Occupational/Environmental lung diseases

Stella Hines (Shines@som.umaryland.edu):

Dr. Hines studies occupational & environmental lung disease with a particular focus on pulmonary physiology. She has a distinct interest in characterizing unique exposures in military populations, ranging from inhalational and systemic metal exposures, blast impact and other airborne hazards in relation to measures of pulmonary physiology, including respiratory impedance. She also studies the use of different forms of respiratory protection among healthcare workers as protection from occupational hazards, with goals of improving preparedness for emerging infectious disease threats and strengthening the healthcare workforce infrastructure

Highlighted Publications:

1. Hines SE, Gucer P, Kligerman S, Breyer R, Centeno J, Gaitens J, Oliver M, Engelhardt S, Squibb K, McDiarmid M. Pulmonary Health Effects in Gulf War I Service Members Exposed to Depleted Uranium. Journal of Occupational and Environmental Medicine. 2013:55;937-944.
2. Hines SE, Barker EA, Robinson M, Knight V, Gaitens J, Sills M, Duvall K, Rose CS. Cross-Sectional Study of Respiratory Symptoms, Spirometry, and Immunologic Sensitivity in Epoxy Resin Workers. Clinical and Translational Science. 2015:8;722-28.
3. Hines SE, Mueller N, Oliver M, Gucer P, McDiarmid M. Qualitative Analysis of Origins and Evolution of an Elastomeric Respirator-based Hospital Respiratory Protection Program. Journal of the International Society for Respiratory Protection. 2017:34:95-111.
4. Hines et al. Impulse Oscillometry Measurement of Distal Airways Obstruction in Depleted Uranium Exposed Gulf War Veterans. American Journal of Industrial Medicine. Am J Ind Med. 2018 Feb 9. doi: 10.1002/ajim.22816. PMID: 29424024 DOI: 10.1002/ajim.22816
5. Kalchiem-Dekel, O. Hines SE. Forty years of reference values for respiratory system impedance in adults: 1977-2017. Respiratory Medicine. 2018;136:37-47.

Links:

Med School faculty page: http://www.medschool.umaryland.edu/occupational/
PubMed publications:

Don Milton (dmilton@umd.edu):

Dr. Milton's work focuses on the interrelated areas of infectious bioaerosols, exhaled breath analysis, and development and application of innovative methods for respiratory epidemiology. Fellows working in my lab will have the opportunity to participate in a variety of federally funded research projects. Currently the lab is working on development and testing of innovative non-invasive measurement of deep lung biomarkers with a transdisciplinary team of engineers, molecular biologists, and photonics experts. Dr. Milton is also performing molecular epidemiologic studies of the importance of the airborne mode in transmission of influenza and other respiratory viruses using whole genome sequencing of viruses from exhaled breath aerosols and NP swabs to identify the source of transmitted viruses.

Highlighted Publications:

1. Yan J, Grantham M, Pantelic J, Bueno de Mesquita PJ, Albert B, Liu F, Ehrman S, Milton DK. Infectious virus in exhaled breath of symptomatic seasonal influenza cases from a college community. Proc Natl Acad Sci U S A. 2018 Jan 30;115(5):1081-1086. PubMed PMID: 29348203; PMCID: PMC5798362.
2. Milton DK, Fabian MP, Cowling BJ, Grantham ML, McDevitt JJ. Influenza virus aerosols in human exhaled breath: particle size, culturability, and effect of surgical masks. PLoS Pathog. 2013 Mar;9(3):e1003205. PubMed PMID: 23505369; PMCID: PMC3591312.
3. Fabian P, Brain J, Houseman EA, Gern J, Milton DK. Origin of exhaled breath particles from healthy and human rhinovirus-infected subjects. J Aerosol Med Pulm Drug Deliv. 2011 Jun;24(3):137-47. PubMed PMID: 21361786; PMCID: PMC3123971.
4. Shorter JH, Nelson DD, McManus JB, Zahniser MS, Sama SR, Milton DK. Clinical study of multiple breath biomarkers of asthma and COPD (NO, CO(2), CO and N(2)O) by infrared laser spectroscopy. J Breath Res. 2011 Sep;5(3):037108. PMCID: PMC3169766
5. Roy CJ, Milton DK. Airborne transmission of communicable infection--the elusive pathway. N Engl J Med. 2004 Apr 22;350(17):1710-2. PubMed PMID: 15102996.

Links:
Faculty webpage: http://sph.umd.edu/people/donald-milton
CATCH-the virus study page: https://catch.umd.edu/
Google Scholar Profile: https://scholar.google.com/citations?user=35qhH0QAAAAJ&hl=en
PHAB Lab page: http://sph.umd.edu/laboratory-resources/public-health-aerobiology-virology-and-exhaled-biomarker-laboratory-phab-lab