1. **No.**

   FP01808107

2. **Title**

   Effects of Smoking on the Human Endometrial toward Pregnancy

3. **Period**

   2017-2019

4. **Summary**

In this research grant, we set up an experimental system to add CSE to ESCs obtained from human endometrial tissue to investigate the effect of cigarette smoke on endometrial cells. CSE was extracted from commercial tobacco in each experiment, but the extraction concentration was not stable for each lot, and even if the experiment was repeated in the same procedure, constant results could not be obtained, which was a problem. Therefore, by conducting trial and error, the suction device at the time of extraction was changed to manual suction with a 50 ml syringe, and by performing the method with a more physiological smoking method, a stable CSE without concentration variation was obtained. But over a year had passed by then. There were the variations in the results depending on the reporting year. In the final year, CSE caused ESCs to accumulate HIF-1α protein, a transcription factor, and showed an increase in the expression of VEGF, a downstream gene. In addition, non-physiologically high concentrations of CSE suppressed the expression of decidualizing factors such as PRL, whereas the addition of physiologically low concentrations of CSE increased the expression.