# *9th Yazd International Congress and Student Award on Reproductive Medicine with 4th Congress of Reproductive Genetics*

## Oral Presentations

### O-41
### Investigating the expressions of miRNA-125b and TP53 in endometriosis: Does it underlie cancer-like features of endometriosis?

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**Background:** Endometriosis is generally considered as a benign condition, but there is a possibility for it to become cancerous. miR-125b was upregulated in both endometriotic tissues and serum samples of women with endometriosis but its potential targets in endometriosis are still not fully understood.

**Objective:** The role of miR-125b in the regulation of TP53 expression in endometriosis was tested with a bioinformatics approach. In addition, the expression of miR-125b and TP53 in both eutopic endometrium (Eu-p) and ectopic endometrium (Ec-p) in endometrium tissues of patients with endometriosis was compared to these in the normal endometrium tissues of controls (Normal).

**Materials and Methods:** In this case-control study, the eutopic and ectopic samples were collected from 20 patients who underwent laparoscopic surgery and the normal endometrium tissues were collected from 20 controls with no evidence of endometriosis. For bioinformatics approach a protein-protein interaction network was constructed based on co-expressed potential targets of miR-125b. Quantitative PCR technique was used for measurement of miR125b and TP53 expression.

**Results:** Our results showed that miR-125b was significantly overexpressed in Ec-p. In addition, there was a significant TP53 underexpression in both Ec-p and Eu-p samples compared with normal tissues.

**Conclusion:** There was a negative correlation between miR-125b and TP53. In addition we observed a noticeable decreased expression of TP53 in both Ec-p and Eu-p samples. These findings may be interpreted as the roles of miR-125b/TP53 axis in the pathogenesis of endometriosis. With the help of bioinformatics analyses we conclude that there is a possible role of miR-125b in cancer-like features of endometriosis.

***Key words:*** *Endometriosis, TP53, miR-125b, Ectopic endometrium.*

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