# When the Air we Breathe Causes Disease Stephan Schwander Associate Professor, Environmental and Occupational HealthDirector, Center for Global Public Health, School Of Public Health

### **CURRENT RESEARCH**

# Understanding the connection between air pollution and respiratory infections

Air pollution has been identified by WHO as a major global health problem. In fact, one in eight deaths worldwide are related to air pollution. Therefore, it has become critical to understand the mechanisms that allow air pollutants to affect the immune response and the ways in which they lead to deadly diseases. Dr. Stephan Schwander, Associate Professor of Public Health and Director of the Center for Global Public Health at Rutgers University, explores if there is a connection between exposure to air pollution in cities and the likelihood of developing respiratory infections such as tuberculosis. Understanding this possible connection will provide the impetus for the implementation of air pollution regulations in low and middle income countries, and may lead to new recommendations for infection

Few researchers worldwide are committed to the study of pollutants impact on immune response and Dr. Schwander is renowned for his research track record in human lung immunity, and particularly in the context of tuberculosis. This expertise has allowed him to integrate novel questions into his research and to successfully obtain government funding due to the incredible significance of his work. Additionally, by partnering with global health organizations, and researchers in Mexico City, Canada, and at Duke University, he and his team are able to cast a wide net to study diverse populations and in the future, deliver robust services.

Current research includes:

 Mexico: Dr. Schwander and his team are conducting translational research in Mexico City to understand how air pollution impacts may lead to respiratory infections, and specifically to tuberculosis. He believes that by..

#### **AFFILIATION**



Rutgers University

### **EDUCATION**

- Ph.D. from University Hamburg, Eppendorf, Germany
- M.D. from University of Frankfurt, Germany

#### **AWARDS**

- Excellence in Research Award for the Academic Year 2011-2012
- Chairman of Symposium entitled 'Macrophages and Monocytes', May 4-8, 2012
- Chair of RBHS Chancellor's Rutgers Global Health Strategic Planning Working Group, 2013-
- Chairman 'TB Genomics' mini-symposium, May 16-21, 2014
- Chairman 'Inhaled Smoke and Lung Immunity to Tuberculosis and Other Infections' minisymposium, May 15-May 20, 2015

### **RESEARCH AREAS**

Health & Wellness, Wellness, Aging Research

## **FUNDING REQUEST**

Your contributions will support the continued research of Dr. Stephan Schwander, of Rutgers University, as he studies how pollution might affect rates of tuberculosis for people around the world. Donations will fund the necessary \$950K/year required to maintain and expand his current work and will support equipment, reagents, travel, expert personnel and the expansion of the Center for Global Public Health at Rutgers. Help to prevent the onset and spread of tuberculosis; support Dr. Schwander and his team!

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