1. **No.**

   FP01907125

2. **Title**

   Elucidation of Causative Association of Oral and Intestinal Microbiota in the Reduced Risk of Lewy Body Disease in Smokers.

3. **Period**

   2018-2020

4. **Summary**

   In this study, we investigated whether the oral and intestinal microflora connected to the nasal cavity are involved in the development of PD between healthy subjects and Parkinson's disease (PD) patients. Patients were divided into two groups: past or present smokers and never smokers. There were no significant changes in both intestinal and oral bacteria with smoking. However, Prevotella of intestinal bacteria showed an increasing trend in both healthy subjects and PD; MPO was significantly increased in PD patients. Oral bacteria and salivary MPO were lower in the presence of Actinomyces, and positively correlated with the amount of Tannerella present. Analysis of the gut microbiota of normal subjects, RBD, and PD showed the presence of four enterotypes, and revealed a transition between the four enterotypes as the severity of the disease progressed from normal through RBD. The main factor determining the progression of this enterotype was the decrease in SCFA-producing bacteria. Oral bacteria were found to influence the intestinal microflora, and changes in intestinal bacteria were found to be an important factor in the development of PD..