

**Gerontological Society of America (Sheraton Hotel, Boston MA)
Sunday Nov 18, 10 to 11:30 am.**

Environmental Determinants of Aging Chair: *Caleb E Finch (USC)*

- The Role of Air Pollution in Healthy Aging, *Jennifer Ailshire (USC)*
- The Neuroinflammation Hypothesis of Urban Air Pollution Effects in the Brain, *Michele Block (Indiana University)*
- Aging in the Vietnam Era Twin Study of Aging Smokers, *Carol Franz, William Kremen (UC San Diego)*
- Genetic and Epigenetic Contributions to Aging and Disease Among Smokers, *Morgan Levine (Yale)*
- Cigarettes & Air Pollution Show Convergent Interactions With ApoE & Sex, *Amin Haghani (USC)*
- Discussion, *George M Martin*

Abstract: Because the heritability of human lifespan is less than 35%, we must consider environmental factors in the individual outcomes of aging. This symposium considers urban air pollution and cigarette smoke as ubiquitous environmental toxins for interactions with aging. Both airborne toxins shorten lifespan and promote diseases of aging with dose-dependence. Jennifer Ailshire (USC) analyzed the Health Retirement Survey for biomarkers of aging that are sensitive to residential air pollution levels. Michele Block (Indiana U) discusses pathways of inflammation, lung-to-brain that mediate the cognitive impact of air pollution. Carol Franz (UCSD) evaluated the Veterans Twin Study of Aging for brain region atrophy by smoking history. Morgan Levine (Yale) identified the genetic and methylation signatures of older smokers. Amin Haghani, student presenter (USC) describes convergent interactions of air pollution and cigarette smoke. Together, these findings point to systemic and genomic responses to air pollution and smoking that are broadly shared by aging processes, lung to brain.