

Name: **Xing (Ezra) Yu**

SFU faculty/major: Health Sciences

Title of presentation: Prenatal maternal stress and infant respiratory health: effect of air purifier intervention

Abstract

Infant respiratory health has been linked to prenatal maternal exposure to stress and air pollution, but few studies have considered how those exposures interact. Using data from a randomized study of portable air purifier use during pregnancy, fetal growth, and early childhood development, this research evaluates whether air purifiers modify associations between maternal stress and infant wheeze in the first year of life.

Infant wheeze cases at 12-month-old were parent-reported from the randomly-assigned intervention (N=217) and control (N=187) groups. We used both self-report (Perceived Stress Scale-4) and hair biomarkers to estimate maternal stress. We employed logistic regression models to characterize the association between maternal stress and infant wheeze, and interaction terms were included to evaluate effect modification by the air purifier intervention.

Higher parental stress in both self-report and biomarker increased odds of infant wheeze in the intervention group, suggesting the association is modified by ambient air pollutant level.