Endotoxin is a constituent of the outer membrane of Gram-negative bacteria, and a frequent contaminant in workplaces dealing with laboratory animals. Studies have found that exposure to endotoxin in the laboratory setting could increase the risk of wheezing among subjects suffering from asthma. However, it is not clear if other pre-existing predictors of exposed individuals increase the risk of wheezing in animal laboratory settings.

**Methods**

- To implement regression models on a publicly-available meta-data to identify variables potentially confounding with endotoxin exposure to increase asthma exacerbations among laboratory animal workers.

**Zenodo.org**

Publicly-available dataset retrieved (http://doi.org/10.5281/zenodo.49686)

**Subset regression**

**Backward Stepwise regression**

**Figure 1:** The publicly-available dataset was identified and retrieved from Zenodo.org platform, which was part of a published study by Souza et al. (BMC Pulmonary Medicine 2016.)

**Figure 2:** Regression models: A) Subset regression, B) Backward stepwise regression.

**Figure 3:** The output of the subset regression (red rectangle) identified confirm asthma, self-reported asthma, pet-ownership, age, and skin-prick test to confound with endotoxin concentration in risk of wheezing among laboratory workers.

**Figure 4:** The output of the subset regression (red rectangle) identified confirm and self-reported asthma, pet-ownership, age, and skin-prick test to confound with endotoxin concentration in risk of wheezing among laboratory workers.

**Confidence of Interest**

- The authors have no conflict of interest to disclose.

Future studies will,

- implement assess the risk of wheezing among laboratory workers in non-animal lab research settings.

- Deploy occupational health studies in laboratory settings to identify other pollutants of biological and non-biological origins in

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