1. No.
   2020G013

2. Title
   Clarifying the pathogenesis of inflammatory lung diseases by multi-omics

3. Period
   2020-2023

4. Summary
   [Background] In spite of massive investment in the discovery of novel biomarkers, there is currently no specific biomarker for IPF. To challenge this problem, we focused on exosomes which contain both great deal of information from pathogenic cells and less protein such as albumin by utilizing the most advanced proteomics.
   [Methods] To explore novel biomarkers for IPF, Shotgun proteomics by DIA followed by MRM verification were performed.
   [Results] From quantitative Proteomics, we obtained 2539 proteins in exosomes. Among them, 85 proteins were up-regulated in fibrosis. Of note, these proteomic profiles reflect their characteristics. Using these novel BM candidates, we are further going to validate them in human.
   [Conclusions] We identified several BM candidates for IPF. Proteomic analysis of peripheral exosomes would provide novel strategy for biomarker discovery.