1. **No.**

   FP01910161

2. **Title**

   MicroRNA Analysis on Exosomes Detected in Nonsmoker Patients with Non-small Cell Lung Cancer

3. **Period**

   2018-2020

4. **Summary**

   Recently we published a paper titled “Nobel breast cancer screening: combined expression of miR-21 and MMP-1 in urinary exosomes detects 95% of breast cancer without metastasis (Sci Rep, 2019).” We applied miR-21 and miR-486-5p as well as MMP-1 on urinary exosomes for lung cancer, especially to find out passive smoker patients with non-small cell lung cancer. We found miR-21 is not suitable for lung cancer, but miR-486-5p showed downregulated expression in females. MMP-1 expression in female non-smoker lung cancer patients showed the higher expression, especially in early cancer. We are now investigating both biomarkers in healthy controls over 70 years old. We expect these both biomarkers are hopeful screening for females at least.