

PRECISION HEALTH SEMINAR

January 25, 2017, 10:30 – 11:30am
Drachman A116

Harnessing inter-individual variability in primary cell ozone responses to identify how MAPK signaling, epigenetics, and adaptive responses influence air pollutant susceptibility



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Seminar Summary

Ozone is a ubiquitous ambient air pollutant that causes pulmonary inflammation upon exposure. The ozone-induced inflammatory response varies by orders of magnitude in “healthy” individuals and can even exceed that observed in “susceptible” populations. In this presentation I will demonstrate how fully-differentiated primary bronchial epithelial cells collected from many healthy human donors can be used to recapitulate heterogeneous ozone inflammatory responses. By comparing cultures that are highly sensitive to ozone exposure to those that are resistant, we have obtained novel mechanistic insights regarding how MAPK signaling, epigenetic modifications, and adaptive responses may contribute to differences in susceptibility.



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