1. No.
   2022G027

2. Title
   Effects of Nicotine Administration and Maternal Diet Intervention on Obese Pregnant Women Metabolic Homeostasis in Offspring

3. Period
   2022-2024

4. Summary
   This study investigated the impact of maternal obesity and cigarette smoke exposure (CSE) during pregnancy on offspring metabolic health. Using a high-fat diet-induced obesity mouse model combined with maternal CSE exposure, we identified increased risks of glucose intolerance, insulin resistance, and pancreatic β-cell hypertrophy in offspring. Transcriptomic analysis revealed significant alterations in lipid metabolism, inflammatory pathways, and complement-coagulation cascades. Future research utilizing autoimmune disease models will clarify epigenetic mechanisms and identify therapeutic targets for preventing metabolic disorders in offspring.