

## **JUNFENG (JIM) ZHANG**

#### **CURRICULUM VITAE**

# **DUKE UNIVERSITY**NSOE LSRC Rm. A309

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#### **DUKE KUNSHAN UNIVERSITY**

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#### I. EDUCATION

Degree	School	Date	Concentration
B.S.	Peking University, Beijing, China	1985	Applied Chemistry
M.S.	Peking University, Beijing, China	1988	Atmospheric Chemistry
M.S	Rutgers University, New Brunswick, NJ	1991	Environmental Sciences
Ph.D.	Rutgers University and the University of Medicine and Dentistry of New Jersey, Piscataway, NJ	1994	Environmental Sciences and Public Health
Postdoctoral	East-West Center and UC-Berkeley Mentored by Kirk R. Smith, PhD	1994- 1995	

#### **Special Training**

Attended "Stand and Deliver" Workshop by Steve Adubato, PhD, consisting of six two-hour sessions on "Speak from the Heart", a UMDNJ effort of leadership development, 2005.

Attached one-day "Ready for Media" training at University of Southern California, with hand-on training on how to effectively communicate with the media and the public about scientific discoveries, 2012.

### **Honors and Awards**

Outstanding Graduate 1985 (Highest Honors), by Peking University and numerous awards during undergraduate and graduate study at Peking University (1981-1988).

Second place of the National Best Books on Environmental Knowledge, Beijing, China. Book title: "A Treasure Box of Environmental Knowledge," 1990.

First place of the National Hongyu (Rainbow and Rain) Cup Contest of Poetry and Words in Beijing, China. Winning poem title: "Memory: A Serenade" 1992.

Second place, Contest of Student Paper Session, 39th Anniversary Conference of Air & Waste Management Association, Mid-Atlantic States Section, Atlantic City, NJ. Paper title: "Indoor AIR chemistry: ozone, aldehydes, and organic acids in residential air," 1993.

Distinguished Lectureship Award (for presenting a short course on Indoor Air Pollution and Exposure Assessment), presented by College of Environmental Sciences and Engineering, Nan Kai University, Tianjin, China, 2002.

For contributing to the award of the Nobel Peace Prize for 2007 to IPCC, presented by the Intergovernmental Panel on Climate Change (IPCC), 2007.

Honorary Member of Delta Omega, the honorary society for graduate studies in public health, 2008.

Excellence in Research Award for 2007-2008 by the Foundation of University of Medicine and Dentistry of New Jersey, 2008.

Excellence in Teaching Award for 2008-2009 by the Foundation of University of Medicine and Dentistry of New Jersey, 2009.

Inducted to the Stuart D. Cook Master Educators' Guild, University of Medicine and Dentistry of New Jersey, 2009.

Jerome J. Wesolowski Award, by International Society of Exposure Science, to recognize sustained and outstanding contributions to the knowledge and practice of human exposure assessment, 2012.

Distinguished Alumni Award, by the Graduate School-New Brunswick, Rutgers University, for oustanding achievement in the Physical and Mathematical Sciences, 2013.

Dennis M. Fenton Graduate Student Alumni Award, presented by the Cook Community Alumni Association, Rutgers University, 2013.

Fellow of American Association for the Advancement of Science (AAAS), 2013.

#### II. PROFESSIONAL BACKGROUND

#### **Academic Appointments**

Research and Teaching Assistant, Department of Technical Physics, Peking University, Beijing, China, 1985-1988.

Consultant, Environmental Protection Office of Peking University, Beijing, China, 1987-1989.

Executive Director of Management Training Program, Stone Company, Beijing, China, 1988-1989.

Air Pollution Analyst, Gibbs & Hill, Inc., NY 1990-1990

Research Assistant, Environmental and Occupational Health Sciences Institute 1989-1994.

Fellow (Research Associate), Program on Environment, the East-West Center, Honolulu, Hawaii, 1994-1995.

Assistant Professor, Department of Environmental and Community Medicine, the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, 1995-2001.

Lecturer, TH Huxley School of Environment, Earth Science and Engineering, Imperial College of Science, Technology and Medicine, London, UK, 2000-2001.

Director, International Environmental Health Center, Environmental and Occupational Health Sciences Institute, Rutgers University, Piscataway, New Jersey, USA, 2001-2004.

Adjunct Research Professor, China National Environmental Monitoring Center, Beijing, China, 2000-2004.

Associate Professor, Department of Environmental and Occupational Health, School of Public Health – University of Medicine and Dentistry of New Jersey, 2001-2006.

Faculty Member, Joint Graduate Program in Toxicology of UMDNJ and Rutgers University 2005-2010.

Faculty Member, Exposure Measurement and Assessment Division, Environmental and Occupational Health Sciences Institute jointly sponsored by University of Medicine and Dentistry of New Jersey and Rutgers- the State University of New Jersey, 2005-2010.

Graduate Faculty, Department of Environmental Sciences, Rutgers University, 1996-2010.

Member, the Cancer Institute of New Jersey, Piscataway, New Jersey, 2002-2010.

Visiting/Guest Professor, College of Environmental Sciences and Engineering, Peking University, Beijing, China, 2004-present.

Faculty member, the Graduate School of Biomedical Sciences at University of Medicine and Dentistry of New Jersey, 1996-2010.

Professor of Environmental and Occupational Health, School of Public Health – University of Medicine and Dentistry of New Jersey, 2006-2010.

Chair and Acting Chair, Department of Environmental and Occupational Health, University of Medicine and Dentistry of New Jersey – School of Public Health, 2006-2010.

Associate Dean for the Piscataway/New Brunswick Campus, Associate Dean for Global Public Health, University of Medicine and Dentistry of New Jersey – School of Public Health, 2008-2010.

Adjunct Professor, Department Environmental and Occupational Health, School of Public Health – University of Medicine and Dentistry of New Jersey, 2010-2015.

Professor, Department of Preventive Medicine, University of Southern California, Los Angeles, CA, 2010-2013.

Professor, Nicholas School of the Environment and Duke Global Health Institute, Duke University, Durham, North Carolina, 2013-present.

Research Professor, Duke Kunshan University, Kunshan, Jiangsu Province, China, 2014-present.

#### **Administrative Appointments**

Chair and Acting Chair, Department of Environmental and Occupational Health, University of Medicine and Dentistry of New Jersey – School of Public Health 2006-2010.

Associate Dean for the Piscataway/New Brunswick Campus, Associate Dean for Global Public Health, University of Medicine and Dentistry of New Jersey – School of Public Health, 2008-2010.

Chair, Executive Committee for the Piscataway/New Brunswick Campus, UMDNJ-School of Public Health, 2008 – 2010.

Director, Regional Ozone Sino-US Collaborative Research Center, Duke Kunshan University, 2015- present

#### **Professional Appointments**

Member of Planning Committee and Workshop Coordinator for the Southeast Asian Environmental Health Research Workshop, sponsored by US National Institute of Environmental Health Sciences (NIEHS), University of Kebangsaan Malaysia, University of Putra Malaysia, Environmental & Occupational Health Science Institute, NJ, and University of Pittsburgh, PA, 01/01–05/01.

Conference Chair, of the Annual Conference of International Society of Exposure Analysis (ISEA) held in October 17-21, 2004 in Philadelphia, USA. 2002-2004.

Program Co-Chair, International Topical Meeting on Environmental Reliability and Risk Studies, Seoul National University, Seoul, South Korea, Sponsored by US National Science Foundation and co-sponsored by Rutgers University, Seoul National University, and UMDNJ, 02/05.

Member of the New Jersey Clean Air Council, advisory body for the State of New Jersey, 2005-2010.

Member of the International Advisory Committee (IAC) for the 10<sup>th</sup> International Healthy Building Conference in 2012 (HB2012), which is the official conference of the International Society of Indoor Air Quality and Climate (ISIAQ) and will take place in Brisbane, Australia, from 8-12 July 2012. 03/11-07/12.

Member of the Environmental Health Sciences Review Committee of the National Institute of Environmental Health Sciences (NIEHS), which has primary responsibility for reviewing applications for P30 Centers, institutional training grants, career awards, and other specialized program applications, 2011 – 2015.

Member of the Environmental Protection Agency (EPA) Clean Air Scientific Advisory Committee (CASAC) Oxides of Nitrogen (NOx) Primary National Ambient Air Quality Standards (NAAQS) Panel, which will review and provide technical advice and policy assessments for NOx. 2013 – 2017.

Member of the Special Scientific Committee on Unconventional Oil and Gas Development, Health Effects Institute. 2014 – 2015.

## **Teaching Responsibilities**

#### **Courses Taught at Duke University**

- Air Pollution: from Sources to Health Effects (ENVIRON 642), graduate level, spring 2014
- Air Quality I: Sources, Fate and Transport of Pollutants ((ENVIRON 603), spring 2016

- Air Quality: Human Exposure and Health Effects (ENVIRON 604), spring 2016, fall 2016, fall 2017.
- Environmental Exposure Analysis (ENVIRON 780), Graduate level (co-teaching with Heather Stapleton), fall 2014, fall 2015, fall 2017.
- Introduction to Global Health, in Global Health Certificate Program jointly offered by Duke University (DGHI) and Peking University Health Sciences Center, Summer 2013, Summer 2015, Summer 2016
- Research Independent Study (ENVIRON 393-71). Rui Liu (Fall 2014, Spring 2015), William Liakos III (spring 2015, fall 2015), Gopi Neppala (fall 2015, spring 2016, fall 2016), Stella Wang (spring 2017)
- Global Environmental Health Problems: Principles and Case Studies (ENVIRON 581), spring 2017, spring 2018.

## **Guest Lectured at Duke University**

Health Education for 2<sup>nd</sup> Year Medical Students, fall 2013

Environmental Health (ENV537), Graduate/undergraduate, spring 2014, spring 2015, spring 2016, spring 2017 Environmental Toxicology and Chemistry (ENV360), Undergraduate, spring 2014, spring 2015, spring 2016, spring 2017

Global Health Challenges (GH570), graduate, fall 2013, fall 2014, fall 2015, fall 2016 China GATE-Energy and Environment, Executive Training Program, Spring 2014

#### Courses Taught at Rutgers University and University of Medicine and Dentistry of New Jersey

Indoor Air Quality, Graduate level elective, fall 2002, fall 2005, fall 2008

*Introduction to Environmental Health*, Graduate Level Core Course, spring 2002, spring 2003, spring 2005, spring 2007, Fall 2007,

Environmental Exposure Measurement and Assessment, Graduate Level Core Course, Fall 1996, Fall 1998, Fall, Fall 2001, Fall 2003, Fall 2007

Atmospheric Chemistry, graduate level course, spring 1998, spring 2000

Air Pollution, part of Fundamental Concepts of Environmental Sciences (II), Graduate level. Spring 1998, spring 1999

#### Guest Lectured at Rutgers University and University of Southern California

Environmental Risk Assessment, Graduate level, Rutgers/UMDNJ

Principles of Air Pollution, Undergraduate level, Rutgers University

Air Sampling and Analysis, Undergraduate level, Rutgers University

Environmental Fate and Transport, Graduate/undergraduate levels, Rutgers University

Environmental and Occupational Toxicology, Graduate level, Rutgers University

Introduction of Global Public Health, Graduate level, Rutgers University

Case Studies in Global Health, Undergraduate level, 2011, 2012, University of Southern California (USC)

Environmental Health: The Growing Impact of Air Pollution on Health, Undergraduate level Intro to Global Health) 2010, 2011, 2012, and 2013, at USC

The Use of Biomarkers in Exposure Assessment, Graduate level, 2012, USC

Expousre Assessment in Environmental Epidemiology,

Graduate level, 2006-2009, Rutgers/UMDNJ and in 2012, 2013, USC

Exposure Assessment in Environmental Toxicology, Graduate level, 2006-2009, Rutgers/UMDNJ and 2012, 2013, USC

#### III. RESEARCH

#### **Major Areas of Research Interest**

Assessing human exposures to environmental contaminants and resulting health effects; developing and validating biological markers of contaminant exposure; understanding reactions among complex mixtures of air pollutants and health implications; assessing health risks associated with household use of chemicals and combustion devices; analyzing impacts of household combustion sources on health, energy and greenhouse gas contributions; developing methods for the measurement of trace-level toxic chemicals present in air, food, water, and dust

#### **Current Research Grants**

1. Prenatal Tobacco Smoke, Genetic and Epigenetic Changes, and Respiratory Health

1R01ES022216 National Institute of Environmental Health Science (NIEHS)

Role: Co-I Project period: 09/13-08/18 Grant amount: \$2,439,475 (Zhang \$101,000)

Percent effort: 5%

2. Prospective Evaluation of Air Pollution, Cognition and Autism from Birth Onward

1R01ES023780 US National Institute of Environmental Health Science (NIEHS)

Role: Co-I Project period: 07/14-04/18 Grant amount: \$3,000,000 (Zhang \$200, 000)

Percent effort: 5%-10%

Health Assessment and Control Mechanisms for PM<sub>2.5</sub> and Co-pollutants in the Built Environment

51420105010 National Natural Science Foundation of China

Role: Co-PI Project period: 10/14-09/19 Grant amount: \$500,000 (Zhang portion

\$200,000)

Percent effort: 10%

4. Effects of Air Pollution on Cardiopulmonary Disease in Urban and Peri-urban Residents in Beijing (AIRLESS)

8151101080 National Natural Science Foundation of China

Role: subcontract PI Project period: 06/16-05/21 Grant amount: \$833,000 (Zhang portion

\$84,000 at DKU)
Percent effort: 5%

5. The Combined Influence of Outdoor and Indoor Pollutants on Acute Respiratory Response of School Children in China

Underwriters Laboratory (UL)

Role: Co-I Project Period: 07/15-06/18 Grant amount: \$1,177,000 (total)

Percent effort: 10%

6. Environmental Influences on Child Health Outcome Coordination Center

1U2COD023375 NIH

Role: Co-I 09/16-08/23 Grant amount: \$50,000,000

Percent effort: 15%

7. Potential Pathophysiologic Mechanisms Linking Air Pollution Exposure in Pregnant Women to Reduced Birth Weight

1R01ES027495 NIEHS

Role: MPI Project period: 09/17-06/22 Grant amount: \$2,490,000 (Zhang portion

~\$1,670,000) Percent effort: 15%

#### **Completed Research Grants**

1. Investigation of Acid Aerosol Exposures in Metropolitan Settings: EOHSI Component (Microenvironmental Assessment)

CR#822050 Harvard University under EPA Cooperative Agreement Role: Co-PI Project period: 11/95-10/96 Grant amount: \$45,000

Percent effort: 10%

# 2. Reports of Pilot Study Results and Interim Full-scale Study Results Regarding Health Effects of Outdoor and Indoor Air Pollution in Four Chinese Cities

CR#822050 US Environmental Protection Agency

Role: PI Project period: 9/96-12/97 Grant amount: \$33,554

Percent effort: 20%

## 3. NHEXAS - Comprehensive Population Based Study of Human Exposure to Contaminants in Multiple Media

CR#822050 Research Triangle Institute subcontract under EPA Cooperative Agreement

Role: Co-I Project period: 99/93-9/98 Grant amount: \$964,002

Percent effort: 20%

## 4. Greenhouse Gases from Small Scale Combustion Devices in Developing Countries, East-West Center

CR#820243 under EPA Cooperative Agreement

Role: PI Project period: 10/95-5/99 Grant amount: \$141,043

Percent effort: 30%

#### 5. Lead-Based Paint Hazard Control in Priority Housing: New Jersey Assessment of Cleaning Techniques

NJLHR0023-97 US Department of Housing and Urban Development (HUD)
Role: Co-I Project period: 09/97-03/00 Grant amount: \$852,816

Percent effort: 15%

### 6. Exposure Analyses for Toms River, N.J: Current Conditions and Historical Reconstruction

NJLHR0023-97 N.J. Department of Health and Human Services

Role: Co-l Project period: 05/98-04/00 Grant amount: \$453,720

Percent effort: 10%

#### 7. Contributions of Outdoor Sources to Indoor Concentrations and Personal Exposures to Air Toxics,

The Mickey Leland National Urban Air Toxics Research Center

Role: Co-I Project period: 12/97-11/00 Grant amount: \$1,476,260

Percent effort: 15%

#### 8. Development of A Passive Sampler to Measure Exposures to Airborne Carbonyl Compounds,

Health Effects Institute (HEI)

Role: PI Project period: 1/99-11/00 Grant amount: \$58,150

Percent effort: 10%

# 9. Effects of Exposure to Automobile Exhaust on Acrolein and Crotonaldehyde-derived DNA Adducts in Human Lymphocyte DNA

Subcontract from American Health Foundation under Health Effects Institute

Research Agreement #98-2

Role: Co-I Project period: 1/00-6/01 Grant amount: \$46,297

Percent effort: 15%

#### 10. Effect of CRA Loans for Lead Abatement

CDC

Role: Co-I Project period: 9/98-9/01 Grant amount: \$291,933

Percent effort: 20%

#### 11. Southdown Quarry Exposure Study

#SR00-066 NJ Department of Environmental Protection #SR00-066

Role: Co- PI Project period: 9/00-9/01 Grant amount: \$521,981

Percent effort: 20%

## 12. Personal and Microenvironmental Measurements of Human Exposures to Multiple Aldehydes in Three Distinct Urban Areas

Health Effects Institute (HEI).

Role: PI Project period: 6/98-2/02 Grant amount: \$769,190

Percent effort: 30%

## 13. Effects of Exposure to Particulate Matter on Respiratory Health in Four Chinese Cities

**US EPA** 

Role: PI Project period: 8/98-7/02 Grant amount: \$302,787

Percent effort: 30%

#### 14. Health Effects of Exposures to VOCs, Ozone and Stress

NIOSH

Role: Co-I Project period: 10/99-9/02 Grant amount: \$1,311,431

Percent effort: 15%

## 15. Hazardous Air Pollutant Mixtures: Measuring and Modeling Complex Exposure

R82792801 Subcontract from University of Minnesota under EPA Star Grant amount: \$142,

331 Project Period: 1/00-12/02

Role: PI

Percent effort: 15%

## 16. Improvement of the PAKS- DNSH Method for the Collection and Analysis of Acrolein and Other Carbonyls

US Environmental Protection Agency

Role: PI Project period: 09/02-08/03 Grant amount: \$86,979

Percent effort: 20%

# 17. Preparation for Follow-up Study of Changes in Respiratory Health, in Relation to Changes in Outdoor Air Pollution Concentrations and Indoor Air Pollution Sources, in Four Chinese Cities

US Environmental Protection Agency.

Role: PI Project period: 5/02-9/03 Grant amount: \$63,500

Percent effort: 15%

## 18. Support for Carbonyls Analysis of the EPA Tampa Asthmatic Children Study, Research Triangle Institute.

**US Environmental Protection Agency** 

Role: PI Project period: 8/02-6/04 Grant amount: \$49,000

Percent effort: 10%

#### 19. Urban Hot Spot Mobile Source Exposure and Chemical Characterization.

Subcontract from Johns Hopkins University via US EPA

Role: PI Project period: 8/02-7/04 Grant amount: \$16,080

Percent effort: 5%

## 20. Comparison of Continuous Ambient PM monitors. State of New Jersey Department of Environmental Protection.

State of New Jersey Department of Environmental Protection.

Role: Co-I Project period: 6/03 –12/04 Grant amount: \$54,460

Percent effort: 5%

## 21. Supporting the 2004 Annual Conference of International Society of Exposure Analysis.

**US Environmental Protection Agency** 

Role: PI Project period: 9/04-12/04 Grant amount: \$59, 400

Percent effort: 5%

#### 22. Conference - International Society of Exposure Analysis.

National Institute of Health (NIEHS and NCI)

Role: PI Project period: 7/04-6/05 Grant amount: \$12,500

Percent effort: 2%

# 23. Effect of Point Source Emissions on School Absenteeism in Three Communities in Warren County, NJ, with High Pediatric Asthma Rates

**ATSDR** 

Role: Co-Investigator Project period: 9/02-8/05 Grant amount: \$367,154

Percent effort: 5%

## 24. Validation of PAH Biomarkers for Quantifying Cancer Risk.

National Cancer Institute (NIH-NCI)

Role: Co-l Project period: 10/01-8/05 Grant amount: \$639,982

Percent effort: 30%

## 25. Health Effects of Diesel Exhaust in Asthmatics: A Real-World Study in a London Street.

**Health Effects Institute** 

Percent effort: 25% Project period: 10/02-06/06 Grant amount: \$745,383

# 26. Field Validation of Modified PAKS-DNSH Method for the Collection and Analysis of Acrolein and Other Carbonyls

**US Environmental Protection Agency** 

Role: PI Project period: 05/05-04/09 Grant amount: \$94,721

Percent effort: 20%

#### 27. Personal and Ambient Exposures to Air Toxics in Camden

Health Effects Institute (HEI)

Role: Co-I Project Period: 12/03 – 11/06 Grant amount: \$864,437

Percent effort: 10%

# 28. The effects of Diesel Exhaust and Stress on the Acute Phase Response and Symptoms in the Chemically Intolerant

US Department of Defense

Role: Co-l Project period: 8/03 – 12/06 Grant amount: \$1,523,062

#### 29. Controlled Human Exposure-Response Study to Environmental Levels of Hydrogen Sulfide.

American Petroleum Institute and other Partners

Role: Co-I Project period: 1/01-3/07 Grant amount: \$980,000

Percent effort: 15%

### 30. Support for Carbonyls Analysis of the EPA's Detroit Exposure and Aerosol Research Study (DEARS)

Subcontract from Research Triangle Institute

Role: PI Project period: 5/04-6/07 Grant amount: ~ \$476,000

Percent effort: 10%

## 31. Diabetic Susceptibility to the Procoagulant Effects of Air Pollution

Environmental and Occupational Health Sciences Institute (through a pilot

project of NIEHS Center grant to the institute).

Role: Co-l Project period: 4/06-12/07 Grant amount: \$20,000

Percent effort: 5%

32. Relation between Airborne Pollen Concentrations and Daily Cardiovascular Hospital Admissions

Role: Co-I Project period: 07/07 -06/08 Grant amount: \$20,000

Percent effort: 5%

33. Cardiovascular Effects of Fresh Particles in Genetically Susceptible Subjects

**US Environmental Protection Agency** 

Role: Co-I Project period: 10/04 –09/08 Grant amount: \$1,521,398

Percent effort: 15%

34. Assessment of Health Risk Associated with Synthetic Turf

Gifts from private donors via the Foundation of UMDNJ.

Role: PI Project period: 02/08/12/08 Grant amount: \$12,000

Percent effort: 5%

35. Validation of Diesel Exhaust Biomarkers. US Environmental Protection Agency

R832097 US EPA STAR grant

Role: PI Project period: 05/05-04/09 Grant amount: \$572,497

Percent effort: 25%

36. Triggering of Myocardial Infarction by Ambient Fine Particles and Fine Particulate Components

R832097 American Heart Association

Role: PI Project period: 07/07 -06/10 Grant amount: \$195,000

Percent effort: 5%

37. Molecular and Physiological Responses to Drastic Changes in PM Concentration and Composition

4760-RFPA05-3/07-3/07-2 Health Effects Institute

Role: PI Project period: 07/07-12/10 Grant amount: \$610,670

Percent effort: 20%

38. Diesel Exhaust Particle Effects on Human Immunity to Mycobacterium tuberculosis

1R21ES016928 NIEHS - NIH

Role: Co-Investigator Project period: 9/08 - 8/11 Grant amount: \$429,000

Percent effort: 5%

39. Response to Drastic Changes in Air Pollution: Reversibility and Susceptibility

5R01ES015864 National Institute of Environmental Health Sciences

Role: PI Project period: 1/08- 11/12 Grant amount: \$1,178,867

Percent effort: 15%

40. Thai Fogarty ITREOH Center

1D43TW007849 National Institutes of Health-Fogarty International Center/ NIEHS/ CDC

Role: Co-PI Project period: 05/07-12/12 Grant amount: \$706,250

Percent effort: 5%

41. Impact of Air Pollution Reductions during the Beijing Olympics on Pre-term Birth Rates and Birth Weight

1R01ES019165-01 National Institute of Environmental Health Sciences (NIEHS)-NIH Role: Co-I Project period: 08/10-03/14 Grant amount: \$1,019,988

Percent effort: 12.5%

#### 42. Biological Response to Air Quality Change in Beijing Pre-, Mid- and Post-Olympics

1R01ES018846-01A1 National Institute of Environmental Health Sciences (NIEHS)-NIH Role: Co-I Project period: 12/10-12/13 Grant amount: ~\$491,323

Percent effort: 10%

## 43. Training Grant in Genomics Analysis and Interpretation

2 T32 GM 67546-0 National Institute of Environmental Health Sciences (NIEHS)-NIH

Role: Co-I Project period: 07/12-06/17 Grant amount: \$222,674

Percent effort: 5% (In-Kind)

#### 44. Environmental and Respiratory Health Across the Lifespan in Mongolia

1D43TW 00988-01A1 National Institute of Environmental Health Sciences (NIEHS) and Fogarty

International Center-NIH

Role: Co-I Project period: 07/12-06/17 Grant amount: \$1,250,000

(Left project in 2013)

Percent effort: 5% (In-Kind)

# 45. Ambient Exposures to Diesel Traffic Particles and Exacerbation of Cardiovascular and Chronic Pulmonary Obstructive Disease: Mechanistic Explanations for Epidemiological Observations

**British Heart Association** 

Role: Co-I Project period: 05/12-4/14 Grant amount: ~1,200,000

Percent effort: 5% (in-kind)

#### 46. Risk Assessment for Manufactured Nanoparticles Used in Consumer Products (RAMNUC)

RD83469301 US Environmental Protection Agency and UK National Environmental Research

Council

Role: PI Project period: 07/10-06/15 Grant amount: \$4,000,000

Percent effort: 20%

#### 47. Respiratory Effects of Silver and Carbon Nanoparticles (RESAC)

U19ES007048-05 National Institute of Environmental Health Science (NIEHS)
Role: PI, PD Project period: 09/10-08/15 Grant amount: \$5,000,000

Percent effort: 20%

## 48. Use of Exhaled Breaths Condensates to Assess Human Exposures and Response to Air Pollution

5P30ES007048-16 National Institute of Environmental Health Science (NIEHS)
Role: Co-I Project period: 04/11-03/16 Grant amount: \$8,900,765

Percent effort: 5% (In-Kind)

#### 8. Air Pollution Particle Effects on Human Antimycobacterial Immunity

R01ES0203821 US National Institute of Environmental Health Science (NIEHS)
Role: Co-l Project period: 07/11-09/16 Grant amount: \$3,558,069

Percent effort: 15%

#### IV. <u>Invited Guest Lectures and Keynote Speeches</u>

November 3, 2017, presented at Duke International Development Center for a Guangdong Academy of Sciences delegation. "Health Impacts of Nanomaterials"

October 31, 2017, presented at College of Environmental Sciences and Engineering, Peking University, Beijing. "Purifying Indoor Air for Better Health in Chinese Cities: Does it Work?"

- September 28, 2017, presented at Qingpu Environmental Monitoring Station. "Why and How to control Ozone Pollution?"
- September 18, 2017, presented at Duke International Development Center for a Chinese Academy of Sciences delegation. "The Intersection of Health and the Environment: The Strategic Role of Innovation"
- July 21, 2017, presented at Zhoushan Hospital, Zhejiang Province, China. "Air Pollution and Lung Cancer: How Much Do We Know?"
- July 13, 2017, presented at Zhengzhou University, Henan Province, China. "Ozone Pollution and Control Challenges"
- May 4, 2017, presented at Current Approaches to exposure Assessment in Environmental Health Sciences Symposium, University of Rochester. "Biomarkers of Source-specific Air Pollution Exposure"
- March 3, 2017, presented at Department of preventive Medicine, University of Southern California. "Reducing indoor Concentrations of Respirable Particles: Will the Body Respond?"
- January 12-15, 2017, presented and attended Symposium on Health and the Environment in Emerging Markets, Green Templeton College, University of Oxford, UK.
- November 9, 2016, presented a key note at the International Symposium on Regional Ozone Pollution Control, Nanjing, China. "Cardiovascular Effects of Ground-level Ozone: Evidence from Epidemiologic Studies".
- October 25, 2016, presented at Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina- Chapel Hill. "Cardiovascular Effects of Ground-level Ozone: Linking Epidemiologic Findings and Biological Mechanisms".
- September 14, 2016, presented at the Chinese Academy of Sciences Delegation (25 member) visit to Duke University, Durham, NS. "Environmental Health Sciences in the Post-genomic Era: Ready for Breakthrough?"
- September 4, 2016, presented at the European Respiratory Society 2016 International Congress, London, UK. "Respiratory Effects of diesel Exhaust Particles: Real-life Exposure Studies and moderating Effects of Nanoceria Fuel Additives"
- August 16, 2016, presented at the Ministry of Environmental Protection, Beijing, China. "Exposure science: Current State of Science and New Opportunities"
- August 15, 2016, presented at Environmental Protection Bureau and Environmental Protection Research Institute of Rizhao City, Shandong Province, "What China can Learn from Air Pollution History?"
- May 17-18, 2016, presented and attended the Indo-US Workshop on Combating Air Pollution in North India, New Delhi, India. The program is sponsored by the US Department of State via US Embassy in India. Title of presentation: "Urban Air Pollution in China: What Can Be Done to Reduce the Health Impact?"
- March 1, 2016, presented at the Duke Pulmonary Research Conference, tittle of presentation: "Air Pollution, the Lung, and the Body: Finding Connections using Real-World Exposures".
- December 10, 2015, presented at Nanoscience Initiative final meeting in London on behalf of the RAMNUC Center, tittle of presentation: "A Nano-Ceria Fuel Additive: Impact on Emissions and Toxicity of Diesel Exhaust Particles".
- December 3, 2015, presented at University of Rochester Center for Energy & Environment, Jesse L. Rosenberger Seminar Series, tittle of presentation: Air pollution in China: What can be done to reduce the health impacts?"
- November 12, 2015, presented a guest lecture at Dr. Paul Lioy Symposium, Rutgers University, tittle of Presentation: "The King and I: Exposure Science without Borders".

- November 6, 2015, presented at Asia Pacific Regional IMFAR: Shanghai 2015, tittle of presentation: "Air Pollution and Autism, is there a causal link?"
- July 7, 2015, Presented at the Quantifying Exposure to Engineered Nanomaterials (QEEN) from Manufactured Products workshop, tittle of presentation: "Health Risk Driven Exposure Assessment for Consumers During the Life Cycle of Nanomaterial-Containing Products".
- May 19, 2015, presented at Johns Hopkins University School of Public Health, Environmental Health Seminar Series tittle of presentation "Health Effects of Air Pollution: what Natural Experiments Can Tell Us"
- February 12, 2015, presented at University of Colorado School of Public Health, Denver, CO. Title of presentation: "Using natural Experiments to Study Health Effects of Air Pollution: from London to Beijing".
- February 5, 2015, presented at NIEHS Inflammation Faculty Webcast on Emerging Biomarkers of Inflammation, Durham, NC. Tittle of presentation: "The Utility of Inflammation Biomarkers in Studies of Air Pollution Health Effects".
- December 16, 2014, presented at Noncommunicable Diseases and Cookstoves Workshop, Washington DC. Title of presentation: "Indicators and Biomarkers of Cardiorespiratory Risk Factors in Relation to Air Quality Improvement During the Beijing Olympics".
- December 8-10, 2014, presented at the expert workshop on Health and Wellbeing in the Changing Urban Environment: A Systems Analysis Approach, Xiamen, China. Title of presentation: "Acute Health Effects of Urban Traffic: Observations from London and Beijing".
- November 20, 2014, presented at the panel discussion at the United Nations Cookstove Future Summit, New York City. Title of panel discussion: "Clean Cooking: The Burden, the Imperative, and the Progress".
- November 8, 2014, presented at Environment and Respiratory Disease Forum, Guangzhou, China. Title of presentation: "Biomarkers of Air Pollution Exposure and Health Effects".
- November 1-2, 2014, presented at the 4<sup>th</sup> International Autism Forum, Fudan University, Shanghai, China. Title of presentation: "Biomarkers of Air Pollution Exposure and Pathophysiologic Pathways".
- October 11, 2014, presented at Dean's Seminars on Urbanization, Trinity College of Art and Sciences, Duke University, Durham, NC. Title of presentation: "Global Health Impact of Urban Air Pollution".
- July 14, 2014, presented at Qingpu District Environmental Protection Bureau, Shanghai, China. Title of presentation: "Air Pollution and Health: Historical and Current Perspectives".
- May 12, 2014, presented at College of Environmental Sciences and Engineering, Peking University, Beijing, China. Title of presentation: "Health Effects of Atmospheric Ultrafine Particles and Engineered Nanoparticles".
- April 1, 2014, presented at Workshop on Health Effects of Fine Particles from Vehicle Emissions, Washington DC. Title of presentation: "Ultrafine Particles and PM2.5 in Relation to Cardiorespiratory Effects and Pathophysiologic Pathways".
- January 7, 2014, presented at North Carolina State University, Raleigh, NC. Title of presentation: "Exploring How Respirable Particles Affect Health: From Real-World Observations to Laboratory Experiments".
- November 20, 2013, presented at Chinese Research Academy of Environmental Sciences, Beijing, China. Title of presentation: "Air Quality Improvements During the Beijing Olympics: What Can We Learn?".
- November 6, 2013, presented at Environmental Toxicology Program, University of California at Riverside.

  Title of presentation: "Analytical Chemistry Based Bio-Monitoring in Studies of Air Pollution Exposure and Health Effects".

- October 31, 2013, presented at the global health workshop of the Association of Pacific Rim Universities (APRU), Zhejiang University, Hongzhou, China. Title of presentation: "Air Quality Improvements during the Beijing Olympics: What Can We Learn?"
- September 16, 2013, presented at National Environmental Health Sciences Institute, Research Triangle Park, NC. Title of presentation: "Exploring Air Pollution Health Effects and Mechanisms Using Quasi-Experimental Approaches".
- April 15, 2013, presented at Health Effects Institute 2013 Annual Conference, San Francisco, CA. Title of presentation: "Improving Air Quality and Health: A Legacy of the Beijing Olympics?".
- March 19, 2013, presented at MRC-HPA Centre for Environment and Health, Imperial College London and King's College London, UK. "How Does Air Pollution Affect Health? Finding Answers from London to Beijing and Beyond"

#### **Professional Society Memberships**

International Society for Environmental Epidemiology International Society of Exposure Science American Association for the Advancement of Science International Society of Indoor Air Quality and Climate American Chemical Society (past)
Air and Waste Management Association (past)
American Public Health Association (past)
American Industrial Hygiene Association (past)

#### V. SERVICE

#### **Duke University Committees (2013-)**

Member of Faculty Search Committee, Department of Civil and Environmental Engineering, Duke University, 2013.

Member of the Search Committee for Faculty Hire in the area of environmental science and policy, Duke Kunshan University, 2013.

Chair of the Review Committee for William Pan's reappointment evaluation, Nicholas School of the Environment, Duke University, 2013.

Member of the Duke University Global Priorities Committee (GPC), the Committee is an advisory body to the Vice President and Vice Provost for Global Strategy and Programs and the Provost. It is charged with reviewing and refining Duke's global strategy and assessing university and academic programs and activities operating globally, both when they are being created and in monitoring ongoing performance, 2015-2018.

Member (2015-2016) and Chair (2016-2018) of the China Faculty Council, appointed by Duke Provost. The Council is charged to advise the Provost and the Associate Vice Provost and Director of the Duke Kunshan University Program Office on program development opportunities in China, including for Duke Kunshan University (DKU), 2015-present.

Member of Duke Kunshan Hiring Central Committee, this committee vets for quality and /or any other issues arising from the main search committees in departments at Duke Kunshan University, 10/2015-presnt.

Chair of the Review Committee for William Pan's Tenure Promotion evaluation, Nicholas School of the Environment, Duke University, 2016.

## **Duke Kunshan University Leadership and Service**

Chair of the Duke Kunshan Faculty Council, 2015-present.

Lead of Environmental Health Program of the Global Health Research Center, Duke Kunshan University.

Director of Regional Ozone Sino-US Collaborative Center (ROSUC), Duke Kunshan University.

Committee Member for faculty cluster hire for the Environment Program at Duke Kunshan University, 2016-2017.

Co-Chair for faculty cluster hire for the Global Health Program at DKU, 2016-2017.

## **Professional Organizations and Governmental Agencies**

Member of Planning Committee and Workshop Coordinator for the Southeast Asian Environmental Health.

Research Workshop, sponsored by US National Institute of Environmental Health Sciences (NIEHS), University of Kebangsaan Malaysia, University of Putra Malaysia, Environmental & Occupational Health Science Institute, NJ, and University of Pittsburgh, PA, 01/01–05/01

Program Co-Chair, International Topical Meeting on Environmental Reliability and Risk Studies, Seoul National University, Seoul, South Korea, Sponsored by US National Science Foundation and co-sponsored by Rutgers University, Seoul National University, and UMDNJ, 02/05-02/05

Conference Chair, of the Annual Conference of International Society of Exposure Analysis (ISEA) held in October 17-21, 2004 in Philadelphia, USA. 2002-2004

Councilor (Academic), International Society of Exposure Analysis, 2004 -2007

Member of the International Advisory Committee (IAC) for the 10<sup>th</sup> International Healthy Building Conference in 2012 (HB2012), which is the official conference of the International Society of Indoor Air Quality and Climate (ISIAQ) and will take place in Brisbane, Australia, from 8-12 July 2012. 03/11-07/12

Member of the Review Panel (Search Committee) for Title-42, Director of Human Exposure and Atmospheric Sciences Division, National Exposure Research Laboratory, U.S. Environmental Protection Agency. 2011.

Member of the World Health Organization (WHO) Working Group charged to Develop Indoor Air Quality

Guidelines – Household Fuel Combustion. 2011-2012 (meeting held in New Delhi, India 04/24/12-04/26/12).

Member of 13<sup>th</sup> International Conference on Indoor Air Quality and Climate (Held in Hong Kong, July 7-12<sup>th</sup>, China)

Center for Environmental NanoScience Risk EPA Grantees Meeting (Held in Columbia, SC September 9-10<sup>th</sup>) Member of Special Scientific Committee Meeting on Unconventional Oil and Gas Development (held in Pittsburgh, PA September 8-9<sup>th</sup>, 2014).

Member of the 4<sup>th</sup> International Autism Research Diagnosis & Development Shanghai (held in Fudan University October 1-2<sup>nd</sup>, 2014, China)

Member of Environment and Respiratory Diseases Forum (held in Guangzhou November 7-8<sup>th</sup>, 2014, China).

## **Rutgers and USC Committees**

Member of the School-wide Curriculum Committee, UMDNJ-School of Public Health, 2009 – 2010.

Member of the Appointment and Promotions Committee, UMDNJ-School of Public Health, 2009 – 2010.

Chair, the Piscataway/New Brunswick Campus Executive Committee, UMDNJ-School of Public Health, 2008-2010.

Member of the Dean's Council, UMDNJ-School of Public Health, 2008- present.

Member of the Faculty Search Committee for Department of Environmental Sciences, School of Environmental and Biological Sciences, Rutgers University, 2008 – 2009.

Member of Dean's Council, UMDNJ-School of Public Health, 2008 – 2010.

Member of the Executive Council, UMDNJ-School of Public Health, 2008 – 2010.

Chair, Executive Committee for the Piscataway/New Brunswick Campus, UMDNJ-School of Public Health, 2008 – 2010.

Member of the ad hoc Search Committee for Dean, Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, 2007- 2008.

Member and Discipline Coordinator, Doctoral Committee, School of Public Health, University of Medicine and Dentistry of New Jersey, 2001 – present.

Member, Graduate Admissions Committee, Department of Environmental Sciences, Rutgers University 1997 – 2005.

Member, Seminar Committee, Environmental and Occupational Health Sciences Institute (EOHSI) and National Institute of Environmental Health Sciences Center of Excellence at EOHSI, 1997 – 2004.

Member of the Executive Committee, Southern California Environmental Health Sciences Center, University of Southern California, 2011-2013.

#### **Editorial Activities**

Associate Editor (Editorial Board Member), Journal of Exposure Science and Environmental Epidemiology, 2007 – present.

Associate Editor, Air Quality, Atmosphere & Health, 2010 – present.

Associate Editor, Indoor Air, Journal of Indoor Environment and Health, 2012 – present.

Guest Editor, Journal of Thoracic Disease, 2014-2015.

Distinguished Editorial Board Member, Journal of Thoracic Diseases February 9, 2015-February 9, 2017

#### **Journal Reviews**

**Analytical Chemistry** 

American Industrial Hygienist Association Journal American Journal of Respiratory and Critical Care Medicine

Atmospheric Environment Chemosphere Energy for Sustainable Development

Environmental Health Perspectives Environmental Science & Technology

Epidemiology Indoor Air (International Journal of Indoor Air Quality and Climate) International Journal of

Environmental Analytical Chemistry Journal of Air & Waste Management Association

Journal of Exposure Analysis and Environmental Epidemiology Journal of Hazardous Materials

Occupational and Environmental Medicine International Journal of COPD

The Science of Total Environment the Shell Foundation (reports)

The Health Effects Institute (reports) Thorax

#### **Grant Reviews**

Ad Hoc Member of NIH NAME study section, meeting October 6-7, 2016, Washington, DC

Ad Hoc Member of NIH IRAP study section, meeting February 11-12, 2016, Washington, DC.

Member of the Environmental Protection Agency Peer Review Committee for Air Pollution Monitoring for Communities –K1 (panel 2). Washington, DC January 8-9, 2015.

Member of the Environmental Health Sciences Review Committee and Special Reviewers. Research Triangle Park, August 14-15, 2014

Member of the National Institute of Environmental Health Science Review Committee for the Review of NIEHS P30 Center Grant Applications. Research Triangle Park, NC, 07/24-26, 2013.

Member of the National Institute of Environmental Health Science Review Committee for the Review of T32 Training Grants and R25 Grant Applications. Research Triangle Park, NC, 9/15, 2012.

Member of the National Institute of Environmental Health Sciences Review Committee for the Review of NIEHS P30 Center Grant Applications, EHS (P3). Research Triangle Park, NC, 08/22-23, 2012.

Member of the National Institute of Health Sciences Review Panel for Infectious Disease, Reproductive Health, and Asthma/Pulmonary Conditions (IRAP) study section. San Francisco, CA, 02/16-17, 2012.

Member of the AAAS Research Competitiveness Program in the review of proposals submitted for funding through the King Abdulaziz City for Science and Technology (KACST). 2012.

External Reviewer for the Natural Sciences and Engineering Research Council (NSERC) and the Canadian Institutes of Health Research (CIHR). 2011.

Member of the National Institute of Environmental Health Sciences Special Emphasis Panel (ZES1 LKB-D D ). Development to Independence Review Meeting. Research Triangle Park, NC, 11/10, 2011.

Member of the National Institute of Environmental Health Sciences Special Emphasis Panel (RFA-ES-11-006). Deepwater Horizon Disaster Consortia: Health Impacts and Community Resiliency (U19). Research Triangle Park, NC, 4/6-8, 2011.

External Reviewer for Health Effects Institute, 2000-present.

External Reviewer for Thrasher Research Fund, 2007.

External Reviewer for the Research Council of Norway, 2007.

Member of the Environmental Exposures Working Group for the PhenX project – under the NIH Gene-Environment Interaction Initiative, 12/2008 – 5/2009.

Member of the US Environmental Protection Agency's Peer Review Panel for Graduate Fellowships: Public Health Sciences and Human Health Risk Assessment, Washington DC, 3/6-3/7, 2008.

Member of the US Environmental Protection Agency's Peer Review Panel for Fellowship: Environmental Decision Making Research, Washington DC, 1/29-2/1, 2008.

Member of the "CDC Grants for Public Health Research Dissertation" Special Emphasis Panel, Atlanta, Georgia, 7/25-26, 2007.

Member of Review Panel, Fellowship – Toxicology, STAR grants, US Environmental Protection Agency. Washington DC, 2/15-16, 2007.

Member of the Scientific Review Committee, P01 Application on Genetic Role in Health Effects of Air Pollution, National Institute of Environmental Health Sciences – NIH. Durum, North Carolina, 12/15, 2006.

Member of the expert panel drafting IARC Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 95: Indoor air pollution from heating and cooking: coal, biomass, cooking oils and fumes. Lyon, France. (IARC: International Agency for Research on Cancer, Would Health Organization), 10/10-17, 2006.

Member, National Institute of Environmental Health Sciences Special Emphasis Panel (ZES1 TN-E(FG)), Genetics, Air Pollution, and Respiratory Effects. Durham, North Carolina, 12/15, 2006.

Ad Hoc Member, the Center for Scientific Review Special Emphasis Panel, National Cancer Institute (NCI-NIH), Epidemiology of Cancer (EPIC) Study Section, Bethesda, Maryland, 03/02-03, 2006.

Ad Hoc Member, the Center for Scientific Review Special Emphasis Panel, National Cancer Institute (NCI-NIH), EPIC Study Section, Washington, DC, 06/23-24, 2005.

Ad Hoc Member, the NIEHS P30 Center Site Visit to the University of Southern California (NIEHS- National Institute of Environmental Health Sciences-NIH), 04/27-29, 2005.

Ad Hoc Member, the Center for Scientific Review Special Emphasis Panel, National Cancer Institute (NCI-NIH), EPIC Study Section, Washington, DC, 04/03/3-4, 2005.

Member, the Grant Review Panel for Particulate Matter Research Centers of US Environmental Protection Agency, Washington, DC, 01/25-27, 2005.

Peer reviewer of the STAR Research Grants for National Center for Environmental Research and Quality Assurance, US Environmental Protection Agency. EPA Category and Sorting Code: Airborne Particulate Matter Health Effects: Cardiovascular mechanisms 2002-STAR-G1, 06/02 – 07/02.

Reviewer of IPCC Draft Document "Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories". (IPCC: Intergovernmental Panel on Climate Change), 12/99–2/00.

Peer reviewer of the STAR Research Grants for National Center for Environmental Research and Quality Assurance, US Environmental Protection Agency. EPA Category and Sorting Code: Airborne Particulate Matter Health Effects, 8/99-9/99.

Site-visit team member for Engineering Research Center (ERC), National Science Foundation (NSF), participated in the site review of a proposed ERC for *Atmospheric Monitoring and Sensor Engineering* at the University of Illinois at Urbana-Champaign, 2/26-27, 1998.

#### **Community Service**

Member of the Steering Committee of the New Jersey Comparative Risk Project, New Jersey Department of Environmental Protection, Trenton, New Jersey, 01/00-08/02.

Mentor of American Chemical Society's Seed Program to sponsor summer research for high school students, 2002.

Guest speaker to the Science and Math Awareness Program, Piscataway High School, 1998-2003.

Mentor for Liberty Science Center Partnership Summer Research Program for high school students, 1997-2010. Member of New Jersey Clean Air Council, appointed by the Governor of New Jersey, 2005-2010.

#### VI. Mentoring

## Sponsorship of Candidates for Postgraduate Degree at Duke University

## **Postdoctoral Fellow Mentor**

Jicheng Gong: 2013 –present Jake Chung: 2015-Present Minquan Li: 2015-Present

#### **Chair of Doctoral Dissertation Committee at Duke University for**

Drew Day: PhD in Environmental Science, Integrated Toxicology and Environmental Health Program, 2013-present

Xiaoxing Cui: PhD in Environmental Science, Integrated Toxicology and Environmental Health Program, 2013-present

Linchen He: PhD in Environment, 2016-present

## Mentoring of Undergraduate Independent Study and Senior Thesis at Duke University

Rui Wang, 2014 fall and 2015 spring (independent study)

William Liakos III, 2014 fall and 2015 (independent study)

Gopi Neppala, 2015 fall, 2016 spring, 2016 fall (independent study)

Gopi Neppala, 2017 spring (senior thesis)

Stella Wang, 2017 spring (independent study)

#### Mentoring of Masters Theses or Projects at Duke University

Chen Liu (MS in Global Health), 2013 - 2015

Bolun Li (MScGH), 2016

Pejia Yan (MEM), 2016-2018

Gina Daniel (MEM), 2016-2018

Qianyi Xia (MEM), 2017-2019

## Sponsorship of Candidates for Postgraduate Degree at Rutgers University and University of Southern California

#### **Director of Dissertation/Thesis Committee**

M.S. Degrees Awarded (as Academic Advisor)

Tara Proetta Rutgers University, MS in Environmental Sciences 1998-2000.

#### **Mentoring of Visiting Scholars at Duke University**

Yalin Chen, Rizhao City Environmental Sciences Research Institute, China, 2013-2014

Huijuan Li, PhD, Xuzhou Institute of Technology, China, 2014-2015

Nan Zhang, Tsinghua University, 2014-2015

Xiaoli Duan, PhD, Chinese Research Academy of Environmental Sciences, Beijing, 2014-2015

Yongjie Wei, PhD, Chinese Research Academy of Environmental Sciences, Beijing, 2014-2015

Shunyan Shan, PhD, Nankai University, 2015-2016

Zongshuang Wang, PhD, Environmental Standards Institute, Beijing, 2016-2017

Hui Wu, PhD, China Medical University, Shenyang, China, 2016-2017

Jianbang Xiang, Tsinghua University, 2016-2017.

#### M.P.H. Degrees Awarded at UMDNJ-School of Public Health (as Academic Advisor)

Glenn Pulliam	2008
Mary Pauline De La Cruz	2009
Michael Carr	2010
lan Pracher	2010
Jessica Small	2010

#### Adviser/superviser of M.P.H. Student practicum or M.S. student thesis at University of Southern California

Lily Fu 2010 - 2011 Athena Foong 2011 - 2013

#### Ph.D. or DrPH Degrees Awarded (as Chair or co-Chair of dissertation research committee)

Thomas Wainman, 1999 Rutgers University, Ph.D. in Environmental Sciences 1995-1999. (Co-Chair with Paul Lioy, Ph.D.)

Dissertation title: "Use of a two tiered dynamic chamber to investigate indoor air chemistry."

Zhengmin Qian, 2002 Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. Program in Exposure Assessment 1997-2002.

Dissertation title: "Assessing air pollution exposure and health effects on children's respiratory health in four Chinese cities."

Daniel Reyner, 2004 UMDNJ- School of Public Health, DrPH in Public Health, 1999–2004.

Dissertation title: "Effects of exposure to paternal environmental tobacco smoke, respiratory disease requiring hospitalization, and breast feeding during infancy on lung functioning".

Wei Hu, 2005, University of Science and Technology of Beijing, Beijing, China, Ph.D. in Environmental Sciences and Engineering, 2001 – 2005 (Co-chair with Professor Fusheng Wei)

Xiaoli Duan, 2005, University of Science and Technology of Beijing, Beijing, China, Ph.D. in Environmental Sciences and Engineering, 2001 – 2005 (Co-chair with Professor Fusheng Wei)

Weili Liu, 2006, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. Program in Exposure Assessment, 2000 –2006.

Dissertation title: "Characteristics of indoor, outdoor, and personal exposure to carbonyl compounds".

Kunning Zhu, 2006, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. in Program in Exposure Assessment (Co-chair of thesis committee with Paul J. Lioy).

Dissertation title: "Evaluation and comparison of continuous PM2.5 monitors in measurements of ambient aerosol, fresh diesel exhaust aerosol, and fresh secondary organic aerosol".

Stella Tsai, 2007, UMDNJ- School of Public Health, Ph.D. in Public Health. Dissertation title: "Outdoor aeroallergens, air pollutants, and daily asthma hospitalization in two urban areas of New Jersey".

Jason Harrington, 2007, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint PhD in Program in Exposure Assessment.

Dissertation title: "Development and evaluation of airborne carbonyl measurement methods".

In-Kyu (Paul) Han, 2008, UMDNJ-School of Public Health, Ph.D. in Public Health. Dissertation Title: "Urinary 1-Hydroxypyrene in Nonsmokers: A Biomarker for Coke Smoke Exposure and General Urban PAH Exposure"

Tenya Steele, UMDNJ-School of Public Health, Ph.D. in Public Health, 2005-2008 (dropped out).

Alyaa Farouk Abdel Fattah Ibrahim, 2010, Faculty of Nursing, Alexandria University, Egypt, degree of Doctor of Community health Nursing.

Dissertation title: "the relation between indoor air pollution and child health in Abis rural area in Alexandria". (Served as co-Advisor and hosted Alyaa as visiting student scholar at UMDNJ from 2008 to 2010)

Chizoba Nwankwo, 2010, UMDNJ-School of Public Health, Ph.D. in Public Health. Dissertation title: "Sex differences in response to acute diesel exhaust exposure."

Jicheng Gong, 2011, UMDNJ-Robert Wood Johnson Medical School and Rutgers University, Joint Ph.D. in Program in Exposure Assessment,

Dissertation title: "Development and application of exhaled breath biomarkers for studying health effects of air pollution."

Brent Altemos, 2014, Rutgers University School of Public Health, PhD in Public Health, Dissertation title: "Air Pollution Source Apportionment Before, During, and After the 2008 Beijing Olympics and Association of Sources to Aldehydes and Biomarkers of Blood Coagulation, Pulmonary and Systemic Inflammation, and Oxidative Stress in Healthy Young Adults".

Victor DeCandia UMDNJ-School of Public Health, PhD in Public Health, 2007 – 2010 (In 2010 assigned to a different advisor, no follow up).

Nancy Lashway UMDNJ-School of Public Health, PhD in Public Health, 2007 – 2010 (In 2010 assigned a different advisor, no follow up).

#### **Member of Dissertation Research Committee**

Linda Bonanno, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. Program in Exposure Assessment, 1996-2000.

Sheng-Wei Wang, Rutgers University, Ph.D. in Environmental Sciences, 1997-1998.

Pei-Yu Tsai, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. Program in Exposure Assessment, 1998-2000.

Nares Chuersuwan, Rutgers University, Ph.D. in Environmental Sciences, 1998-2001.

Ho-Jin Lim, Rutgers University, Ph.D. in Environmental Sciences, 1999-2001.

Qingyu Meng, Rutgers University, Ph.D. in Environmental Sciences, 2002-2004.

Paromita Hore, UMDNJ-School of Public Health, Ph.D. in Public Health, 2000-2004.

Served as external thesis evaluator for) Jouni Jurvelin, MSc, University of Kuopio and KTL-National Public Health Institute, Kuopio, Finland, 2003-2003.

Jaymin Kawn, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. Program in Exposure Assessment, 2002-2005.

Gary Garetano, UMDNJ-School of Public Health, Ph.D. in Public Health, 2003-2005.

Chang Ho Yu, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. Program in Exposure Assessment, 2003-2005.

Diann Blanset, UMDNJ-School of Public Health, Ph.D. in Public Health, 2004-2006. Steven Spayd, Ph.D. Program at UMDNJ- School of Public Health, 2004-2009.

Margaret Lumia, Ph.D. Program at UMDNJ- School of Public Health, 2005- 2007.

Maria Trabaris, PhD, Rutgers University and UMDNJ-Robert Wood Johnson Medical School, Joint Ph.D. Program in Exposure Science, 2004-2008.

Marija Borjan, PhD Program at UMDNJ-School of Public Health, 2006-2009.

Susan Huyck, DrPH Program at UMDNJ-School of Public Health, 2007-2010.

Danielle Botelho, PhD in Toxicology, Rutgers University, 2015.

#### Sponsorship/Mentor of Post-Doctoral Fellows

Zhipeng Bai, Ph.D., 1997-2000. Rutgers University and UMDNJ Lin Zhang, Ph.D., 1998-2001. Rutgers University and UMDNJ In-Kyu Han, Ph.D., 2008-2008. Rutgers University and UMDNJ Ananya Roy, Sc.D., 2009-2011. Rutgers University and UMDNJ Jicheng Gong, PhD., 2012-2013. University of Southern California Jicheng Gong, PhD., 2013-2016, Duke University Jake Chung, PhD., 2014-2016, Duke Kunshan University Yanbo Teng, PhD, 2016-, Duke Kunshan University

#### VII. STAFF SUPERVISION

Tseng-Heng Li, Research Assistant, Ph.D. student at Rutgers University, 1995-1996.

Cheng-Wei Fan, Research Assistant, Ph.D. student at Rutgers University, 1996-1998.

Vito Ilagua, Ph.D. student at Rutgers University, 1998-1999.

Yuching Yang, Ph.D. student at Rutgers University, UMDNJ, 1999-2000.

Zhi-hua (Tina) Fan, Ph.D., Research Associate, UMDNJ, 1998-2000.

Chen Zhang, B.S., Senior Lab Technician, UMDNJ, 1997-2006.

Robert Harrington, B.S., Senior Lab Technician, UMDNJ, 1999-2005.

Lin Zhang, Ph.D. Research Teaching Specialist III/II, UMDNJ, 2001-2013.

Jean Tong, M.S. Research Teaching Specialist V, UMDNJ, 2005-2011.

Henock Solomon, M.P.H, Project Specialist, USC Department of Preventive Medicine, 2011-2014.

Yan Chang, PhD, Senior Research Associate, USC department of Preventive Medicine, 2011-2014.

Vikram Paranjpe, Undergraduate Research - Global Health, USC, Fall 2011-2013.

Sanika Gadkari, Undergraduate Research - Health Promotion and Disease Prevention, USC, spring 2012-2013.

Charlene Nguyen, Research Assistant, USC Department of Preventive Medicine 2012-2013.

Marlyn Duarte, MS, Data Analyst II, Duke Global Health Institute, 2014-2016.

Hailong Hang, BS, Laboratory Technician, Duke Global Health Institute, 2015-

Linchen He, MEM, Laboratory Technician, Duke Global Health Institute, 2015-

Rui Wang, BS, Laboratory Technician, Duke Global Health Institute, 2015-2015.

Xing (Lucy) Liu, PhD, Research Scientist, Duke Global Health Institute, 2016-present

Yuqiao Song, MS, Research and Administrative Assistant, 2017- present

#### **Laboratory Volunteers**

Jerry Liu MD, PhD, 06/2014-03/2015 Hailong Han, BS, 03/2015-06/2015 Rui Wei, BS, 03/2015-07/2015 Linchen He, MEM, 04/2015-07/2015

#### VIII. INTERNATIONAL SCHOLARS SPONSORSHIP

Huixin Wu (Yunnan Medical University, Kunming, China), 2012-2013 (University of Southern California)

Yalin Chen, Ph.D., Director of Rizhao City Environmental Protection Research Institute, Shangdong pPovince, China, 2013-2014.

Nan Zhang, Ph.D. student from Tsinghua University, Beijing, China, 2014-2015.

Chunyan Shan, Ph.D., visiting scholar from Nankai University Department of Environmental Science and Engineering, 2015-2016

Yongjie Wei, Ph.D., visiting scholar from Chinese Research Academy of Environmental Sciences, 2015-2015.

Cong Cong, B.S., visiting student from Peking University, 2015-2015.

Xiaoli Duan, Ph.D., visting scholar from Chinese Research Academy of Environmental Sciences, 2015-2016.

Huijuan Li, Ph.D., visiting scholar from Xuzhou Institute of Technology, 2015-2016.

Zongshuang Wang, PhD, visiting scholar from Chinese Research Academy of Environmental Sciences, Beijing, 2016-2017

Hui Wu, PhD, visiting professor from China Medical University, Shenyang, China, 2016-2017

Qijun Wang, PhD, visiting professor from Southern China University of Technology, Guangzhou, China, 2017-2018

Jinpu Jia, visiting PhD student from Eastern China Normal University, Shanghai, China, 2017-2018

Shanshan Shi, PhD., visiting scholar from Nanjing University, Nanjing, Jiangsu, China, 2017-2018

Beibei Hu, PhD., visiting scholar from Tianjin Normal University, Tianjin, China, 2017-2018

#### IX. BIBLIOGRAPHY

H-index =49, as of 6/22/16, based on Google Scholar

#### **Peer Reviewed Articles**

1. Zhang J, He QC and Lioy PJ.

Characteristics of Aldehydes - Concentrations, Sources, and Exposures for Indoor and Outdoor Residential Microenvironments.

Environmental Science & Technology 28(1):146-152, 1994.

(Cited 216 times as of 6/22/16)

2. **Zhang J** and Lioy PJ.

Ozone in Residential Air - Concentrations, I/O Ratios, Indoor Chemistry, and Exposures.

Indoor Air-International Journal of Indoor Air Quality and Climate 4(2):95-105, 1994.

(Cited 66 times as of 6/22/16).

3. Zhang J, Wilson WE and Lioy PJ.

Sources of Organic-Acids in Indoor Air - a Field-Study.

Journal of Exposure Analysis and Environmental Epidemiology 4(1):25-47, 1994.

(Cited 30 times as of 6/22/16)

4. Zhang J, Wilson WE and Lioy PJ.

Indoor Air Chemistry - Formation of Organic-Acids and Aldehydes. *Environmental Science & Technology* 28(11):1975-1982, 1994.

(Cited 66 times as of 6/22/16)

5. Zhang J and Smith KR.

Hydrocarbon emissions and health risks from cookstoves in developing countries. *Journal of Exposure Analysis and Environmental Epidemiology* 6(2):147-161, 1996.

(Cited 93 times as of 6/22/16)

6. Hibbert R, Bai Z, Navia J, Kammen DM and Zhang J.

High lead exposures resulting from pottery production in a village in Michoacan State, Mexico.

*J Expo Anal Environ Epidemiol* 9(4):343-51, 1999.

(Cited 23 times as of 6/22/16)

7. Lioy PJ, Wainman T, **Zhang J** and Goldsmith S.

Typical household vacuum cleaners: The collection efficiency and emissions characteristics for fine particles.

Journal of the Air & Waste Management Association 49(2):200-206, 1999.

(Cited 56 times as of 6/22/16)

8. Wei F, Teng E, Wu G, Hu W, Wilson WE, Chapman RS, Pau JC and **Zhang J**.

Ambient concentrations and elemental compositions of PM10 and PM2.5 in four Chinese cities.

Environmental Science & Technology 33(23):4188-4193, 1999.

(Cited 176 times as of 6/22/16)

9. **Zhang J**, Qian Z, Kong L, Zhou L, Yan L, and Chapman RS.

Effects of Air Pollution on Respiratory Health of Adults in Three Chinese Cities.

Journal of Environmental Health, 55(6): 373-381, 1999.

(Cited 50 times as of 6/22/16)

10. Zhang J, Smith KR, Uma R, Ma Y, Kishore VVN, Lata K, Khalil MAK, Rasmussen RA and Thorneloe ST.

Carbon monoxide from cookstoves in developing countries: 1. Emission factors. *Chemosphere - Global Change Science* 1(1-3):353-366, 1999.

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