cancer.";i:1;s:272:"Methods: miR-155-5p mimics were carried by chitosan nanoparticles using new nanotechnology methods. Cellular uptake of miRNA was assessed by fluorescence microscope while MTT and qPCR assay were used to determine miRNA profile and the effect of CS-NP/miRNA on SKOV3 cells.";i:2;s:883:"Results: Results of profiling validated using quantitative realtime-polymerase chain reaction (PCR) found one of the most altered tumor suppressor miRNAs, miR-155-5p was downregulated 892.15-fold. According to bioinformatic analysis we identified the miRNA could recognize and regulate HIF1 alpha expression. Transfection of mimics for miR-155-5p showed significantly increased miR-155-5p endogen SKOV3 expression level compared to the control group. We found differences after transfection mimics for miR-155-5p 31.5 and 63 nanoMolar. Increasing of miR-155-5p endogen lead to diminished SKOV3 viability (by 30%; &lt;0.05 at concentration 80 nanoMolar). These mimics may cause an increase in upregulated miR-155-5p endogen that can reduce HIF1 alpha expression. Here we found 2-fold and 2.8-fold reduction of HIF1 alpha expression level after transfection compared to the control group.";i:3;s:145:"Conclusion: According to these findings, the mimics miR-155-5p can inhibit ovarian cancer cell proliferation by regulating HIF1 alpha expression.";} </p>
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