1. No.
   2022G006

2. Title
   Elucidation of Competitive Dynamics in Oral Squamous Cell Carcinomas (OSCCs) by Cigarette Smoking

3. Period
   2022-2024

4. Summary
   In this study, a genetically engineered oral epithelial carcinoma model and a 4NQO (4-nitroquinoline oxide) chemical carcinogenesis mouse model were successfully established, providing a robust research platform for investigating the development and progression of head and neck squamous cell carcinoma (HNSCC) and oral squamous cell carcinoma (OSCC). *In silico* analysis revealed that COL17A1 and HRAS, key factors in clonal carcinogenesis, are co-expressed at the leading edge of cancer metastasis, suggesting their critical role in the invasion and metastasis of squamous cell carcinoma. Future research will leverage these models to uncover how changes in the tumor microenvironment drive the clonal expansion of cancer stem cells and contribute to cancer progression. By deepening our understanding of squamous cell carcinoma metastasis, this study aims to pave the way for the development of novel, targeted cancer therapies.