We are pleased that our research (1) has generated interest in the scientific community, and we are happy to provide our reply to the comments submitted by Dr. Haifeng Qiu.

The major concern addressed by Dr. Qiu is that the upregulation of plasma miR-21 level in endometriosis-associated ovarian cancer (EOC) cases is due to loss of estrogen possibly present in this group of patients. Dr. Qiu’s argument is based on two lines of reasoning: (i) miR-21 expression is repressed by estrogen, and (ii) our patients with EOC are significantly older than the healthy controls and those in the endometriosis group, and therefore they are likely postmenopausal women with low estrogen levels. In addition to miR-21, Dr. Qiu also has concerns about the increased expression of miR-16 and miR-195, which have also been previously reported as estrogen targets.

Although the estrogen/progesterone imbalance is a well-documented pathogenic factor in ovarian cancer and endometriosis, the role of estrogen in regulating miR-16, 21, and 195 expressions remains inconclusive. Studies have shown miR-21 being either repressed (2, 3) or induced by estrogen (4). Furthermore, evidence from several studies on the effect of estrogen on miRNA expression (5) suggests that miR-21 was not a consistent estrogen-repressed miRNA, and miR-16 and 195 only were shown to be repressed by estrogen in one study (6) among 19 studies reviewed (5).

In summary, based on our study results and the above arguments, we do not believe that estrogen plays a significant role in regulating the plasma miRNA signature we have identified, which distinguishes EOC patients with endometriosis from healthy controls.

Disclosure of Potential Conflicts of Interest
No potential conflicts of interest were disclosed.

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Plasma MicroRNAs in Ovarian Cancer—Response

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