

Stephen J. Vesper, Research Biologist, in EPA's National Exposure Research Laboratory

Exposure Methods and Measurements Division

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Area of Expertise: Dr. Vesper's goal is to understand the environmental factors associated with the development of asthma and with asthma exacerbation. Along with Dr. Haugland, Dr. Vesper patented in 2002 "mold specific quantitative PCR" (MSQPCR). In conjunction with HUD, MSQPCR was used to quantify 36 molds in a random national sampling of homes to create the Environmental Relative Moldiness Index (ERMI). In a 10-year prospective study with the University of Cincinnati Environmental Health Department, we found that infants exposed to very moldy, i.e. high ERMI, homes were much more likely to develop asthma. Next we want to examine the combined roles of indoor and outdoor contaminants in asthma's etiology which should lead to practical methods to reduce the asthma burden in the US.

Select Publications:

King, D., S. Pfaller, M. Donohue, S. Vesper, E. Villegas, M. Ware, S. Glassmeyer, M. Vogel, E. Furlong, AND D. Kolpin. Microbial pathogens in source and treated waters from drinking water treatment plants in the United States and implications for human health. *SCIENCE OF THE TOTAL ENVIRONMENT*. Elsevier BV, AMSTERDAM, Netherlands, 562:987–995, (2016).

Rosenbaum, P., J. Crawford, A. Hunt, S. Vesper, AND J. Abraham. Environmental Relative Moldiness Index and Associations with Home Characteristics and Infant Wheeze. *JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE*. Lippincott Williams & Wilkins, Philadelphia, PA, 12(1):29-36, (2015).

Adkins, L., G. Frantz, F. Fulk, J. Rhodus, B. Thompson, S. Vesper, R. Williams, V. Zartarian, AND E. Bender. Health Impact Assessment(HIA)of Building Renovations at Gerena Community School, Springfield, Massachusetts. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-15/236, 2015.

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Education:

- Ph.D. Environmental Biology, Ohio State University, 1983
- M.S. Plant Pathology, Ohio State University, 1975
- B.S. Biology, Xavier University, 1972

Professional Experience:

- Biologist, US EPA, National Exposure Research Laboratory, Cincinnati, OH 1998-present
- Research Assistant Professor, Civil and Environmental Engineering, University of Cincinnati, Cincinnati, OH 1990-1998
- Senior Microbiologist, Biotechnology Group, Henkel-Emery Co, Cincinnati, OH 1987-1990
- Research Microbiologist, Battelle Columbus Division, Columbus, OH 1983-1987