



# Members of the Scientific Review Panel on Toxic Air Contaminants

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Pursuant to the section 39670 of the Health and Safety Code, nine members are shown by category below.

## ACADEMIC ADMINISTRATION

### S. Katharine Hammond, Ph.D.

Chair, Environmental Health Sciences Division  
 Professor of Environmental Health Sciences  
 School of Public Health  
 University of California, Berkeley

## OCCUPATIONAL MEDICINE

### Paul D. Blanc, M.D.

Chief, Division of Occupational  
 and Environmental Medicine  
 Endowed Chair, Occupational Medicine  
 Professor of Medicine  
 University of California, San Francisco

## ATMOSPHERIC SCIENCE

### Cort Anastasio, Ph.D.

Professor of Tropospheric Chemistry  
 and Department Vice Chair  
 Department of Land, Air and Water Resources  
 University of California, Davis

## ONCOLOGY

### Alan R. Buckpitt, Ph.D.

Professor  
 Department of Molecular Biosciences  
 School of Veterinary Medicine  
 University of California, Davis

## BIOCHEMISTRY/MOLECULAR BIOLOGY

### Sarjeet S. Gill, Ph.D.

Professor of Cell Biology  
 Department of Cell Biology and Neuroscience  
 University of California, Riverside

## PATHOLOGY

### Jesús A. Araujo, M.D., Ph.D.

Associate Professor  
 Director of Environmental Cardiology  
 Division of Cardiology  
 School of Medicine  
 University of California, Los Angeles

## BIOSTATISTICS

### Stanton A. Glantz, Ph.D.

Professor of Medicine  
 Division of Cardiology, Department of Medicine  
 School of Medicine  
 University of California, San Francisco

## TOXICOLOGY

### Michael T. Kleinman, Ph.D., Chairman

Adjunct Professor and Co-Director  
 Air Pollution Health Effects Laboratory  
 Department of Medicine  
 University of California, Irvine

## EPIDEMIOLOGY

### Beate R. Ritz, M.D., Ph.D.

Professor and Vice Chair  
 Department of Epidemiology and  
 Environmental Health Sciences  
 School of Public Health  
 University of California, Los Angeles

## Prof. Michael T. Kleinman

Research Area: Health Effects



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Professor of Environmental Toxicology and Co-Director of the Air Pollution Health Effects Laboratory in the Department of Community and Environmental Medicine, Adjunct Professor in College of Medicine [Ph.D. in Environmental Health Sciences from New York University, NY]. Professor Kleinman brings to the ORU expertise in the health effects of air pollution on animals and humans, as well as the development of analytical techniques for assessing biological and physiological responses to exposure to environmental contaminants and for determining concentrations of important chemical species in air.

Environmental pollutants represent important potential causes of preventable neurological, cardiological and pulmonary diseases. The research in Dr. Kleinman's laboratory uses immunological and molecular methods to examine the mechanisms by which toxic agents affect the lung and heart. Current studies include the effects of ambient particles on blood pressure and heart rate in sensitive animal models. Other studies examine the link between asthma and environmental exposures to ambient particles near real- world pollutant sources, such as freeways in Los Angeles.

Research focuses on mechanisms of cardiopulmonary injury following inhalation of toxic compounds. State-of-the-art methods are used to evaluate the roles of free radicals and oxidative stress in sensitive human volunteers and laboratory animals. In vitro methods are used to evaluate specific mechanisms. Dr. Kleinman's current studies involve the inhalation exposures to manufactured and combustion-generated nanomaterials fine and coarse particles using state of the art field exposure systems and real-time physiological monitoring methods. Recent findings demonstrate that fine and ultrafine particles near heavily trafficked roads increase the risk of developing airway allergies but this allergenic potential is attenuated at greater distances downwind of the source. The chemical and physical changes in the aerosol responsible for the heightened allergenicity of the near-source particles is an important focus of Dr. Kleinman's research.

Biological mechanisms related to oxidative stress have been identified after particulate matter exposure and Dr. Kleinman's team is also pursuing how these mechanisms affect pathological and physiological changes in the heart and lungs. Other interests include analytical and atmospheric chemistry, environmental sampling and analysis, and the application of mathematical and statistical methods to environmental and occupational assessments of exposure and risk.

Prior to joining the faculty at UCI in 1982, he was the Director of the Aerosol Exposure and Analytical Laboratory at Rancho Los Amigos Hospital in Downey, CA. Dr. Kleinman was also a Physical Scientist at the U.S. Atomic Energy Commission Health and Safety Laboratory (now the DOE Environmental Measurements Laboratory) in New York and has published approximately 100 peer-reviewed articles in the fields of environmental health sciences, atmospheric chemistry and radiochemistry, transport and fate of airborne contaminants in tropospheric and stratospheric air, apportionment and identification of sources of air pollution, and the effects of air pollution on health. Dr. Kleinman is the current chair of the California Air Quality Advisory Committee, a member of the U.S. EPA Clean Air Scientific Advisory Committee and also chairs the Executive Committee for the U.C. Toxic Substances Research and Teaching Program.

### Research Interests:

- Inhalation toxicology
- Oxidative stress
- Cardiopulmonary diseases

### Selected Honors and Awards:

MEETING  
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9:33 A.M.

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1 a new member to the Panel -- another new member, Cort  
2 Anastasio. And I'd like to welcome him. And I'd like to  
3 give Cort just a few minutes to just introduce himself.

4 PANEL MEMBER ANASTASIO: Thanks. So I'm Cort  
5 Anastasio. I'm a professor in land, air, and water  
6 resources.

7 Okay. Apparently, I was not on, so I'll start  
8 again. So my name is Cort Anastasio. I'm a professor in  
9 the Department of Land, Air and Water Resources at UC  
10 Davis. I'm an atmospheric chemist and my research  
11 focuses on reactions in condensed phases in the  
12 atmosphere, so that's cloud drops, fog drops, aerosol  
13 particles. We're also interested in the generation of  
14 reactive oxygen species by particles, and how that may be  
15 linked to human health effects.

16 CHAIRPERSON KLEINMAN: Thank you, Cort.

17 I'd like to give -- just take a few minutes  
18 for -- and go around the table, so that the people on the  
19 panel can introduce themselves.

20 PANEL MEMBER BLANC: Why don't you start  
21 actually, since we don't know you.

22 CHAIRPERSON KLEINMAN: I'll start. My name is  
23 Mike Kleinman, in the School of Medicine at UC Irvine. I  
24 am a professor in the Division of Occupational  
25 Environmental Health. And most of my studies involve