Seminar Series 2013-2014

Southern Ontario Centre for Atmospheric Aerosol Research University of Toronto

Lead Toxicity: The Long Tail of Health Impacts (and On-going Research Opportunities!) From an Historical Environmental Air Pollutant



Howard Hu, MD MPH ScD Dean & Professor Dalla Lana Faculty of Public Health University of Toronto

Dr. Hu will briefly review the current state of knowledge on the latent, on-going impact on risk of chronic disease (cardiovascular disease; cognitive declines; Parkinson's Disease; cataracts; etc.) and child development (physical growth; cognition; behavior) from early-life and cumulative exposure to lead, for which the greatest source of exposure to the general population has been inhalation of air contaminated by the combustion of leaded gasoline (1930's-1991 in North America). A life-course approach will be taken, with examples drawn from the speaker's work on the Normative Aging Study (NAS) and the Early Life Exposures in Mexico to Environmental Toxicants (ELEMENT) study. Related topics will also be discussed, such as interactions between lead exposure and other air pollutants, potential genetic susceptibility factors, and nutrients; and mechanistic considerations, including recent insights on the role of epigenetics. Current investigations and examples of opportunities for new research will also be discussed.

Dr. Hu is physician-scientist, trained as an internist and occupational and environmental medicine specialist, with a doctoral degree in epidemiology from Harvard. Previously, Dr. Hu had been Professor of Occupational and Environmental Medicine at the Harvard School of Public Health and the Channing Laboratory of the Brigham & Women's Hospital in Boston from 1988 to 2006; and the NSF International Chair of the Department of Environmental Health Sciences and Professor of Environmental Health, Epidemiology & Internal Medicine at the University of Michigan from 2006-2012. Since 1990, Dr. Hu has led multi-institutional and international teams of scientists devoted to the environmental, nutritional, social, psychosocial and genetic determinants of chronic disease in population-based studies in the U.S., Mexico, India, China, and elsewhere around the world. His research has enjoyed continuous funding from NIH, generated over 250 original research publications,

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Wallberg Building, 200 College Street, Room 215



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