Integrating the Science of Aging and Environmental Health Research

A Workshop of the Standing Committee on the Use of Emerging Science for Environmental Health Decisions

April 7-8, 2020

Keck Center of the National Academies, Room 100
500 Fifth St. N.W. Washington, DC

PRELIMINARY AGENDA

With the global population living longer—the number of people worldwide aged 80 years or over is projected to triple by 2050—understanding the factors that influence healthy aging throughout our lifetimes is critical for protecting public health. Scientists have long known that environment plays an important role in aging: for example, research has shown that human exposure to environmental pollutants can exacerbate age-related diseases, such as Alzheimer’s and Parkinson’s. However, many questions remain about the mechanisms through which environmental stressors influence aging, longevity, and the etiology of age-related disease. How do environmental pollutants, such as airborne particulate matter and pesticides, alter the biological processes that underlie human aging and longevity?

This workshop will explore emerging research at the intersection between aging, longevity, environmental exposures, and human health. Workshop speakers will detail emerging research findings through two lenses:

1. How environmental exposures influence or mediate aging; and
2. How aging influences environmentally-mediated health outcomes.

Participants will also explore research opportunities and needs, enabling technologies and analytical tools, and mechanisms to anticipate and use new data to inform decisions about personal health choices, public health and medical practice, or environmental regulation.

Join the conversation: #ESEHDWorkshop

DAY 1: April 7, 2020, 1:00pm-5:00pm

Keynote Presentations:

- Luigi Ferrucci, National Institute of Aging
- Julie Anderson, Buck Institute

For more information and to register, please visit http://nas-sites.org/emergingscience/
Session 1. Emerging trends and tools in biological aging research for integration with environmental health

- Rafael de Cabo, Intramural Research Programs, NIH
- Murat Acar, Yale University
- Wenyu Zhou, Stanford University
- Nathan Price, Institute for Systems Biology

DAY 2: April 8, 2019, 8:30am – 4:30pm

Keynote Presentation:

- Caleb Finch, University of Southern California

Session 2: Exploring emerging areas of integration – exposures and aging processes

Exposure focus: Chemicals
- Beate Ritz, University of California, Los Angeles
- John Meeker, University of Michigan

Exposure focus: Heavy Metals
- Andres Cardenas, University of California, Berkeley
- Brandon Pierce, University of Chicago

Exposure focus: Air Pollution
- Jamaji Nwanaji-Enwerem, Harvard University
- Joel Kaufman, University of Washington

Integrating exposures and other stressors
- Uchechi Mitchell, University of Illinois at Chicago
- Rosalind Wright, Mount Sinai

Session 3: Integrating the science of aging and environmental health: considerations for decision-making

Breakout Activity (TBD)