1. **No.**

   FP01812212

2. **Title**

   Influence of Maternal Smoking during Pregnancy on Organ Failure with Preeclampsia: application of preeclampsia mouse models with human placental transplantation

3. **Period**

   2016-2018

4. **Summary**

   To clarify the effects of nicotine for organ failure with preeclampsia, we tried to establish the preeclampsia mouse models with human placental transplantation. The human chorionic gonadotropin elevated in immunodeficient transplanted mice over a month after transplantation. Histological examination also revealed survival of the xenograft with mouse erythrocyte invasion of the implant and no lymphocytic cellular infiltration. However, there were no change in symptoms (hypertension, proteinuria and weight gain) and no histological difference between abnormal and normal placenta-transplanted mice. As part of the preeclampsia mouse models study, I also investigated iPS-derived patient specific trophoblast by chemical induction. This induced-trophoblast met the multiple features of *in vivo* trophoblasts. In future study, I would like to establish the preeclampsia-specific iPS cells and clarify the effects of nicotine for organ failure with preeclampsia.