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Acknowledgements

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Facilitated by:

Phoebe Thorpe, MD, MPH, Series Director
John Iskander, MD, MPH, Senior Advisor

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WE WERE THERE

January 30, 2019

1:00 p.m. to 2:30 p.m. (ET)

Roybal Campus | Global Communications Center, (Building 19) | Alexander D. Langmuir Auditorium

Not Everything Is Better with Butter-flavoring: Popcorn Lung Disease and the Dangers of Diacetyl



Kay Kreiss,
MD

Kay Kreiss, MD

After Harvard Medical School and internal medicine residency, Dr. Kreiss joined the Epidemic Intelligence Service in 1978, working in environmental studies before there was a Center for Environmental Health. She did a preventive medicine residency at CDC, assigned to the Colorado health department, helping to establish environmental epidemiology there. Between 1982 and 1996, she climbed the academic ladder at the University of Colorado Health Sciences Center, developing occupational medicine at National Jewish Health from scratch with a referral clinic and research program in occupational lung disease, as well as an accredited residency in occupational and environmental health. In 1996, Dr. Kreiss returned to CDC at its National Institute for Occupational Safety and Health as the field studies branch chief in the Respiratory Health Division. Over 20 years, her multidisciplinary group described new occupational lung diseases such as flock workers' lung, flavoring-related bronchiolitis obliterans, indium-related alveolar proteinosis, and asthma due to dampness in the built environment, shark cartilage, and a pesticide. They also made major strides in understanding risk of beryllium disease by recognizing skin sensitization and genetic factors. Dr. Kreiss thinks occupational public health is challenging because diseases arise from the interstices of our economic system and values of those controlling conditions of work.



Ann F. Hubbs
DVM, PhD

Ann F. Hubbs DVM, PhD

Dr. Hubbs is a Veterinary Medical Officer at the National Institute for Occupational Safety and Health within the Centers for Disease Control and Prevention. She is also an adjunct associate professor at West Virginia University. She is board-certified in veterinary pathology, board eligible in laboratory animal medicine and the author or co-author of more than a hundred peer-reviewed papers, principally dealing with respiratory and toxicologic pathology. Her research includes many studies of emerging workplace hazards, including nanoparticles and flavoring vapors. These scientific publications have received numerous awards and according to Scopus have been cited more than 5000 times in the scientific literature resulting in an h-index of 38. In addition, she has used her knowledge to respond to public health emergencies, including the Anthrax events in 2001, the monkey pox outbreak in 2003, and Hurricane Katrina in 2005.



Kristin J. Cummings,
MD, MPH

Kristin J. Cummings, MD, MPH

Dr. Cummings received her undergraduate degree from Harvard University, and public health and medical degrees from Johns Hopkins University. She trained in Internal Medicine at Stanford University and Occupational Medicine at West Virginia University and is certified by the American Board of Internal Medicine and the American Board of Preventive Medicine. In 2005, she joined CDC as an Epidemic Intelligence Service Officer assigned to the National Institute for Occupational Safety and Health (NIOSH) in Morgantown, West Virginia, later serving as Medical Officer (2007-2015) and Field Studies Branch Chief (2015-2018) in NIOSH's Respiratory Health Division. She is currently a Consultant to NIOSH. Dr. Cummings' work has focused on understanding the relationship between work conditions and lung disease to inform prevention. In addition to flavoring-related lung disease, she has investigated asthma in soy processing workers, alveolar proteinosis in indium-tin oxide (ITO) workers, and lymphocytic bronchiolitis in machinists. She contributed to CDC's emergency response, including deployments for Hurricane Katrina and Ebola. She is also interested in health disparities as they relate to occupation and the impact of contingent employment arrangements on health.

Welcome to *We Were There*, a quarterly lecture series featuring past and present CDC investigators as they share their personal perspectives on historically important epidemiologic and laboratory investigations. *We Were There* provides insight into the rich past of CDC and is a chance to hear first-hand accounts from the responders.

In 2000, an astute physician reported that eight former microwave-popcorn factory workers had developed a rare, irreversible, and disabling lung disease, bronchiolitis obliterans. Four of the eight young workers were so ill that they were put on lung transplant waiting lists. After investigating numerous possible sources and ruling out a few false leads, researchers ultimately determined the cause of lung damage: vapor from butter flavoring added to the popcorn. While it would be several years before the mechanism was completely understood, changes in worker protection drastically reduced the exposure and continue to prevent this crippling disease.

In this presentation, Kay Kreiss, MD, Ann F. Hubbs DVM, PhD, and Kristin J. Cummings, MD, MPH will discuss how this unique outbreak led them to unravel the mystery of popcorn-lung disease and how we can continue to protect workers from permanent lung damage caused by the butter flavoring diacetyl.

Welcome	Phoebe Thorpe, MD, MPH
Opening Remarks	Anne Schuchat, MD
Presentations	Kay Kreiss, MD Ann F. Hubbs DVM, PhD Kristin J. Cummings, MD, MPH
Panel Discussion/ Question & Answer	All
Closing Remarks	Phoebe Thorpe, MD, MPH