

# HARVARD MEDICAL SCHOOL

## CURRICULUM VITAE

**Date Prepared:** March 7, 2019

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**Place of Birth:** Santa Monica, California

### Education:

1985	B.S. (Honors) Summa Cum Laude	Biology	Bucknell University
1989	M.D.	Medicine	Harvard Medical School
1992	M.P.H.	Occupational Medicine	Harvard School of Public Health

### Postdoctoral Training:

07/89 – 06/90	Intern	Internal Medicine	Cambridge Hospital Harvard Medical School
07/90 – 06/91	Resident	Internal Medicine	Cambridge Hospital Harvard Medical School
07/91 – 06/92	Resident	Occupational Medicine	Harvard School of Public Health
07/92 – 06/93	Chief Resident	Occupational Medicine	Harvard School of Public Health
07/93 – 06/95	Clinical Fellow	Environmental Medicine	Agency for Toxic Substance & Disease Registry U.S. Public Health Service

**Please note that the Harvard School of Public Health (HSPH) was officially renamed in January 2015 to the Harvard T.H. Chan School of Public Health, which is acknowledged by date.**

**Faculty Academic Appointments:**

07/92 – 06/96	Instructor	Medicine	Harvard Medical School
07/96 – 06/09	Assistant Professor	Medicine	Harvard Medical School
07/97 – 06/09	Assistant Professor	Environmental Health	Harvard School of Public Health
07/05 – 06/09	Adjunct Assistant Professor	Occupational Health	Cyprus International Institute for the Environment & Public Health Nicosia, Cyprus
07/09 – 09/17	Associate Professor	Medicine	Harvard Medical School
07/09 – 10/17	Associate Professor	Environmental Health	Harvard T.H. Chan School of Public Health
07/09 - 06/13	Adjunct Associate Professor	Occupational Health	Cyprus International Institute for the Environment & Public Health Nicosia, Cyprus
10/17 –	Professor	Medicine	Harvard Medical School
11/17 –	Professor	Environmental Health	Harvard T.H. Chan School of Public Health

**Appointments at Hospitals/Affiliated Institutions:**

07/92 –	Active Staff	Medicine	The Cambridge Hospital
07/96 –	Active Staff	Medicine Occupational Medicine	Cambridge Health Alliance/ Somerville Hospital
07/00 –	Attending Physician	Employee & Industrial Medicine	Cambridge Health Alliance
12/2007	Faculty	Cardiovascular Epidemiology Program	Harvard T.H. Chan School of Public Health
12/2009	Faculty	Division of Sleep Program	Harvard Medical School
02/10 - 12/11	Sponsored Research Staff	Sleep Medicine	Brigham and Women's Hospital

**Other Professional Positions:**

1993 –	Occupational Medicine Consultant	Massachusetts/Rhode Island Poison Control Center (Affiliated with Children’s Hospital) Boston, Massachusetts
1993 –	Environmental Medicine Consultant	Public Health Commission Cambridge, Massachusetts
1993 – 2009	Impartial Medical Examiner	Massachusetts Department of Industrial Accidents
1996 – 2003	Occupational Medicine Consultant	Division of Occupational Hygiene Massachusetts Lead Registry
1997 – 2001	Co-Organizer and Facilitator, Medical Summit on Hazardous Materials Firefighters Surveillance Examinations	Massachusetts Office of Hazardous Materials Response
2006 – 2009	Comprehensive Medical Examiner	Public Employee Retirement Administration Commission Commonwealth of Massachusetts
2007 –	Occupational Medicine Consultant	Partners HealthCare System
2012 –	Research Collaborator	Canadian Forces Environmental Medicine Establishment (CFEME) / Centre de Médecine Environnementale des Forces Canadiennes (CMEFC)

### **Major Administrative Leadership Positions:**

#### **Local:**

1996 – 1997	Director, Clinical Services	Occupational and Environmental Health Center, Cambridge Hospital
1998 – 2010	Assistant Director	Occupational and Environmental Health Center, Cambridge Hospital
2001 –	Medical Director	Employee Health and Industrial Medicine, Cambridge Health Alliance
2001 –	Co-Director, Introduction to Occupational & Environmental Medicine Course	Harvard School of Public Health
2003	Co-Director, Chemical Terrorism and Public Health Course	Harvard School of Public Health

2005	Organizer & Co-Director, Fundamentals of Occupational Health Course	Cyprus International Institute/Harvard School of Public Health
2006 –	Director, Occupational Medicine Residency Program	Department of Environmental Health, Harvard School of Public Health
2006 –	Director, Occupational Medicine Core	Educational Resource Center, Harvard School of Public Health/National Institute for Occupational Safety & Health
2009 –	Founder and Co-Director	Initiative for Productivity and Health Management Harvard School of Public Health
2010	Organizer & Co-Director, Leadership for Productivity & Health Management: Issues, Innovations, and Solutions Course	Harvard School of Public Health
2010 –	Chief, Division of Occupational & Environmental Medicine	Cambridge Health Alliance
2011 –	Director, Occupational & Environmental Health Field of Study, Master of Public Health Program	Harvard School of Public Health
2012	Organizer, Co-Director & Lecturer Leadership for Productivity & Health Management Course, Sleep and Shift Work: Optimizing Productivity and Health Management in the 24/7 Global Economy	Harvard School of Public Health
2013	Organizer, Director & Lecturer Cardiovascular Physiology & Disease in Firefighting Course	Occupational & Environmental Medicine Cambridge Health Alliance
2014	Organizer, Co-Chair & Lecturer Leadership for Productivity & Health Management Course, Mediterranean Diet & Workplace Health	Harvard School of Public Health

**Regional:**

2003 – 2006	Chief Medical Consultant	Division of Occupational Hygiene Commonwealth of Massachusetts Lead Registry
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**International:**

2005 – 2013	Director, Occupational Health Program	Cyprus International Institute / Harvard Cyprus Program
2007 – 2010	Co-Director, Occupational & Environmental Health Course	Cyprus International Institute / Harvard Cyprus Program
2011 – 2013	Director, Occupational & Environmental Health Course	Cyprus International Institute / Harvard Cyprus Program
2014	Organizer & Co-Chair, Closed Symposium on Obstructive Sleep Apnea and Driving Safety	International Association for Traffic and Safety Sciences (Japan) / Harvard T.H. Chan School of Public Health / Cambridge Health Alliance
2016	Scientific Chair, Mediterranean Diet Roundtable	Mediterranean Diet Roundtable
2016-	Organizer, Scientific-Chair Mediterranean Diet & Health	Initiative for Productivity & Health Management, Mediterranean Diet Roundtable, The Cooking Odyssey

**Committee Service:****Local:**

1995 –	Occupational & Environmental Medicine Residency Advisory Committee	Harvard School of Public Health
2001 – 2006	Blood and Body Fluid Exposure Task Force	Cambridge Health Alliance
2001 –	Medical Committee for Emergency Preparedness	Cambridge Health Alliance
2001 – 2006	Quality Improvement Committee	Cambridge Health Alliance
2001 –	Infection Prevention Committee	Cambridge Health Alliance
2004 – 2006	Medical Executive Committee	Cambridge Health Alliance
2004 –	Committee on Benefits/Employee Health Insurance	Cambridge Health Alliance
2005 –	Safety Committee	Cambridge Health Alliance

2006 –	Department of Environmental Health Curriculum Committee	Harvard School of Public Health
2009 –	Department of Medicine Promotions Committee	Cambridge Health Alliance
2011 –	Master of Public Health Steering Committee	Harvard School of Public Health
2012 –	Curriculum and Oversight Committee of the Training Program in Sleep, Circadian and Respiratory Neurobiology	Harvard Medical School
2013 – 2014	Master of Public Health, Transformation Team	Harvard School of Public Health
2013 –	Employee Wellness Executive Steering Committee	Cambridge Health Alliance
2014 –	Dean’s Leadership Council	Harvard TH Chan School of Public Health
2015 –	Dean’s Leadership Council	Harvard Medical School
2017 –	Faculty Executive Committee	HMS Division of Sleep Medicine
<b>Regional:</b>		
2002	Occupational Advisory Group, Cardiovascular Health Initiative	Massachusetts Department of Public Health
<b>National:</b>		
2001 – 2002	Expert Review Panel	U.S. Agency for Toxic Substances & Disease Registry
2008	Expert Review Panel	Fire Life Safety Research Center, University of Illinois Fire Service Institute
2008	Working Group, Database Systems	Federal Emergency Management Agency, Assistance to Firefighters Grants
2010 – 2014	Examination Committee, Occupational Medicine Subcommittee	America Board of Preventive Medicine
2015	Expert Working Group, Future Directions in Cardiovascular Research for the U.S. Fire & EMS Service	Federal Emergency Management Agency, National Heart, Lung and Blood Institute; National Fallen Firefighters Foundation
2015 - 2016	Expert Review Panel for the Joint Committee on National Statistics, Board on Human-Systems Integration	National Research Council

and Transportation Research Board /  
Report on Research Methodologies &  
Statistical Approaches to  
Understanding Driver Fatigue Factors  
in Motor Carrier Safety and Driver  
Health

2015 –	Occupational Medicine (OM) Work Group: Challenges & Opportunities to Strengthen the OM Workforce	National Institute of Occupational Safety and Health
2016	Expert Working Group, Messaging for Cardiac Health in the Fire Service	National Fallen Firefighters Foundation/ Department of Homeland Security/ FEMA’s Grant Program Directorate for Assistance to Firefighters Grant Program – Fire Prevention and Safety Grants
2018	Expert Working Group for Revision Recommendations of the firefighter medical examination standards (NFPA 1582).	International Association of Fire Fighters (IAFF) Health, Safety & Medicine
<b>International:</b>		
1998 – 1999	Working group on the Prevention of Chemical Emergencies and Associated Health Risks	Poison Control Center, Hospital Universitario Antonio Pedro, Universidade Federal Fluminense, Niteroi, Rio de Janeiro, Brazil Advisor
1998 – 2000	Occupational Health Curriculum Development Committee	Department of Hygiene and Epidemiology, University of Athens School of Medicine, Athens, Greece Advisor
2005	Organizing Committee, Symposium on Health and Safety in the Construction Industry	Cyprus International Institute and Technical Chamber of Commerce of Cyprus Nicosia, Cyprus
2005	Organizing Committee and Moderator, Workshop on an Occupational and Environmental Health Research Agenda	Cyprus International Institute in collaboration with the Cypriot Ministries of Labour and Health, Nicosia, Cyprus Moderator
2005	Invited Expert, WHO Second Technical Meeting on Quantifying Disease from Inadequate Housing, Housing and Health Program	World Health Organization (WHO), Regional Office for Europe, Bonn, Germany

2006	Curriculum Working Group, European Training for Health Professionals on Rapid Response to Health Threats	European Union (sponsored collaboration)
2006 – 2009	Working Group, Household Carbon Monoxide Poisoning, Housing and Health Program	World Health Organization (WHO)
2007	Expert Review Panel, Criteria Document for Carbon Monoxide in Indoor Air	Health Canada
2008 – 2009	Expert Review Panel, WHO Indoor Air Quality Guidelines	World Health Organization (WHO), Regional Office for Europe, Bonn, Germany
2011	Expert Review Panel, Cardiovascular Disease Guidelines	Fire & Rescue, New South Wales, Australia
2014 –	Corps of Academic Electors, Occupational/Environmental Medicine and Public Health	Demokritus University Thrace Medical School, Alexandroupolis, Greece International Promotions Evaluator
2014 – 2015	Working Group on Sleep Apnea and Traffic Accidents	International Association for Traffic and Safety Sciences (IATSS), Tokyo, Japan International Advisor
2015 –	School for Health & Welfare Professionals Registry	Technological Educational Institute Athens, Greece International Promotions Evaluator
2015 –	School of Medicine Registry	National and Kapodistrian University of Athens, Athens, Greece International Promotions Evaluator
2016 –	Invited working group on future challenges in occupational health	SEAT (Spanish subsidiary of Volkswagen), Grupo Ergos, MC Mutual, Centro ITAE, Barcelona, Spain
2016 –	School of Health Sciences Registry	University of Crete, Heraklion, Greece International Promotions Evaluator
2016	External Reviewer for the Division of Occupational Medicine	Department of Medicine, University of Toronto, Toronto, Canada
2016	Participant, Transport Canada's Advisory Council on Rail Safety	Transport Canada, Ottawa, Canada
2017 –	Corps of Academic Electors, Occupational/Environmental Medicine and Public Health	University of Thessaly, School of Health Sciences and Medical Faculty, Larissa, Greece, International Promotions Evaluator



2017 –	Department of Medicine Registry	Demokritus University Thrace Medical School, Alexandroupolis, Greece International Promotions Evaluator
2017 –	Department of Medicine Registry	Demokritus University Thrace Medical School, Alexandroupolis, Greece International Promotions Evaluator
2017 –	Department Of Occupational Therapy Registry	Technological Educational Institute Of Athens, Athens, Greece International Promotions Evaluator
2017-	Invited member, Comisión Científica Empresa Saludable de SEAT (Scientific Commission for a Healthy Enterprise)	SEAT Automobiles, Barcelona, Spain
2018	Member, Scientific Committee, 4 <sup>th</sup> Forum Υγείας (Health) – Diet, Health, Beauty	DYO Forum, Thessaloniki, Greece

#### Professional Societies:

1993 –	American College of Physicians	
	2003 – 2004	Member, Continuing Medical Education Faculty
	2004	Peer Reviewer, PIER, Clinical Guideline
1993 –	American College of Occupational and Environmental Medicine	
	2004 –	Member, Academic Medicine Section
	2006 –	Member, National Committee of Occupational & Environmental Medicine Residency Directors
	2010 –	Public Safety Medicine Section
	2016	Expert Content Reviewer, Presidential Task Force on Fitness-for-Duty Assessments for Industrial Firefighters
1993 –	New England College of Occupational and Environmental Medicine	
	2004 – 2010	Board Member
	2004	Chair, Scientific Program for Annual Conference
	2004 –	Member, Scientific Program Committee
	2006 – 2012	Chair, Research Session for Annual Conference

- 1993 – New England Hellenic Medical and Dental Society  
1997 – 1998 Board Member
- 1996 – Hellenic Medical Society of New York
- 2001 – National Fire Protection Association  
2001 – Member, Research Section
- 2010 – American College of Sports Medicine
- 2012 – American Academy of Sleep Medicine
- 2013 – 2015 American Thoracic Society  
Member, Ad hoc Committee  
Public Health Impact of Sleep Disturbance:  
“The Importance of Health Sleep –  
Recommendations and Future Priorities”
- 2014 – Circle of Hellenic Academics in Boston
- 2015 – Hellenic Bioscientific Association, USA  
Member, Scientific Advisory Board
- 2016 – Oleocanthal International Society  
Scientific Advisory Committee
- 2017 – World Hellenic Bioscientific Association, Senior Faculty Selection Committee for the Stavros Niarchos Foundation Research Training Program in Clinical and Experimental Medicine . This is a \$375,000 grant with the aim to train medical graduates of Greek universities in clinical and basic science in the USA; improve their skills and credentials and to successfully place the graduates in top-level US clinical training programs.
- 2017 – Scientific/ Medical Advisor, World Olive Center for Health, Athens, Greece.  
International non-profit center dedicated to promoting the health benefits of olive and olive oil products as essential components of a healthy Mediterranean Diet.

#### **Grant Review Activities:**

- 2002 Disease, Disability and Injury Prevention Control  
National Institute for Occupational Safety and Health  
Ad hoc Member, Special Emphasis Panel
- 2003 RFP on Cardiovascular Disease in Police, Firefighters and Ambulance Workers  
Workers Compensation Board  
Vancouver, British Columbia, Canada  
Ad hoc Member, Expert Review Panel

2004; 2005; 2008; 2010; 2011	Workplace Safety Grants Program	Ontario Workplace Safety and Insurance Board, Research Advisory Council, Toronto, Ontario, Canada Ad hoc Member, External Reviewer
2005	Pilot Feasibility Projects	Harvard Clinical Research Center Ad hoc Member, Study Section
2005; 2008; 2009; 2011–2013; 2015; 2018	New England Pilot Research Program	Harvard T.H. Chan School of Public Health-National Institute for Occupational Safety & Health, Educational Resource Center Ad hoc Member, Review Panel
2007	Innovation Grants	Research Secretariat, Work Safe BC, Vancouver, British Columbia, Canada Ad hoc Member, External Reviewer
2008; 2011 – 2014; 2017	Research and Development Proposals in the “Assistance to Firefighters Grants” Program	U.S. Department of Homeland Security / Federal Emergency Management Agency, Washington, DC Ad hoc Member Federal Review Panel
2009	“Bridging the Gap” Grants	Ontario Workplace Safety and Insurance Board, Research Advisory Council, Toronto, Ontario, Canada Ad hoc Member, External Reviewer
2010	Experimental and Translational Research Program	Chief Scientist Office, Experimental and Translational Research Program, Edinburgh, Scotland, United Kingdom External Referee
2010; 2013; 2016	Peer Reviewer, Pilot Program	Harvard School of Public Health-National Institute for Environmental Health Sciences Ad hoc Member
2016-2017	'Excellent Young Principal Investigator' Grant Program	European Science Foundation Ad hoc Member, Expert Reviewer

**Editorial Activities:**

**Ad hoc Reviewer:**

American Journal of Cardiology  
American Journal of Industrial Medicine  
American Journal of Public Health  
Annals of Internal Medicine  
Annals of Occupational Hygiene  
Arh Hig Rada Toksikol (Archives of Industrial Hygiene and Toxicology, Croatia)  
Aspen Publishers (Health Care Reviewer on chapter in Terrorism and Public Health)  
Biological Psychology  
BMC Health Services Research  
BMC Public Health  
BMJ Open Diabetes Research & Care  
British Journal of Nutrition  
British Medical Journal  
Case Reports in Neurological Medicine  
Circulation  
Clinical Chemistry  
Clinical Epidemiology  
Clinical Neurology and Neurosurgery  
Critical Reviews in Toxicology  
Environmental Health Perspectives  
Environmental Health: A Global Access Science Source  
Environmental International  
European Journal of Applied Physiology  
European Respiratory Journal  
Food and Chemical Toxicology  
Indian Journal of Medical Sciences  
Industrial Health (Japanese National Institute of Occupational Safety and Health)  
International Archives of Occupational and Environmental Health  
International Journal of Food Safety, Nutrition and Public Health (IJFSNPH)  
International Journal of Occupational and Environmental Health  
Journal of Cardiovascular Computed Tomography  
Journal of Exposure Science and Environmental Epidemiology  
Journal of Obesity  
Journal of Occupational & Environmental Hygiene  
Journal of Occupational and Environmental Medicine  
Journal of Occupational Medicine and Toxicology  
Journal of Sleep Research  
Journal of the American College of Cardiology  
JRSM Open (Companion journal to the Journal of the Royal Society of Medicine)  
Lancet  
Medical Science Monitor  
Medicine & Science in Sports & Exercise  
Metabolism  
Military Behavioral Health  
New England Journal of Medicine  
Nutrition and Metabolism  
Occupational and Environmental Medicine  
Pediatrics

PLoS ONE  
 Police Practice and Research: An International Journal  
 Prehospital Emergency Care  
 Preventive Medicine  
 Proceedings B (Proceedings of the Royal Society, Biological Sciences)  
 Regulatory Toxicology and Pharmacology  
 Science of the Total Environment (STOTEN)  
 Sleep  
 Southern Medical Journal  
 The Spine Journal

#### Other Editorial Roles:

2005 – 2012	Editorial Review Board	Environmental Health Perspectives
2005 –	Consulting Editor	Archives of Environmental and Occupational Health
2012 – 2016	Associate Editor	BMC Public Health
2013 –	International Advisory Board	Occupational Medicine (London)
2015 –	International Board	Hygeia@Ergasia, Scientific Edition of Hellenic Society of Occupational and Environmental Medicine (Alexandroupolis, Greece)

#### Honors and Prizes:

1987	Paul Dudley White Fellowship	Harvard Medical School	Overseas Research
1991 – 1993	Scholar, Occupational Physicians Scholarship Fund	American College of Occupational Medicine	Competitive award for full stipend support of Occupational Medicine Residency Training
1996	KO1 / Special Emphasis Research Career Award	National Institute for Occupational Safety & Health (NIOSH)	Hazmat firefighters: medical and incident surveillance
1999	Elected to Fellowship	American College of Physicians	
2002	Invited Speaker and Faculty Panelist	Harvard School of Public Health	Chemical Terrorism Plenary Lecture, Alumni Day
2003	Elected to Fellowship	American College of Occupational and Environmental Medicine	

2005	Honorable Mention	Society of Teachers of Family Medicine	Best Research Paper Award
2007	Teacher of the Year	Harvard School of Public Health	Occupational & Environmental Medicine Residency Program
2010	Honorable Mention, Best Research Paper Award	Society of Teachers of Family Medicine	As published in JAMA 2008; 300(8):915-923.
2013	Kehoe Award for Excellence in Education and Research in Occupational and Environmental Medicine (OEM)	The American College of Occupational and Environmental Medicine	Awarded for significant contributions in OEM research (cardiovascular disease in public safety personnel and occupational sleep research) as well as for educational leadership as the Director of the Harvard Occupational Medicine Residency Program.
2013	Nominee, Outstanding Faculty Mentor Award	Harvard School of Public Health Postdoctoral Association	Harvard School of Public Health
2014	Harriet Hardy Award	New England College of Occupational and Environmental Medicine (NECOEM)	Lifetime achievement award to an individual who has made outstanding contributions to the field of Occupational and Environmental Medicine.
2015	Best Paper Award	Michigan Industrial Hygiene Society	Best scientific paper as published in the Journal of Occupational and Environmental Hygiene 2014; 11(9):591-603.
2016	Oficial, Ordem Do Mérito Imperador Dom Pedro II (Officer in the Order of Merit, Emperor Dom Pedro II)	Corps of Military Firefighters, Brazilian Federal District, Brazil	Awarded for more than two decades of research beneficial to the fire service and supporting the Corps' goals of improving firefighters' health and fitness.

2016	Research Service Award	International Association of Fire Chiefs - Safety, Health & Survival Section	Special recognition of research to improve the well-being of members of the fire service.
2017	Special Recognition Award, 1st International Symposium on Health and Physical Fitness among Public Safety Workers	University of Brasilia, Department of Physical Education, Brazilian Federal District, Brazil	Recognition of outstanding research on firefighters' cardiovascular risk assessment and strong commitment to fire service health promotion.
2017	Olympic Commemorative Medal	Olympia Health and Nutrition Awards 2017, European Inter-regional Mediterranean ARISTOIL program & Faculty of Pharmacy, University of Athens, Athens, Greece	Recognition of research and education to introduce Mediterranean Diet to non-Mediterranean populations
2017	Silver Medal	Best Biomedical/ Health Research, Health Matters Convention, 4 <sup>th</sup> Oleocanthal International Congress, Oleocanthal International Society, Malaga, Spain	Recognition as PI of the Mediterranean Diet Workplace Intervention "Feeding America's Bravest: Survival Mediterranean Style"
2019	Robert C. Johns Research Partnership Award	Center for Transportation Studies, Univ. of Minnesota presents the award annually to a team of individuals who have collaboratively drawn on their diverse expertise to achieve significant impacts on transportation.	Recognition of collaboration: "Exploring Links Between Medical Conditions and Safety Performance in Tractor Trailer Drivers," which resulted in 2016 paper in <i>SLEEP</i> on OSA and crash risk.

## **Report of Funded and Unfunded Projects**

### **Funding Information:**

#### **Past:**

1993 – 1995	Medical Surveillance of Hazardous Materials Response Firefighters PI U.S. Agency for Toxic Substances and Disease Registry / Competitive Post-Doctoral Research Award
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The study goals were to examine the potential health effects of hazardous materials duty on firefighters through the medical examination and hazardous incident surveillance.

- 1996 – 1999      Hazmat Firefighters: Medical and Incident Surveillance  
 PI  
 KO1 / National Institute for Occupational Safety & Health / Research Career Award  
 The study goals were to confirm and expand the results of the previous study (see above) regarding the potential health effects of hazardous materials duty prospectively in a much larger cohort of firefighters.
- 1998 – 2000      Occupational Risk Assessment and Handling of Occupational Emergences  
 Co-Investigator  
 Greek Ministry of Education / Competitive Training Grant  
 The goals were to create a basic occupational health training program for Greek physicians. My role was to provide input on curriculum design and to give specific lectures in the classroom.
- 1999 – 2000      A Polymorphism in the COL9A2 Gene and Intervertebral Disc Disease  
 Co-Investigator  
 Liberty Mutual / Cooperative Agreement with the Harvard School of Public Health  
 This was a case-control study of gene polymorphisms in intervertebral disc disease in a Mediterranean population (Greece). My roles included study design, data analysis and interpretation and manuscript preparation.
- 1999 – 2002      Evidence-Based Medical Examinations for Firefighters  
 PI  
 RO1 / National Institute for Occupational Safety & Health  
 Goals of the study were to examine systematically medical examination results and employment and health outcomes to determine which examination components have evidence-based utility.
- 2000 – 2006      NIOSH Educational Resource Center  
 Director and Core Faculty  
 National Institute for Occupational Safety & Health  
 Longstanding grant held at the Harvard School of Public Health for this center of excellence in Occupational Health Academic & Research Training, including: medicine, safety, ergonomics, industrial hygiene and nursing. My role was to teach/direct core Occupational medicine courses.
- 2002 – 2003      Chemical Terrorism: Development of a Protocol for Empirical Recognition  
 PI  
 Kresge Center for Environmental Health/CDC/NIEHS  
 Developed a syndrome-based protocol for the clinical/empirical recognition of “toxicodromes” produced by distinct classes of chemical agents whether they are industrial or agricultural chemicals or chemical weapons.
- 2002 – 2003      Community-Based Intervention to Prevent Lead Poisoning in Brazilian-American Painters



- PI  
Health Research and Educational Trust  
Goals were to construct a community-based educational intervention in Portuguese for educating painters in the Brazilian-American community regarding lead poisoning due to house painting and construction and its prevention.
- 2002 – 2005      Program for Monitoring and Assessment of the Environmental Consequences of the Iraqi Aggression in Kuwait  
Co-PI for Medical Monitoring  
Kuwait Public Authority for Assessment of Compensation  
Multi-disciplinary project to assist Kuwait in the assessment of health effects due to the Iraqi invasion of Gulf War I.
- 2004 – 2005      Profile of Massachusetts Firefighters Retiring under Heart Presumption Legislation: 1997-2003  
PI  
Harvard-NIOSH Education and Research Center  
This pilot epidemiologic study initiated the examination of the characteristics of Massachusetts firefighters receiving state disability pensions for cardiovascular diseases.
- 2004 – 2006      Profile of Massachusetts Firefighters Retiring under Heart Presumption Legislation: 1997-2003  
PI  
Public Employee Retirement Administration Commission of Massachusetts  
This epidemiologic study fully investigated the characteristics of Massachusetts firefighters receiving state disability pensions for cardiovascular diseases started under the above pilot project.
- 2005 – 2010      Capacity building for Molecular Metabolic & Genetic Epidemiology Research  
Co-PI  
Research Promotion Foundation of Cyprus  
The major goals of the study are to examine genetic, hormonal and environmental (i.e., dietary, activity, living conditions) determinants of obesity and metabolic syndrome in young adult males.
- 2006 – 2007      On-Duty CHD Events in Firefighter: Predictors of Fatal Incidents  
Senior Investigator  
Harvard-NIOSH Education and Research Center  
Epidemiologic investigation comparing firefighters dying within 24 hours of an on-duty cardiovascular event to those surviving similar events to identify predictors of case-fatality. My role was to provide study design, case databases, and supervise data analysis, interpretation and manuscript preparation.
- 2006 – 2009      Firefighters and Cancer  
PI  
Workplace Safety Insurance Board of Ontario, Canada  
The major goal was to perform a updated and expanded, systematic meta-analytic review of epidemiologic studies examining whether firefighters are at increased risk of various cancers as a result of their occupation.

- 2006 – 2013 NIOSH – Educational Resource Center  
 Director, Occupational Medicine Core  
 National Institute for Occupational Safety & Health (NIOSH)  
 Longstanding grant held at Harvard T.H. Chan School of Public Health for this center of excellence in Occupational Health Academic & Research Training which includes medicine, safety, ergonomics, industrial hygiene and nursing. Major goal is to provide education for occupational health and safety professionals.
- 2007 – 2008 Responder Wireless Physiological Monitoring Device  
 Consultant  
 US Department of Homeland Security  
 Project to examine a wireless device for providing real-time cardiovascular monitoring of emergency responders during incident responses. My role was to advise Quasar, Inc. regarding the epidemiology of on-duty cardiovascular disease events among firefighters.
- 2007 – 2008 Obesity and Sleep Apnea in Truck Drivers  
 Senior Investigator  
 Harvard-NIOSH Education and Research Center  
 Examine the efficacy of obesity-driven criteria as tools for screening for obstructive sleep apnea among professional drivers. My role was to provide study design, access to subjects, and supervise data collection and analysis, interpretation and manuscript preparation.
- 2007 – 2009 Sleep Apnea Screening and Psychomotor Vigilance Testing in Truck Drivers  
 Senior Co-Investigator  
 American College of Occupational & Environmental Medicine and the Federal Motor Carrier Safety Administration  
 Major goals were to examine the results of screening commercial truck drivers for obstructive sleep apnea at federally-regulated medical exams for driver certification. My role as the senior mentor and research group leader was to oversee study design, data collection and data analysis and provide other supervision and resources.
- 2007 – 2011 Predicting Cardiovascular Risk and Fitness in Firefighters  
 PI  
 US Department of Homeland Security  
 Examines and stratifies cardiovascular risk among a cohort of firefighters recruited from several different states undergoing comprehensive examinations. The major goals are to determine baseline predictors of exercise stress test, and how exercise testing results predict future health and employment consequences.
- 2008 – 2009 Guidelines for Prevention of Obesity at the Workplace  
 Consultant  
 European Union  
 Program to develop obesity prevention strategies within European workplaces. My role was to provide expert advice regarding obesity and its potential interaction with fitness for duty in various jobs.
- 2008 – 2009 Survey of Occupational Physicians on Recommendations for Obstructive Sleep Apnea

(OSA) Screening in Commercial Motor Vehicle Operators  
PI

Respironics, Inc.

The project surveyed American College of Occupational and Environmental Medicine (ACOEM) members' regarding new consensus guidelines for OSA screening in truck drivers. The goals were to determine knowledge about, compliance with, and obstacles to implementing the guidelines in practice.

- 2008 – 2010      Fire-Service Health Surveillance System  
Consultant  
US Department of Homeland Security  
The study examined health behaviors and risks as determinants of firefighter health in states across the Missouri valley. My role is to provide guidance regarding cardiovascular disease epidemiology.
- 2008 – 2011      Operation Healthy Sleep  
Consultant  
US Department of Homeland Security  
This study examined comprehensively fatigue, shift work and sleep disorders among firefighters. My roles were to provide expertise regarding cardiovascular epidemiology in firefighters and to analyze cardiovascular and metabolic parameters in firefighters in association with information regarding their sleep hygiene.
- 2010 – 2011      Impact of a Company-Based Sleep Apnea Screening, Diagnostic and Treatment Program on Truckers' Health and Safety  
PI  
Harvard Catalyst/The Harvard Clinical and Translational Science Center (NIH Award #UL1 RR 025758 and financial contributions from Harvard University and its affiliated academic health care centers.  
This pilot study rigorously examined a large trucking company's program for mandated Obstructive Sleep Apnea (OSA) screening, diagnosis, and treatment among professional drivers. The specific aims were to investigate the effects of OSA diagnosis and treatment compliance monitoring on crash risk; healthcare outcomes and costs; and to refine OSA screening parameters for driver populations.
- 2010 – 2011      Obstructive Sleep Apnea (OSA) and Commercial Motor Vehicle Operators – A Cross-Sectional Analysis of Driver-Simulator Performance and Diagnosis of OSA  
Senior Investigator  
Harvard-NIOSH Education and Research Center  
This cross-sectional pilot study assesses the utility of using driver simulator as a potential in-clinic method to identify commercial vehicle operators who are at a high risk for OSA and road crashes.
- 2010 -2013      The Impact of the Nutrition Environment in the Fire Service on Health & Safety  
Consultant  
US Department of Homeland Security  
This study will fill this important gap in the public health literature. Using a longitudinal cohort design, we will examine dietary intake and the food environment

among 1,000 firefighters housed in 60 fire stations within 20 fire department across the nation.

- 2010 – 2014      Exercise Tolerance as a Predictor of Firefighters’ Future Risks  
 PI  
 US Department of Homeland Security  
 The grant built on the prior DHS award to Kales’ group and examined cardio-respiratory fitness as a prognostic indicator of firefighters’ future health and employment outcomes. The ultimate goal of the research is to establish guidelines for firefighters’ physical fitness requirements that when implemented reduce the burden of illness and injuries in America’s emergency responders.
- 2011 – 2014      Risk Factors for Crashes in a Retrospective Cohort Study of Commercial Truck Drivers  
 Mentor  
 KO1 / National Institute for Occupational Safety & Research  
 The goals for this grant were to quantify individual occupational and non-occupational risk factors of commercial truck drivers involved in non-fatal and fatal crashes in a large retrospective cohort study of over 90,000 drivers.
- 2012 – 2013      Sudden Cardiac Death in Relation to Law Enforcement Duties  
 Senior Investigator  
 Harvard-NIOSH Education and Research Center  
 Working with co-investigators to determine whether specific law enforcement duties are associated with more perceived stress than others and whether they convey a higher risk of sudden cardiac death in police officers.
- 2013 – 2014      Entry Fitness Levels and Subsequent Academy Performance Outcomes in  
 Massachusetts Police Recruits  
 Senior Investigator  
 Harvard-NIOSH Education and Research Center  
 Pilot Award for above fully-funded study to assess police academy students’ entry fitness levels as predictors of subsequent performance in the academy.
- 2012 – 2016      Non-Invasive Identification of LVH/Cardiomegaly in Firefighters  
 US Department of Homeland Security  
 PI  
 This grant built on the prior DHS awards to Kales’ group. Cardiovascular disease (CVD) causes 45% of firefighters’ on-duty deaths. LVH/cardiomegaly increase the risks of arrhythmia, myocardial infarction, stroke and death. Autopsies demonstrate LVH/cardiomegaly in most firefighter CVD fatalities. The grant 1) determined the prevalence of left ventricular hypertrophy (LVH) and cardiomegaly among firefighters; 2) quantified major risk factors for LVH/cardiomegaly; 3) developed prediction models/screening algorithms; 4) validated the models/screening algorithms.
- 2015 – 2017      Department of Transportation Medical Examiners and Sleep Disorders Continuing  
 Medical Education Module / National Sleep Foundation  
 PI  
 Commercial drivers are subject to federally-regulated medical examinations at least every two years. Fatigue and excessive daytime sleepiness are recognized causes of

large truck and bus crashes. This grant sponsors my team to create a CME module for Department of Transportation (DOT) Medical Examiners on Sleep Disorders in collaboration with the National Sleep Foundation.

- 2013 – 2017      Entry Fitness Levels and Subsequent Academy Performance Outcomes in Massachusetts Police Recruits  
 Massachusetts Municipal Police Training Committee Competitive Research Award, Commonwealth of Massachusetts / MPTC 2014-1  
 PI (\$79,586.00)  
 The purpose of these retrospective and prospective cohort studies are to assess police academy students' entry fitness levels as predictors of subsequent performance in the academy. Aim1: Categorize recruit officers' entry fitness levels as determined by Cooper Assessments and describe the distribution of various fitness attributes (Body Mass Index, body fat, aerobic capacity, strength) across this population. Aim 2: Statistically examine the association of entry fitness levels with subsequent performance in the academy (academic achievement on written tests, attendance, incidence of disciplinary actions, training injuries, academy withdrawals and graduation rates). Aim 3: Estimate, from the above evidence, the minimum fitness requirements predicting successful completion of a Municipal Police training academy.
- 2014 – 2017      Understanding and Preventing SCD in the Fire Service  
 US Department of Homeland Security / EMW-2013-FP-00749  
 Co-Investigator, Site PI for Harvard (\$259,363.00 to HSPH)  
 This grant builds on the prior DHS awards to Smith's and Kales' groups. The purpose of this study is to retrospectively analyze the most complete set of firefighter autopsies and accompanying medical records ever made available in order to evaluate the pathoanatomic (medical) causes of sudden cardiac death (SCD) and the underlying medical conditions of the victims, and to identify the most effective preventive strategies.
- 2014 – 2017      Physical Activity, Sedentary Behavior, Cardiac Autonomic Function and Associated Factors among Brazilian Military Firefighters  
 Ministry of Science, Technology and Innovation, National Council for Scientific and Technological Development (CNPq), Brazil  
 Co-Investigator  
 This grant is part of an international collaboration with Dr. Luiz Porto at the Brasilia University, Brazil. Firefighters' activities expose them to intense stressors, which alter cardiac autonomic function (CAF). Despite the crucial role of CAF in regulating stress response, little is known about firefighters' on-duty CAF and the effects of firefighting on the CAF. This grant will 1) evaluate resting on-duty CAF of male firefighters and its association with cardiorespiratory fitness, physical activity level and sedentary behavior; 3) evaluate the effects of a 12-hour period of routine fire service duty on CAF.
- 2016-2017      Food Frequency Questionnaire Analysis for Feeding America's Bravest: Mediterranean Diet-Based Interventions to Change Firefighters' Eating Habits  
 Sub Award from: NIDDK/ Boston Medical Center, Boston Obesity Center (Administrative Core)  
 Site-PI at Harvard (\$3,000)

**Past Unfunded Projects:**

- 2004 – 2009      Contamination of Ayurvedic Herbal Products with Heavy Metals  
Collaborative efforts with Dr. Robert Saper of Boston University, a former student, to determine the extent of heavy metal contamination in various Ayurvedic products and the resulting health effects among users of these medications. These projects led to two original reports in *JAMA* and a number of other peer-reviewed publications.
- 2007 – 2009      Blood Pressure in Public Safety Officers/Emergency Responders  
Examination of the prevalence, correlates and adverse outcomes associated with uncontrolled hypertension in this group of workers which constitute about 1.5% of the total US workforce. This project culminated in a “State of the Art” review in the *American Journal of Hypertension*.
- 2009 – 2010      Road Ready Study  
Preliminary study of crash risk in over 60,000 truck drivers as a function of driver BMI and other characteristics. This work led to KO1 career award for Matt Thiese of the University of Utah on which I was a senior mentor.
- 2009 – 2012      BMI and Crash Risk at Major Trucking Firm  
Working with co-investigators from University of Minnesota-Morris on analyses of crash risk as a function of truck driver BMI controlling for various occupational exposures. The preliminary work led to an HMS Catalyst on which I was the PI related to sleep apnea and crash risk among commercial drivers.
- 2010 – 2012      Sudden Cardiac Death in Relation to Law Enforcement Duties  
Working with co-investigators to determine whether specific law enforcement duties are associated with a higher risk of sudden cardiac death (SCD) in police officers. These initial efforts allowed our team to receive pilot funding from NIOSH and ultimately culminated in an original report in the *British Medical Journal* documenting duty-related risks of SCD among police officers.

**Current:**

- 2013 – 2018      NIOSH – Educational Resource Center  
National Institute for Occupational Safety & Health (NIOSH) / T42OH008416  
Director, Occupational Medicine Core (\$885,590.00 to OM Core)  
Renewal of longstanding grant held at Harvard T.H. Chan School of Public Health for this center of excellence in Occupational Health Academic & Research Training including: medicine, safety, ergonomics, industrial hygiene and nursing. Major goal is to provide education for occupational health and safety professionals.
- 2015 – 2018      Feeding America’s Bravest: Mediterranean Diet-Based Interventions to Change Firefighters’ Eating Habits and Improve Cardiovascular Risk Profiles  
US Department of Homeland Security / EMW-2014-FP-00612  
PI (\$1,578,936.00)  
Nutrition and medical experts agree that following a Mediterranean-style diet improves health. However, the health system has had very limited effectiveness in changing

Americans' eating and other lifestyle behaviors, while limited evidence suggests that workplace-based nutrition interventions can be beneficial. Building on prior work with firefighters and the above, our proposal seeks to establish the effectiveness of behavioral change strategies in the fire service to modify the existing food culture. We aim to motivate firefighters and their families to incorporate Mediterranean diet principles at work and home through education, participation and incentives. The ultimate purpose of the study is to lower firefighters' risks for cardiovascular and cancer by successfully getting more firefighters and their families to adopt and incorporate the healthy eating principles behind the Mediterranean diet.

- 2017-2018      Medical Evaluations and Cardiovascular Risk Factor Reduction / International Association of Fire Fighters (IAFF)  
Co-PI (\$100,000)  
There is considerable enthusiasm for improving firefighter health and safety and an increasing recognition of the vital role that medical evaluations play in achieving this goal. While the efforts to increase the number of firefighters who are getting an annual medical evaluation are beneficial, it is also crucial that the health care providers who provide these evaluations fully understand the physical and psychological demands and physiological consequences of firefighting. Additionally, it is important that firefighters act on actionable information regarding risk factors that are assessed as part of these examination. Therefore, we will develop and provide content to IAFF to deliver online course modules for firefighters and healthcare providers to increase knowledge about, (a) CVD progression and its impact in the fire service, (b) risk associated with each of the cardiovascular disease risk factors, especially in the context of firefighting, (c) the importance of annual medical evaluations and additional medical testing (when warranted) in the identification of and stratification of CVD risk, and (d) effective strategies to reduce cardiovascular disease risk factors.
- 2017-2018      Mediterranean Diet-Based Interventions to Change Firefighters' Eating Habits: A Pilot Study of Adherence Biomarkers / Ohio University, Research Innovation Grant  
(Co-Investigator)  
This will be a nested study within our FEMA-funded study of Mediterranean lifestyle/behavioral change, which seeks to examine the measurable effects on biomarkers of a Mediterranean-style diet. This study will also help cross-validate our modified Mediterranean diet scale.
- 2018-2019      Mediterranean Diet-Based Interventions to Change Firefighters' Eating Habits: A Pilot Study of Metabolomic/ 2018 SECIM Pilot and Feasibility program, Southeast Center for Integrated Metabolomics, University of Florida (Co-Investigator).  
This is another nested study within our FEMA-funded study of Mediterranean lifestyle/behavioral change, which seeks to identify additional biomarkers of a Mediterranean-style diet.

**Report of Local Teaching and Training**  
**Teaching of Students in Courses:**

1993 – 1995	Introduction to Clinical Medicine 2 <sup>nd</sup> year medical students	Harvard Medical School 32 hours over eight weeks
1993 –	Clinical Experience in Occupational Medicine 3 <sup>rd</sup> and 4 <sup>th</sup> year medical students	Harvard Medical School Forty hours per year
1994 – 1995	Practice of Occupational Health Public health students	Harvard School of Public Health Two hour lecture per year
1996 – 2001	Introduction to Occupational & Environmental Medicine Public health students	Harvard School of Public Health Two hour lecture per year
2001–	Introduction to Occupational & Environmental Medicine, Course Co-Director and Lecturer Public health students	Harvard School of Public Health Organize and supervise course Eight hours of lecture per year
1999 – 2008	Patient-Doctor II 2 <sup>nd</sup> year medical students	Harvard Medical School Two hour lecture per year
2002 – 2005;	Toxicology	Harvard School of Public Health
2007 – 2009	Public health students	Two hour lecture per year
2007 – 2013	Occupational Health Public health students	Cyprus International Institute Average of 18 hours over one to two weeks

**Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):**

1993 – 2002	Occupational/Environmental Medicine Conferences 2 <sup>nd</sup> and 3 <sup>rd</sup> year medical residents	The Cambridge Hospital One hour lectures each quarter
1998 – 1999	Allergy/Immunology Board Review Session Internal Medicine medical residents	The Cambridge Hospital Two hour sessions per year
2002	Occupational Medicine Primary Care medical residents	Massachusetts General Hospital One hour lecture
2006	Independent Medical Examinations Physiatry residents	Spaulding Rehabilitation Hospital One hour lecture
2006 –	Career and other seminars Occupational Medicine residents	Harvard School of Public Health One hour sessions, each
2012	Introduction to Occupational & Environmental Medicine	Spaulding Rehabilitation Hospital



	Physiatry residents	One hour lecture
2018	Occupational Sleep Medicine: Focus on OSA T32 Training Grant-Sleep Trainees	Brigham & Women's Hospital/ HMS Division of Sleep Medicine One hour lecture and discussion

### **Clinical Supervisory and Training Responsibilities:**

1993–1996; 1998	Primary Care Preceptor / Harvard Medical School	Ten hours per year
1993 – 1997	Internal Medicine Morning Report Attending / The Cambridge Hospital	One hour per week
1993 – 1998	Inpatient Medicine Rounds Attending / Cambridge Hospital	One month per year
1993 –	Occupational Medical Consultation Clinic Preceptor / Cambridge Health Alliance	Four sessions per month (1993 – 2010) Two sessions per month (2010 – )
2001	Introduction to Clinical Medicine Preceptor / Boston University School of Medicine	Five sessions
2001 –	Employee Health & Industrial Medicine Clinic Preceptor / Cambridge Health Alliance	Two sessions per week
2012 –	Training Program in Sleep, Circadian and Respiratory Neurobiology Preceptor / Harvard Medical School	Ten to twenty hours per year Mentorship and Supervision

### **Laboratory and Other Research Supervisory and Training Responsibilities:**

1995	Advisor for a Community Medicine Research Project for a medical student from Mount Sinai School of Medicine	Daily mentorship for one month
2001	Preceptor for January Research Program / Colby College	Daily mentorship for one month
2002 – 2006; 2014	Preceptor for public health research experiences for Human Physiology students / Sargent College, Boston University	Twice weekly mentorship throughout semester
2001 –	Advisor for Occupational Medicine Residency Research Projects / Harvard School of Public Health	Twice weekly mentorship for one year

2003 – 2005; 2011 –	Advisor for doctoral theses / Harvard T.H. Chan School of Public Health	Regular mentorship throughout doctoral studies
2005 – 2006	Research Advisor for International Dermatology Program / Massachusetts General Hospital	Twice monthly mentorship for one year
2006 – 2007	Master Thesis Advisor / Boston University School of Medicine	Twice weekly mentorship for six months
2007 –	Supervisor for Post-Doctoral Research for 1 – 3 fellows / Harvard T.H. Chan School of Public Health / Cambridge Health Alliance	Twice weekly mentorship

### Formally Supervised Trainees and Faculty:

1995 – 2000	Gerry Polyhronopoulos, M.D., FRCS(C) / Surgical attending, Ville-Marie Medical Center, Montreal, Canada As a research trainee, co-authored nine papers and gained admission to McGill University Medical School. Building on his research training in our group, as a surgical resident, he performed an extra research year working in Experimental Surgery and received the award for best paper in basic science from the Canadian Association of General Surgeons.
1995 – 1996	Julia Liu, M.D. / Internal Medicine Resident, Cambridge Hospital As a research trainee won the 1996 Best Abstract Award in the Associates Research Competition from the American College of Physicians for her study of methanol poisoning that was subsequently published and highly cited in the <i>Journal of Toxicology and Clinical Toxicology</i> .
1996 – 1998	Michael Levine, M.D., M.P.H. / Private practice in Occupational Medicine, Williamsburg, Virginia Mentored longitudinally as a medical resident in occupational medicine then accepted to the Johns Hopkins Occupational Medicine residency with an Occupational Physicians Scholarship Award.
1997 – 1999	Jon M. Aldrich, M.D. / Associate Professor of Anesthesiology, University of California at San Francisco As a research trainee, co-authored six papers and gained admission to Stanford Medical School.
1998 – 1999	Angela Pinzon Rondon, M.D., M.P.H. / Associate Professor, Universidad del Rosario, School of Medicine and Health Sciences, Bogota, Columbia As a public health trainee, mastered statistical concepts and software and gained admission to Harvard School of Public Health.
1999 – 2001	Pierre Mendoza, M.D. / Medical Director, Urologic Robotic Surgery, Ocean Medical Center, Brick, New Jersey

- As a research trainee, co-authored one paper and gained admission to Boston University School of Medicine.
- 2001 – 2002 Stavros Christoudias, M.D. / Private practice in surgery, Teaneck, New Jersey  
As a research trainee, co-authored three papers and gained admission to University of Medicine and Dentistry of New Jersey.
- 2001 – 2002 Scott Tucker, M.D. / Tulane University School of Medicine, Class of 2008  
As a research trainee, co-authored two papers and gained admission to Tulane University School of Medicine.
- 2001 – 2004 J.C. Chen, M.D., Sc.D. / Associate Professor of Preventive Medicine, Environmental Health, USC, Keck School of Medicine  
Formally supervised as a teaching assistant in my Occupational Medicine course.
- 2001 – 2005 Elpidoforos Soteriades, M.D., M.Sc., Sc.D. / Visiting Scientist, Harvard School of Public Health; Assistant Professor at the Institute of Public Health, College of Medicine and Health Sciences at the United Arab Emirates University.  
Formally supervised as OM resident and Doctoral Student. Thesis: Obesity in Firefighters. As a trainee, published four papers, co-authored two others and won a national resident research award from the American College of Occupational and Environmental Medicine (ACOEM).
- 2002 – 2003 Marcelo Targino, M.D. /Chief Health Officer & Corporate Medical Director, Johnson & Johnson  
Mentored longitudinally as a medical resident in occupational medicine, then accepted to the HSPH Occupational Medicine residency with an Occupational Physicians Scholarship Award.
- 2002 – 2003 Robert B. Saper, M.D., M.P.H. / Associate Professor & Director of Integrative Medicine, Boston University School of Medicine and School of Public Health, Co-Editor in Chief, Global Advances in Health and Medicine  
MPH student and research advisee whose research project culminated in a 2004 *JAMA* publication. Our collaboration later produced a second paper in *JAMA* (2008) and a number of others related to heavy metal contamination of Ayurvedic (traditional Indian) medications.
- 2003 Robert Nordness, M.D., M.P.H. / Executive Director Pharmacovigilance Operations at Alexion Pharmaceuticals, Inc., New Haven, Connecticut  
Occupational medicine trainee, co-authored Massachusetts portion of an *MMWR* report.
- 2003 Shannon L. Muller, M.P.H. / Epidemiologist, UBC Corporation, Lexington, Massachusetts  
As a public health trainee, mastered statistical software and concepts and gained admission to Emory University's Rollins School of Public Health.
- 2003; 2006; 2007 Aaron Kenney, B.S., M.S. / University of Vermont College of Medicine, Class of 2012  
As a research trainee, co-authored one paper and gained admission to a Masters of

Biological Science at Drexel University College of Medicine and subsequently to medical school at the University of Vermont.

- 2003 – 2004 Erik Won, D.O., M.P.H. / President, Newport Brain Research Laboratory  
Occupational medicine clinical trainee, co-authored a Disease-based module for the American College of Physicians. He went on to become the Chief Physician in the Southern California Region for the Boeing Company.
- 2003 – 2004 Ernest Lee, M.D., M.P.H. / Senior Medical Officer, Occupational Health Detachment, Marine Corps Logistics Base, Barstow, California  
Occupational medicine trainee, co-authored case series in *Journal of Occupational & Environmental Medicine* and later chapters on chemical weapons.
- 2004 – 2006 Jonathan Holder, D.O., M.P.H. / Staff Occupational Medicine Physician, Quadrant, Beverly, Massachusetts  
Clinical and research trainee, received a national resident research award, lead author on one paper and co-authored a second regarding cardiovascular disease in firefighters.
- 2004 – 2006 Ibe Mbanu, M.D., M.P.H., M.B.A. / Senior Medical Director, Advocate Health Care, Downers Grove, Illinois  
Clinical and research trainee, who published his residency research in Chronobiology.
- 2005 Sachin Kapoor, D.O., M.B.A., M.P.H. / Chief, Occupational Medicine and Professional Education, The Permanente Medical Group, Antioch, California  
Formally supervised as a resident and teaching assistant in my occupational medicine course.
- 2005 – 2006 Leonard Stallings, B.S. / Fellow Department of Critical Medicine, Vidant Medical Center, East Carolina University  
As a research trainee, co-authored two papers and gained admission to Loyola's Medical School.
- 2005 – 2007 Karen Huyck, M.D., M.P.H. / Assistant Professor of Medicine, Geisel School of Medicine at Dartmouth, Lebanon, New Hampshire  
Clinical and research trainee, co-authored one paper and won the Occupational Physicians Scholarship Award.
- 2006;  
2008 – 2009 Saeher Muzzafer, M.D. / Chief of the Hazard Evaluation System and Information Service, Occupational Health Branch, California Department of Public Health  
Clinical trainee who published a review on pneumoconiosis surveillance and received a national resident research award. Completed her Pulmonary Fellowship at University of Pennsylvania School of Medicine concurrently with Occupational and Environmental Medicine Residency.
- 2006 – 2007 Jesse Geibe, M.D., M.P.H. / US Navy/DoD Occupational Medicine Liaison, US Centers for Disease Control  
Clinical and research trainee who published his residency research in *American Journal of Cardiology* and received a national resident research award.

- 2006 – 2007 Belayneh Abeije, M.D., M.P.H. / Clinical Professor of Medicine and Medical Director, Employee Health Services, University of California at San Francisco, Fresno, California  
Clinical and research trainee, he published a review in *Environmental Health Perspectives* and also received a national resident research award. The latter research was subsequently accepted for publication in *Journal Occupational Medicine & Toxicology*.
- 2006 – 2008 Philip Parks, M.D., M.P.H. / Visiting Scientist, Harvard School of Public Health; Senior Director, Medical Affairs Exact Sciences, Boston, Massachusetts  
Clinical and research trainee, winner of an Occupational Physicians Scholarship Fund award from the American College of Occupational and Environmental Medicine (ACOEM). Later, his residency research won awards from Federal Motor Carrier Safety Administration and ACOEM and was published in *Journal of Occupational & Environmental Medicine*.
- 2006 – 2008 Ken Spaeth, M.D., M.P.H. / Assistant Professor of Medicine, Hofstra North Shore-LIJ School of Medicine; Director, Occupational and Environmental Medicine Center; Director of Education, Department of Population Health, North Shore University Hospital, Manhasset, New York  
Clinical trainee, lead author of clinical handbook on neurotoxicity of metals.
- 2006 – 2009 Jae Young Kim, M.D., M.P.H. / Assistant Professor of Preventive Medicine, Keimyung University, College of Medicine, Daegu, South Korea  
Post-doctoral research fellow, lead author of a monograph summarizing a comprehensive meta-analysis of cancer and firefighting after receiving her ScD as a Graduate of the Harvard School of Public Health.
- 2006 – 2011 Antonios Tsismenakis, M.D., M.A. / Fellow, Joint Surgery, Hospital for Special Surgery, New York University, NYC, NY  
Supervised master's thesis at BUSM, which was received with honors. Gained admission to Boston University School of Medicine and subsequently orthopedics residency; co-authored six papers and a handbook, also presented at international hypertension & obesity meetings.
- 2007 – 2008 Aaron Thompson, M.D., M.P.H., FRCPC (Occ. Med.) / Assistant Professor, Faculty of Medicine, University of Toronto; Director, Occupational Medicine Residency Program, St. Michael's Hospital, Toronto, Ontario, Canada  
Clinical trainee, lead author of a lung disease chapter and received national resident research award.
- 2007 – 2009 Peter Lee, M.D., M.P.H. / Assistant Clinical Professor, Yale University School of Medicine; Global Medical Director, Health Services and Global Occupational Health & Wellness Program Leader, General Electric, Fairfield, Connecticut  
Clinical trainee and teaching assistant, winner of a national quality award and two resident research awards.
- 2007 – 2010 Gerardo Durand, M.D., M.P.H. / Medical Director, Occupational Medicine, 3M Corporation, Saint Paul, Minnesota  
Clinical and research trainee, co-authored three articles on sleep apnea in professional

drivers. Recipient of National Resident Research Award from the American College of Occupational and Environmental Medicine (ACOEM) in 2010 for research on firefighters, which was then published as a full-length original research article in *Medicine & Science in Sports Exercise*.

- 2008           Suphagaphan Tarn Ratanamaneechat, M.D. / Instructor in Preventive and Social Medicine, Mahidol University, Siriraj Hospital, Bangkok, Thailand  
At the request of the University of Pittsburgh where Dr. Ratanamaneechat had taken academic courses, I designed and supervised a several month clinical mentorship to prepare her to work in a leadership role in occupational health at her home university in Thailand.
- 2008 – 2009    Tejaswini Kulkarni, M.D., M.P.H. / Faculty, Division of Pulmonary, Allergy and Critical Care Medicine, University of Alabama at Birmingham  
Mentored as public health school trainee in Occupational and Environmental Health Curriculum and supervised in an Occupational and Environmental Medicine observership in my clinic. Under my mentorship, gained US-based residency training in internal medicine. After completing her fellowship, she has become junior faculty.
- 2008 – 2012    Chunbai Zhang, M.D., M.P.H. / Occupational Health Services, University of Washington Valley Medical Center, Renton, Washington  
Clinical and research trainee, winner of an Occupational Physicians Scholarship Fund award from the American College of Occupational and Environmental Medicine (ACOEM). He was a co-author of a state of the science review on emergency responders in the *American Journal of Hypertension*. Later served as Chief Resident (2009-10) and then became our first trainee to pursue occupational sleep medicine formally by combining clinical and research training in internal, occupational and sleep medicine. Awarded a NIOSH Pilot grant 2010-2011 under joint mentorship between myself and Atul Malhotra (then of the HMS/BWH Sleep Division) to examine driving simulators as potential occupational screening for sleep disorders and excess daytime sleepiness. He published/co-authored several original papers, two chapters and a review related to sleep apnea in commercial drivers and made two presentations at Sleep meetings.
- 2008 – 2012    Adi Leiba, M.D., M.P.A., FACP / Head, Academy and Research Branch, Israeli Defense Forces, Tel Aviv, Israel; Clinical Assistant Professor, Tel Aviv University; Instructor in Medicine, Harvard Medical School; Hospitalist, Mount Auburn Hospital, Cambridge, Massachusetts.  
Clinical and research trainee. Co-authored a case-report; presented original research at two international hypertension meetings; and co-authored two original research reports.
- 2009 – 2010    Eric Amster, M.D., M.P.H. / Associate Medical Director, Institute of Occupational and Environmental Medicine, Israel; Faculty, Dept. Environmental Health, Haifa University School of Public Health & Technion Center for Excellence in Environment Health, Haifa, Israel.  
Clinical trainee and teaching assistant, winner of a national resident research award from the American College of Occupational and Environmental Medicine (ACOEM) and a Fulbright Scholarship.

- 2010 – 2011 Stasia Muhlner, M.D., M.P.H. / Occupational Medicine Staff, Kaiser Permanente, San Francisco, California  
Clinical trainee and teaching assistant, winner of a national resident research award from the American College of Occupational and Environmental Medicine (ACOEM).
- 2010 – 2011 Anne McDonough, M.D., M.P.H. / Occupational/Environmental Medicine, US Navy, Norfolk, Virginia  
Clinical trainee, winner of a national resident research award from the American College of Occupational and Environmental Medicine (ACOEM).
- 2010 – 2011 Yolanta Petrofsky, M.D., M.P.H. / Occupational Medicine, North Bay Healthcare, Fairfield, California.  
Clinical trainee, winner of an Occupational Physicians Scholarship Fund Award from the American College of Occupational and Environmental Medicine (ACOEM).
- 2010 – 2012 Dorothee Baur, M.D., M.Sc. / Endocrine Practice, Munich-area, Germany  
Masters Student and Research trainee in Occupational and Cardiovascular Epidemiology and Clinical Research. Co-authored seven peer-reviewed publications and then continued to collaborate as an HSPH Visiting Scientist until 2016.
- 2010 – 2012 Albert Rielly, M.D., M.P.H. / Visiting Scientist, Harvard School of Public Health; Instructor in Medicine, Part-Time, Harvard Medical School; Occupational/ Environmental Medicine, Cambridge Health Alliance, Cambridge, Massachusetts; Medical Director of Employee Health, Massachusetts General Hospital, Boston, Massachusetts  
Clinical and research trainee and Occupational Medicine Chief Resident. Co-authored one research article and the revision of a heart disease manual for the firefighters' union (IAFF) of the US/Canada while a trainee.
- 2010 -2012 Paul Medrek, M.D., M.P.H. / Occupational Medicine Attending, Partners Healthcare; Medical Office, Eastman Chemical Company, Indian Orchard, Massachusetts  
Clinical and research trainee and OM Resident. First trainee to graduate and become Occupational Medicine board-certified under the American Board of Preventive Medicine's "Complementary Pathway".
- 2010 -2012 Denise Gaughan, Sc.D. / Assistant Professor, Preventive Medicine, Institute of Translational Epidemiology, Ichan School of Medicine at Mount Sinai, New York, New York  
Doctoral student committee member. Dr. Gaughan's thesis studied cardiovascular, pulmonary and other health effects in "wildland" firefighters (fight forest and brush fires) versus structural firefighters. Published three papers from this work, one of which won the Michigan Industrial Hygiene Society's Best Scientific Paper.
- 2010 – Vasileia Varvarigou, M.D. / Visiting Scientist, Harvard School of Public Health; Community Primary Care Practice, Boston, Massachusetts  
Research trainee in Occupational and Cardiovascular Epidemiology and Clinical Research. Has co-authored seven publications. In the spring of 2012, she won a national resident research award from the American College of Occupational and Environmental Medicine (ACOEM); was chosen as a finalist in the HSPH Cardiovascular

Epidemiology Program's Post-Doctoral Fellows research competition; and a Cambridge Health Alliance trainee research poster competition. This research on sudden cardiac death among police officers went on to be published with her as the lead author in the BMJ in 2014. She completed internal medicine training at Tufts (St. Elizabeth's) while continuing to be mentored in research. She collaborates with our group as a Visiting Scientist at HSPH and hopes to continue her academic career in OM after completing US visa-obligations through her current primary care work.

- 2011 – 2013 Kevin Johnson, D.O., M.P.H. / Medical Director, US Navy, Bremerton, Washington  
Clinical and research trainee and OM Chief Resident. Performing research on sleep hygiene and self-reported accident risk in transportation workers. In the spring of 2013, he was selected for a national resident research award from the American College of Occupational and Environmental Medicine (ACOEM) for the above research. The paper was subsequently accepted in the *Journal of Occupational and Environmental Medicine*.
- 2011 – 2013 Salma Batool-Anwar, MD, MPH / Clinical Practice. Pulmonary and Sleep Medicine  
Joint research trainee with Dr. Atul Malhotra working on sleep apnea and driving safety. Published one paper in *Nature and Science of Sleep* and two abstracts.
- 2011 – 2013 Dennis Teehan, M.D., M.P.H. / Medical Director, Boston Fire Department  
Clinical and research trainee, OM Resident and winner of an Occupational Physicians Scholarship Fund award from the American College of Occupational and Environmental Medicine (ACOEM). Performed research on sudden cardiac death in young firefighters. In the spring of 2013, he was selected for a national resident research award from ACOEM for the above research and the work was published in the *American Journal of Cardiology*.
- 2011 – 2014 Eleni Christoforidou, M.Sc., Ph.D. / Post-Doctoral Researcher, University of Thessaloniki Medical School, Thessaloniki, Greece  
Served on her three member doctoral committee at the University of Athens. She studied the effect of environmental exposure to heavy metals – chromium included – on mortality of the general population of Oinofita region of Greece. She published several papers from her thesis and successfully defended her Ph.D. dissertation in June 2014.
- 2011 – 2014 Matthew S. Thiese, Ph.D., M.S.P.H. / Assistant Professor, University of Utah; Rocky Mount Center for Environmental/Occupational Health, Salt Lake City, Utah  
I served as a faculty mentor on Matthew's KO1 Career Award from NIOSH on medical issues and risk factors for crashes among commercial drivers. The award led to three published papers, several more in preparation and an R21 proposal that has been submitted.
- 2012 – 2013 Josée L. Pilon, M.D., M.P.H., CCFP, CCBOM / National Medical Advisor, Royal Canadian Mounted Police (RCMP), Adjunct Associate Professor, University of Ottawa, Faculty of Medicine, Ottawa, Canada  
Post Doctoral, public health MPH trainee in Occupational Health. Upon return to Canada, successfully certified as member of the Canadian Board of Occupational Medicine by passing written and oral exams. She took a leadership position in occupational health with the Canadian federal government and after one year, this led to a second high-ranking post with the Royal Canadian Mounted Police.



- 2012 – 2013      Shu-Yi Liao, M.D., M.P.H., Sc.D. / Fellow, Pulmonary and Critical Care Medicine, University of California, Davis  
Special Clinical Fellow in Occupation Medicine – clinical trainee while finishing his doctoral studies at HSPH. After our mentorship gained a US clinical internal medicine residency position in the UC-system and is now in a pulmonary fellowship.
- 2012 – 2014      Michael Shusko, M.D. / Director, Occupational Medicine/Public Health, US Navy, Okinawa, Japan  
Clinical and research trainee and OM Resident/Chief Resident. Research on police recruit fitness funded by NIOSH ERC pilot grant and a competitive contract from the Commonwealth of Massachusetts. He won a 2014 CHA trainee research poster competition for clinical research, presented a poster also at ACOEM and submitted the paper for publication.
- 2012 – 2014      Sharon Lee, M.D., M.P.H. / Assistant Professor, Icahn School of Medicine at Mount Sinai; Practice in Occupational Medicine, Selikoff Centers for Occupational Health, New York, New York  
Clinical trainee and OM Resident. Her research won a national ACOEM resident research award.
- 2012 – 2014      Diane Chen, M.D., M.P.H. / Occupational Medicine Attending, Reliant Medical Group, Worcester, Massachusetts  
Clinical and research trainee and OM Resident. Performing research on driving simulator performance in commercial drivers and risk of obstructive sleep apnea.
- 2012 –            Justin (Chih Chao) Yang, M.D., M.P.H. / Occupational Medicine Resident  
In 2012, Justin became a Post-Doctoral Research trainee in Occupational and Cardiovascular Epidemiology and Clinical Research. Finalist and winner of a 2013 Cambridge Health Alliance trainee research poster competition for clinical research. Has published nine peer-reviewed papers, was accepted at St. Elizabeth's/Tufts for Internal Medicine Residency. In 2015, he won a Massachusetts ACP Resident Research Runner up award, and in 2017, his research was recognized at St. Elizabeth's research day. He completed his IM in 2017 and was been accepted for July 2017 to join our OM residency. He has board-certified in IM and has been selected as a recipient of the 2018 AOHC Resident Scholarship from ACOEM.
- 2012 –            Maria Korre, ScD, M.Sc. / Visiting Scientist, Harvard T.H. Chan School of Public Health, Visiting Assistant Professor, Public Health, Skidmore College, Saratoga Springs, New York  
Originally my MSc student in Cyprus, Maria worked with me to gain admission to our Doctoral program in occupational health. I served as her curriculum and thesis advisor, and now as her post-doctoral mentor. Dr. Korre is studying cardiovascular disease issues among police and firefighters. She has led/ contributed to authorship to ten published articles with several others in preparation or submitted. She won the 2016 award for the Best Student Poster at the Harvard Chan School Poster Day and has presented at several regional and national conferences. She was the winner of the 2017 Public Safety Medicine Scholarship from the Public Safety Medicine Section of the American College of Occupational & Environmental Medicine. In August, she accepted a faculty position at

Skidmore College.

- 2013 – 2015 Laurent Benedetti, M.D., M.P.H. / Medical Director, Employee Health, Beth Israel Deaconess Medical Center, Boston, Massachusetts  
Clinical and research trainee and OM Resident. Performed research on public safety worker fitness resulting in a monograph and a paper accepted for publication.
- 2013 – 2015 Mason Harrell, M.D. / Medical Director, Occupational Medicine, U.S. Navy, San Diego, California  
Clinical trainee and OM Resident. His research won a national the American College of Occupational and Environmental Medicine (ACOEM) resident research award, and was then published in the Journal of Occupational & Environmental Medicine.
- 2013 – 2015 Alix LaCoste, Ph.D. / IBM Watson Project  
Doctoral Candidate, Molecular Biology, Harvard. Curriculum advisor for HMS Sleep Medicine T-32 training grant which sponsored Dr. LaCoste. She successfully defended her thesis and has joined the IBM Watson project.
- 2013 – 2016 Andrea Farioli, M.D., Ph.D. / Research Associate, University of Bologna, Bologna, Italy; Visiting Scientist, Harvard T.H. Chan School of Public Health  
Sponsored and funded by the University of Bologna to train for 12 months in my group and programs as an HSPH Visiting Scientist. Dr. Farioli collaborated on research and served as a clinical observer. He was accepted to complete a PhD at University of Bologna under my research supervision and returned there as a salaried Research Associate, where he successfully defended his doctoral work. He has published 11 papers with our group.
- 2013 –16 Erin Teeple, M.D. / Post-Doctoral Fellow, Liberty Mutual/UMass Lowell  
Clinical and research trainee and OM Resident. First joint trainee with Brigham and Women’s Center for Orthopedic and Arthritis Outcomes Research (J. Katz, PI). Erin graduated and has now joined the Liberty Mutual Disability Research Institute as a Post-Doctoral Fellow.
- 2014 Konstantina Sampani, M.D. / Medical Graduate, Democritus University of Thrace, Alexandroupoli, Greece; Post-Doc, Harvard School of Public Health  
Visiting Physician Researcher/Observer in Occupational Medicine at CHA/HSPH. Collaborated on a study of anthropometrics and driving simulator performance.
- 2014 – 2015 Soni Matthew, M.D. / Occupational Medicine Director, General Electric, Lynn, Massachusetts  
Clinical trainee and OM Resident. Our second trainee to graduate under the American Board of Preventive Medicine’s “Complementary Pathway”.
- 2014 – 2015 Paula Carpintero Perez, M.D. / Physical and Rehabilitation Specialist, Henares Hospital, Madrid, Spain  
Visiting Occupational Medicine Resident at HSPH, clinic observation and mentorship for one year. Afterwards was able to obtain a staff physiatry position in Madrid.
- 2014 – 2015 Elpida Frantzekou, M.D., Ph.D. / Occupational Medicine Staff Physician, Evangelismos

Hospital, Athens, Greece

Visiting OM Resident for five weeks as HSPH and then longitudinally mentored and supervised her OM residency thesis regarding the practice of Occupational Medicine in the US, which was successfully defended in 2015.

- 2014 – 2017 Stephanie Susser, M.D., M.Sc., M.P.H. / Chief Occupational/ Environmental Service, Department of Public Health, Laval, Quebec, Canada  
I supervised Dr. Susser for two months in our OM clinic as a visiting resident from the Universite de Montreal and then continued to serve as one of her mentors in the HSPH MPH in Epidemiology-Online and on campus from which she graduated in May 2017. With my support she was able to successfully write the American Board of Preventive Medicine Exam in Occupational Medicine in 2017.
- 2014 – 2016 Sam Turner, M.D. / Occupational Medicine Director, US Navy, Yokohama, Japan  
Clinical and research trainee and Occupational Medicine resident. Performed research on Police officer stress with a paper in preparation.
- 2014 – 2016 Kevin Loh, D.O. / Occupational Medicine Physician, Wilford Hall Medical Center, San Antonio, US Air Force  
Clinical and research trainee and OM Resident. Performed prospective research on recruit fitness and police academy graduation rates funded by the Commonwealth of Massachusetts. Winner of the 2016 Public Safety Medicine Scholarship from the Public Safety Medicine Section of the American College of Occupational & Environmental Medicine.
- 2014 – 2016 Jeffrey Vogel, M.D., M.P.H. / Instructor in Medicine, Harvard Medical School, Occupational Medicine Staff Physician, CHA, CEO and Founder of RecoverMe  
Clinical trainee and OM Resident. Winner of an Occupational Physicians Scholarship Fund award from the American College of Occupational and Environmental Medicine (ACOEM) as a competitive travel scholarship. During his training, Jeff founded a start-up company which has created a smartphone app to facilitate recovery from workplace injuries. The company has attracted significant investment and has its application in beta-testing
- 2014 – 2017 Shane Journeay, M.D., Ph.D. / Assistant Professor, University of Toronto  
Originally mentored as a medical student, Shane then became a clinical trainee and OM Resident. In joint training with University of Toronto, Physiatry Residency Program, he finished the Physiatry portion and successfully wrote the Royal College and ABMS exam in this discipline. He then finished requirements for OM and also passed the ABPM board exam for US certification.
- 2014 – 2016 Konstantina Sampani, M.D. / Post-Doctoral Fellow, Joslin Clinic  
Post-doctoral research trainee in Occupational and Cardiovascular Epidemiology and Clinical Research. Co-authored three papers to date and helped to draft a CME module for the National Sleep Foundation.
- 2015 – 2016 Patthrarawalai Phichalai, M.D., M.P.H. / Attending Physician, King Chulalongkorn Memorial Hospital; Clinical Instructor, Department of Preventive and Social Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Special Clinical Fellow in Occupational Medicine. Clinical trainee for 12 months under the sponsorship of her university hospital in Thailand.

- 2015 – Emily Eshleman, M.Sc / Research Assistant, Medical Student at Philadelphia College of Osteopathic Medicine, Philadelphia, PA.  
Emily did a two-year masters at Harvard Chan and after spending some time visiting our clinic, she began to assist us with several police and fire studies. Emily is a co-author on a manuscript and continues to assist us with several online health surveys.
- 2015 – 2017 Luiz Guilherme Grossi Porto, M.Sc., Ph.D. / Visiting Scientist, Harvard T.H. Chan School of Public Health, Professor of Physical Education, University of Brasilia  
Visiting Scientist in Cardiovascular Epidemiology; Professor, Cardiovascular Laboratory Faculty of Medicine, Adjunct Professor of Public Health, Faculty of Physical Education, Universidade de Brasilia. Dr. Porto was awarded a competitive scholarship from the Brazilian government to work at HSPH under my supervision and we are continuing to collaborate on several grants from Brazil and the US. He has published several papers, presented at several international meetings and his 2016 poster submission to the Endocrine Society was selected for the Annual Presidential competition.
- 2016 – 2017 Mercedes Sotos-Prieto, Ph.D. / Assistant Professor, Food and Nutrition Science, Ohio University and Visiting Scientist, Harvard T.H. Chan School of Public Health  
A former Post-Doc with Prof. Frank Hu in Nutrition at Harvard T.H. Chan School of Public Health whose doctoral work was done within the Spanish PREDIMED trial, she came to work full-time on our federally-funded Mediterranean Diet Nutritional Intervention within the US Fire Service as a Research Associate. We have already co-authored one review, one invited commentary and one original paper together. She was recently recruited to a new faculty position at Ohio, where she will continue to collaborate with our group on Mediterranean nutrition workplace interventions as a Visiting Scientist.
- 2016 – 2017 John Clarke MD / Occupational Medicine Director, Cornell University, Ithaca, NY  
As a clinical trainee, John was our third mid-career, complementary pathway resident. He came as a Board-Certified Family Physician and Medical Director for ConEdison, NY. As a result of his ongoing training with us, he was able land the more complex job of overseeing occupational medical services for Cornell University and its laboratories. He began this job concurrent with the remainder of his training, which he finished in December 2017.
- 2016 Fabianne Bonnet MD / Occupational, Legal, Forensic and Traffic Medicine Residency Preceptor, University of Sao Paulo, Brazil  
Supervised occupational medicine training of this Brazilian resident at Harvard as a culminating experience of her Brazilian residency and in preparation to assume her current teaching role at the program.
- 2016 – 2018 David Rainey MD, MPH / Occupational Medicine Resident, Instructor in Medicine, HMS, Visiting Scientist and Assistant Residency Program Director, Harvard T.H. Chan School of Public Health  
Clinical and research trainee and OM Resident. Performing prospective research on an open-online Mediterranean Nutrition Intervention among Volunteer Firefighters.

Winner of a 2018 Public Safety Medicine Scholarship and the 2018 Medical Center Occupational Health Scholarship both from the American College of Occupational & Environmental Medicine.

- 2016 – 2018 Michael Chin MD, MPH / Occupational Medicine Chief Resident, Assistant Professor of Medicine, Vanderbilt University  
Clinical and research trainee and OM Resident. Performing original research on stress and resiliency, which was awarded a NIOSH Pilot grant as well as a pilot from NIEHS after winning a flash-funding competition. Michael has co-authored a textbook chapter and has won a 2018 Public Safety Medicine Scholarship from the American College of Occupational & Environmental Medicine.
- 2017 Berenice Luna Garcia MD / Visiting Scientist, Harvard T.H. Chan School of Public Health, Health Sciences Master Program (Occupational Health), School of Medicine, Universidad Nacional Autónoma de México, Mexico City, Mexico.  
Awarded a scholarship from her university to spend three months in my group doing occupational sleep medicine research. She analyzed data collected on Mexican security officers under my supervision, as well as leading data extraction for a study of sleep and fatigue as factors in transport accidents investigated by the US National Transportation Safety Board.
- 2017 – Vladimir Ivkovic, PhD / Director, Laboratory for Neuroimaging and Integrative Physiology, Mass General Hospital  
Scientific Advisory Board for Dr. Vladimir Ivkovic’s NIH Mentored Research Scientist Development Award (K01) proposal “Validating Multimodality Brain and Psychophysiological Monitoring for Assessment and Prediction of Post-Traumatic Stress in First Responders”.
- 2017- Maria Romanidou / PhD Candidate, University of Alexandroupolis, Greece  
Member of Maria’s Thesis committee. She was previously a volunteer researcher in our group in 2017. She returned to Greece to finish her Master’s degree in nutrition and will now pursue a doctorate in Greece using data from our study of Mediterranean Nutrition intervention among firefighters. Maria has already presented at several international conferences.

**Formal Teaching of Peers (e.g., CME and other continuing education courses):**

Those presentations below sponsored by outside entities are so noted and the sponsor is identified.

1994	Solvents; Metals Fundamental of Industrial Hygiene, Harvard School of Public Health	Two Plenary Lectures Boston
1997 – 2003; 2005	Lung Disease due to Organic and Inorganic Dusts, Fundamentals of Industrial Hygiene, Harvard School of Public Health	Plenary Lecture Boston
2003	Clinical Recognition of Chemical Toxidromes	Plenary Lecture

	Chemical Terrorism and Public Health: Recognize, Prepare and Respond, Harvard School of Public Health	Boston
2003; 2005	Introduction – Why This Training is Important Emergency Medical Services Response to Hazardous Materials Incidents or Acts of Terrorism, Harvard School of Public Health	Plenary Lecture Boston
2005	Metal Fumes and Dusts; Chemical Emergencies Including Pesticide Poisoning Fundamentals of Occupational Health, Cyprus International Institute and Harvard T.H. Chan School of Public Health	Two Plenary Lectures Nicosia, Cyprus
2006 – 2008	Medical Monitoring of Asbestos-Exposed Workers Current Concepts in Asbestos-Related Lung Disease, Harvard Medical School	Plenary Lecture Boston
2010	Framing Achievements and Challenges in Productivity & Health Management Leadership for Productivity & Health Management, Harvard School of Public Health/Novartis, Whole Foods, Harvard Pilgrim, Healthways, Wellpoint	Plenary Lecture Boston
2012	Screening Transportation Operators for Obstructive Sleep Apnea Leadership for Productivity & Health Management: Sleep and Shift Work, Harvard School of Public Health/ Occupational & Environmental Health Network	Plenary Lecture Boston
2014	Challenges: Diabetes & Contemporary Nutrition Leadership for Productivity & Health Management: Mediterranean Diet & Workplace Health 2014, Harvard School of Public/FAGE USA	Plenary Lecture Boston

### Local Invited Presentations:

Those presentations below sponsored by outside entities are so noted and the sponsor is identified.

1993	Occupational Medicine / Grand Rounds Department of Medicine, Harvard University Health Services
1994	Treatment of Chemical Burns / Grand Rounds Department of Environmental Health, Harvard School of Public Health
1995	Case Discussion: A 55 Year Old Disabled Construction Worker with Increasing Dyspnea and Abnormal Chest Radiographs / Clinicopathological Conference Department of Pathology, Massachusetts General Hospital (New England Journal of Medicine)

- 1995 Silicosis and Related Diseases / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 1995 Pneumoconioses / Seminar  
Poison Control Center, Toxicology Fellowship, Children's Hospital
- 1996 Hypersensitivity Pneumonitis / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 1997 Carbon Monoxide Poisoning / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 1997 Occupational and Environmental Lung Disease / Adult Provider Conference  
Department of Medicine, Cambridge Health Alliance
- 1998 Accelerated Silicosis and Silica-Related Diseases / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 1998 Methanol Poisoning (Prognostic Factors) / Grand Rounds/Morbidity and Mortality  
Department of Medicine, Cambridge Health Alliance
- 1998 Firefighting Medical Requirements – The Science Behind NFPA 1582 / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 1999 Latex Allergy: Diagnostic and Laboratory Considerations / Grand Rounds  
Department of Medicine, Cambridge Health Alliance
- 1999 Methylene Chloride Intoxication / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 1999 Latex Allergy / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2000 Idiopathic Environmental Intolerance / Grand Rounds  
Department of Medicine, Cambridge Health Alliance
- 2001 Biological Testing for Mercury / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2002 Chemical Terrorism / Faculty Panel  
Alumni Day, Harvard School of Public Health
- 2002 Clinical Approach to the Mercury-Exposed Patient / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2003 Lead, Seizures and 'Guglu': The Hidden Dangers of Ayurvedic Medicine / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2003 An Indian Immigrant with Lead Poisoning and Seizures – Dangers of Traditional Medicines /  
Grand Rounds

Department of Medicine, Cambridge Health Alliance

- 2003 Latex Allergy and Pseudo-Latex Allergy / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2004 Chemical Emergencies / Grand Rounds  
Department of Medicine, Cambridge Health Alliance
- 2004 Abdominal Pain in a Young Man (Lead Toxicity) / Grand Rounds/Morbidity and Mortality  
Conference  
Department of Medicine, Cambridge Health Alliance
- 2004 Lead Toxicity Among Brazilian Painters / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2005 Profile of Massachusetts Firefighters Retiring Under Heart Presumption Legislation:  
1997 – 2004 / Pilot Project Symposium  
Department of Environmental Health, Harvard School of Public Health, Harvard-NIOSH  
Educational Resource Center
- 2005 Mercury and the General Population / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2006 Carbon Monoxide Poisoning / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2007 Asbestos-Related Pericarditis / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2007 On-Duty Coronary Heart Disease Events in Firefighters: Predictors of Fatality / Pilot  
Project Symposium  
Department of Environmental Health, Harvard School of Public Health, Harvard-NIOSH  
Educational Resource Center
- 2007 Hypertension in Emergency Responders / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2007 Ayurvedic Lead Poisoning / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2008 Hypertension in Police, Firefighters and Other Emergency Responders / Hypertension  
Conference  
Department of Medicine, Brigham and Women's Hospital
- 2008 Screening for Obstructive Sleep Apnea at Commercial Driver Examination / Pilot  
Project Symposium  
Department of Environmental Health, Harvard School of Public Health, Harvard-NIOSH  
Educational Resource Center



- 2008      Obstructive Sleep Apnea and Commercial Motor Vehicle Drivers / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2009      Coronary Heart Disease in Firefighters: State of the Science / Grand Rounds  
Department of Medicine, Cambridge Health Alliance
- 2009      Cardiovascular Disease in Firefighters / Grand Rounds  
Department of Family Medicine, Cambridge Health Alliance
- 2009      A Motor Vehicle Accident Due to Obstructive Sleep Apnea / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2009      The Obesity Epidemic and Obstructive Sleep Apnea in Transportation Workers /  
Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2010      Workers Compensation: The Initial Care of Occupational Injuries / Conference  
Department of Emergency Medicine, Cambridge Health Alliance
- 2010      Elevated Urine Mercury Levels / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2011      High Risk Groups – Untreated Sleep Disorders, Non-Standard Work Hours, Commercial  
Vehicle Drivers / Invited Faculty – Discussant and  
Drowsy Driving: Translating Sleep Research to the Real World: Developing a Regulatory  
Framework for Drowsy Driving and Exploring the Challenges of Physiologically Based  
Modeling / Invited Faculty – Participant  
Internal Leadership Seminar, Radcliffe Institute for Advanced Study, Harvard University
- 2011      Disaster Response: Lessons Learned Since 9/11 / Expert Panel Member  
Live and On-Demand Webcast, The Forum at Harvard School of Public Health (Reuters)
- 2011      Recognizing and Managing Cardiovascular Risk in Firefighters / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2011      Alleged Arsenic Poisoning: Was it Attempted Murder? / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2012      Motor Vehicle Crash in a Commercial Driver with Obstructive Sleep Apnea / Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2012      Cardiomegaly, Left Ventricular Hypertrophy and Sudden Cardiac Death in Firefighters /  
Grand Rounds  
Department of Environmental Health, Harvard School of Public Health
- 2014      Occupational Sleep Medicine: Obstructive Sleep Apnea in Commercial Drivers /  
Grand Rounds  
Division of Sleep Medicine, Harvard Medical School and Brigham and Women's Hospital

- 2015 Cardiovascular Disease in a Police Officer / Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2016 A Preventable Truck Crash in a Commercial Driver with Obstructive Sleep Apnea /  
Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2016 Indoor Air Quality, "Chemical Sensitivity" and Mold - Facts and Fiction /  
Morning Conference, Invited Speaker  
Division of Allergy & Immunology, Brigham and Women's Hospital, Harvard Medical  
School
- 2016 Asymptomatic Elevation of Blood Mercury/ Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2016 Progressive Lung Disease in a Sausage Maker: a Case of Salami Brusher's Disease/  
Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2016 Sudden Cardiac Death in a Corrections Officer/ Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2017 Utility Worker Fatalities in a Manhole: Toxicology and Prevention of Confined Space  
Hazards due to Sewer Gas/Hydrogen Sulfide / Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2017 Introduction to the Greek Diet: and Evening with the Renowned Chef Maria Loi.  
Initiative for Productivity and Health Management, Harvard T.H. Chan School of Public  
Health
- 2018 Latex Allergy and Pseudo-Latex Allergy/ Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2018 Wi-Fi Makes my Head Hurt, A Case of Environmental Intolerances/ Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health
- 2018 Sudden Cardiac Death in a Volunteer Fire Chief/ Grand Rounds  
Department of Environmental Health, Harvard T.H. Chan School of Public Health

### **Report of Regional, National and International Invited Teaching and Presentation**

#### **Regional:**

Those presentations below sponsored by outside entities are so noted and the sponsor is identified.

- 1992 Occupational Medicine / Grand Rounds

- St. Anne's Hospital, Fall River, Massachusetts (Commonwealth of Massachusetts SENSOR Program)
- 1993 Occupational Medicine / Grand Rounds  
St. Luke's Hospital, New Bedford, Massachusetts (Commonwealth of Massachusetts SENSOR Program)
- 1993 Occupational Medicine / Grand Rounds  
Arlington Hospital, Arlington, Massachusetts (Commonwealth of Massachusetts SENSOR Program)
- 1994 The Hazmat Response / Plenary Talk – Airborne Toxins Conference  
Baystate Medical Center, Springfield, Massachusetts (Massachusetts Poison Control Center)
- 1994 The Hazmat Response / Plenary Talk – Airborne Toxins Conference  
Wellesley College, Wellesley, Massachusetts (Massachusetts Poison Control Center)
- 1996 Hazardous Materials Incidents / Plenary Talk  
First Annual Northeast Regional All-Hazard Conference, Boston, Massachusetts (Massachusetts Emergency Management Association)
- 2002 Medical Examinations of Firefighters: Issues in Medical Surveillance & Fitness for Duty / Seminar – Invited Faculty  
University of Connecticut Health Center, Farmington, Connecticut
- 2003 On-Duty Coronary Heart Disease Deaths in Firefighters / Plenary Talk  
New England College of Occupational & Environmental Medicine Conference, Bedford, Massachusetts
- 2005 Chemical Emergencies / Visiting Professor  
Occupational Health Colloquium, University of Connecticut, Farmington, Connecticut
- 2005 Mercury and Human Health / **Keynote Speaker**  
**7<sup>th</sup> Annual Research Symposium, New England Hellenic Medical and Dental Society,** Boston, Massachusetts
- 2005 Lead Poisoning from Ayurvedic (Traditional Indian) Medications / Research Presentation  
New England College of Occupational & Environmental Medicine Annual Conference, Bedford, Massachusetts (Environmental Research Center, Harvard School of Public Health)
- 2006 Heart Disease in Firefighters: From Risk Factors to On-Duty Death / Visiting Professor  
Occupational Health Colloquium, University of Connecticut, Farmington, Connecticut
- 2007 Emergency Duties and Heart Disease Deaths in Firefighters / Research Presentation  
New England College of Occupational & Environmental Medicine Annual Conference, Bedford, Massachusetts (Environmental Research Center, Harvard School of Public Health)
- 2008 Cardiovascular Disease in Firefighters: State of the Science / Plenary Talk and

- How to Decrease Cardiovascular Mortality in your Fire Department / Panelist  
New England College of Occupational & Environmental Medicine and the Occupational & Environmental Medicine Association of Connecticut, Sturbridge, Massachusetts
- 2008 Obstructive Sleep Apnea Screenings at Department of Transportation Medical Examinations: An Update / Research Presentation  
New England College of Occupational & Environmental Medicine Annual Conference, Bedford, Massachusetts (Environmental Research Center, Harvard School of Public Health)
- 2009 The Obesity Epidemic and Obstructive Sleep Apnea in Truck, Bus and Train Operators / Visiting Professor Presentation  
Yale University School of Medicine, New Haven, Connecticut
- 2010 Dealing with Sleepiness in Transportation Workers / Plenary Lecture  
Northeast Sleep Society Annual Conference, Newton, Massachusetts (Sleep Health Centers)
- 2010 Obstructive Sleep Apnea in Commercial Drivers: Present and Future / Invited Speaker  
New Hampshire Association of Occupational Health Nurses, Bedford, New Hampshire
- 2010 Cardiovascular Disease in the US Fire Service: Past, Present & Future / Invited Speaker  
New England College of Occupational & Environmental Medicine, Newton, Massachusetts
- 2010 Occupational & Environmental Medicine / Professor Rounds  
Internal Medicine Residency Program, Metrowest Medical Center, Framingham, Massachusetts
- 2010; 2011; 2012 Clinical Research Track / Session Moderator  
New England College of Occupational & Environmental Medicine Annual Conference, Newton, Massachusetts (Environmental Research Center, Harvard School of Public Health)
- 2011 On-Site Clinics / Session Moderator  
New England College of Occupational & Environmental Medicine Annual Conference, Newton, Massachusetts (Environmental Research Center, Harvard School of Public Health)
- 2012 The Growing Interface Between Occupational Health and Sleep Medicine / Invited Speaker  
Massachusetts Sleep Society Spring Meeting, Boston, Massachusetts
- 2012 Left Ventricular Hypertrophy & Cardiomegaly in Firefighter Sudden Death / Research Presentation  
New England College of Occupational & Environmental Medicine Annual Conference, Newton, Massachusetts (Environmental Research Center, Harvard School of Public Health)
- 2012 Sleep Disorders and Commercial Drivers / Invited Speaker  
Commercial Driver Medical Examiner Training, New England College of Occupational & Environmental Medicine, Newton, Massachusetts
- 2013 Leadership in Medicine: Occupational Medicine as a Career Path Combining Academics, Administration and Consulting / Invited Speaker

Boston University School of Medicine, Boston, Massachusetts (Medicine and Business Association)

- 2013 Workers Compensation Case as Viewed by Various Stakeholders / Invited Panelist  
Work-Related Injuries: New Challenges and New Solutions Conference, Waltham, Massachusetts (Boston University School of Medicine and the Lou Millender Foundation)
- 2014 Cardiovascular Disease and Sudden Cardiac Death in Law Enforcement and Fire Personnel /  
Visiting Professor  
Occupational Health Colloquium, University of Connecticut, Farmington, Connecticut
- 2014 Work Causation in Cardiovascular Cases / Panelist and Case Discussant  
Work-Related Injuries: New Challenges and New Solutions Conference, Waltham, Massachusetts (Occupational and Environmental Health Network and the Lou Millender Foundation)
- 2014 Maximal Medical Improvement / Session Moderator  
Work-Related Injuries: New Challenges and New Solutions Conference, Waltham, Massachusetts (Occupational and Environmental Health Network and the Lou Millender Foundation)
- 2014 Cardiovascular Disease in Firefighting and Law Enforcement: Journey from Resident  
Project to State of the Science / **Keynote Address-Harriet Hardy Award**  
**New England College of Occupational & Environmental Medicine Annual Conference**,  
Newton, Massachusetts
- 2017 Mediterranean Diet, Workplace Health Promotion and the "Feeding America's Bravest"  
Trial.  
Special Invited Seminar, Yale Occupational and Environmental Medicine Program, Yale  
School of Medicine, New Haven, Connecticut.
- 2017 Mediterranean Diet for Cardiovascular and Workplace Health Promotion  
Invited Wellness Seminar, Vertex Pharmaceuticals, Boston, Massachusetts
- 2017 Sleep and Transportation Accidents / Invited Speaker  
New England College of Occupational & Environmental Medicine Annual Conference,  
Newton, Massachusetts
- 2018 Sudden Cardiac Death among Firefighters and Police Officers.  
Special Invited Seminar, Yale Occupational and Environmental Medicine Program, Yale  
School of Medicine, New Haven, Connecticut.
- 2018 Traditional Greek Diet: Benefits, Applications to Workplaces and Outreach /  
Invited Speaker, New England Hellenic Medical and Dental Society, Under the Aegis of  
the Consul General of Greece in Boston. Boston, Massachusetts
- 2018 Feeding America's Bravest: Survival Mediterranean Style in the Fire Service /  
Visiting Professor, Occupational Health Colloquium,  
University of Connecticut School of Medicine, Farmington, Connecticut

**National:**

Those presentations below sponsored by outside entities are so noted and the sponsor is identified.

- 1998            Firefighting Medical Requirements - The Science Behind NFPA 1582 / Invited Speaker -  
Medical Session  
National Fire Protection Association Fall Meeting, Atlanta, Georgia (NFPA)
- 1999            Fitness for Duty in Firefighters: Some of the Issues Occupational Medicine / Visiting  
Professor Grand Rounds  
Center for Occupational and Environmental Health, University of California at Irvine,  
Irvine, California
- 2001            Evidence-Based Medical Examinations for Hazardous Materials Firefighters /  
Expert Workshop Presentation  
Best Practices in Workplace Surveillance Workshop, National Institute for Occupational  
Safety and Health, Cincinnati, Ohio (NIOSH)
- 2002            Occupational Hazards of Firefighters: From the Fire Ground to the Clinic-Where can the  
Occupational Doc make a Difference? / Plenary Talk  
National Annual Providers' Meeting, Merrimack, New Hampshire (Occupational Health +  
Rehabilitation, Inc.)
- 2003            Chemical Terrorism: Empiric Recognition & Management / Invited Speaker  
"Meet the Professor" Session, American College of Physicians Annual Meeting, San  
Diego, California (ACP)
- 2003            Occupational Risk Factors for On-Duty Coronary Heart Disease Deaths In Firefighters /  
Invited Research Presentation  
American Occupational Health Conference, American College of Occupational &  
Environmental Medicine, Atlanta, Georgia
- 2004            Acute Chemical Emergencies: Syndrome-Based Recognition & Empiric Management /  
Invited Speaker  
"Meet the Professor" Session, American College of Physicians Annual Meeting, New  
Orleans, Louisiana (ACP)
- 2004            Obesity and Cardiovascular Disease Risk Factors in Firefighters: A Prospective Study /  
Invited Research Presentation  
American Occupational Health Conference, American College of Occupational &  
Environmental Medicine, Kansas City, Missouri
- 2004            Essential Job Duties: Making Recommendations for Appropriate Accommodations/  
Modified Duties / Invited Speaker  
2004 National Workers' Compensation and Occupational Medicine Seminar, Hyannis,  
Massachusetts (SEAK, Inc. [Skills, Education, Achievement, Knowledge])
- 2006            Hematopoietic Toxicity from Lead-Containing Ayurvedic Medications /  
Invited Research Presentation

American Occupational Health Conference, American College of Occupational & Environmental Medicine, Los Angeles, California

- 2007 Cardiovascular Disease in Firefighters / Visiting Professor  
Occupational Health Speaker Series, University of Michigan School of Public Health, Ann Arbor, Michigan
- 2007 Public Safety Workers: the Case for Improved Blood Pressure Control / Invited Speaker  
Worklife 2007: Protecting and Promoting Worker Health: A National Symposium, National Institute for Occupational Safety and Health/Centers for Disease Control, Bethesda, Maryland (NIOSH/CDC)
- 2007 Environmental Intolerances: Crossroads of Toxicology and Psychiatry / Invited Speaker  
Center for Forensic Psychiatry of Michigan & Forensic Psychiatry Fellowship Program, University of Michigan Medical School, Ann Arbor, Michigan
- 2007 Heart Disease in Firefighters / Visiting Professor  
Division of Occupational & Environmental Medicine, Wayne State University School of Medicine, Detroit, Michigan
- 2008 Update in Cardiovascular Epidemiology / Special Invited Presentation and  
Cardiovascular Risk Stratification in Firefighters / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, Washington, District of Columbia (Department of Homeland Security)
- 2008 The Obesity Epidemic and Future Emergency Responders / Research Presentation and  
Cardiovascular Disease In Emergency Responders / Invited Speaker and Session Chair,  
State of the Science Review  
American Occupational Health Conference, American College of Occupational & Environmental Medicine, New York, New York
- 2009 Cardiovascular Risk Stratification in Firefighters by Cardio-Respiratory Fitness / Principal  
Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, Washington, District of Columbia (Department of Homeland Security)
- 2010 Emergency Duties and Heart Disease Deaths in US Firefighters / Visiting Professor  
Departments of Epidemiology and Environmental Health Sciences, Johns Hopkins  
Bloomberg School of Public Health, Baltimore, Maryland
- 2010 Cardiovascular Disease in the Fire Service: State of the Science / Visiting Professor  
Department of Preventive Medicine Seminar, Mount Sinai School of Medicine, New York,  
New York
- 2010 Exercise Tolerance as a Predictor of Firefighters' Future Risks / Principal Investigator  
Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of

Homeland Security/Federal Emergency Management Agency, Chicago, Illinois  
(Department of Homeland Security)

- 2010 Cardiovascular Disease in the US Fire Service: Current Epidemiology & the Future Role of Fitness Testing / Plenary Lecture  
Via video link, Firefighter Cardiovascular Health & Safety Research Summit 2010, Champaign, Illinois (Illinois Fire Service Institute, University of Illinois)
- 2010 The Role of the Occupational Medicine Physician in Evaluating Sleep and Sleep Disorders / Plenary Lecture  
The Future of Clinical Sleep Medicine, Dedham, Massachusetts (Sleep Health Centers)
- 2011 Cardiovascular Disease in Firefighters and Law Enforcement: State of the Scientific Research and Clinical Implications / Invited Faculty  
Scientific Course Session, American Occupational Health Conference, American College of Occupational & Environmental Medicine, Washington, District of Columbia
- 2011 Physical Fitness and Cardiovascular Risk / Featured Research Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, New York, New York  
(Department of Homeland Security)
- 2011 Obstructive Sleep Apnea Detection Strategies in Transportation Operators / Plenary Lecture  
Sleep Apnea & Multi-Modal Transportation Conference 2011, Baltimore, Maryland  
(American Sleep Apnea Association, US Dept. of Transportation)
- 2011 Cardiovascular Disease / “Showcase” Research Presentation, Plenary Lecture  
2<sup>nd</sup> National Fire Service Research Agenda Symposium, National Fallen Firefighters Foundation, U.S. Fire Academy (U.S. Department of Homeland Security)
- 2012 Obstructive Sleep Apnea Detection Strategies in Transportation Operators: Potential In-Clinic Tests for Sleepiness / Invited Research Presentation  
Commercial Driver Medical Examiner Update, American Occupational Health Conference, American College of Occupational & Environmental Medicine, Los Angeles, California
- 2012 Survival of the Fittest? Exercise Tolerance & Longitudinal Outcomes / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, Denver, Colorado  
(Department of Homeland Security)
- 2013 Screening for Obstructive Sleep Apnea among Truck Drivers / Invited Speaker and Health, Obstructive Sleep Apnea, and Accident Risk among Truckers Session / Panelist  
Transportation Research Board 92<sup>nd</sup> Annual Meeting, Washington, District of Columbia  
(Transportation Research Board of the National Academies)
- 2013 Translating Firefighting Cardiovascular Epidemiology into Clinical Evaluations / Plenary Lecture



Cardiovascular Physiology & Disease in Firefighting: Translating Recent Research to Clinical Practice Symposium, Cambridge Health Alliance, Orlando, Florida (Cambridge Health Alliance, Cambridge Medical Care Foundation, Harvard School of Public Health, International Association of Fire Fighters, International Association of Fire Chiefs, National Fallen Firefighters Foundation, Public Safety Medical, Masimo Corporation)

- 2013 Chemical Asphyxiants in the Workplace / Plenary Lecture & Panelist  
Medical Surveillance and On-Site Testing - The Next Generation of Occupational Health and Safety, Orlando, Florida (Masimo Corporation)
- 2013 Cardiorespiratory Fitness & Longitudinal Health and Employment Outcomes / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, Denver, Colorado (US Department of Homeland Security)
- 2013 Non-invasive Detection of Left Ventricular Hypertrophy/Cardiomegaly in Firefighters / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, Denver, Colorado (US Department of Homeland Security)
- 2014 Causation of On-Duty Cardiovascular Events Among Firefighters and Law Enforcement Officers / Invited Speaker  
Public Safety Session, American Occupational Health Conference, American College of Occupational & Environmental Medicine, San Antonio, Texas (Public Safety Medicine Section of ACOEM)
- 2014 Understanding Cardiovascular Disease and Sudden Cardiac Death in the Fire Service / Visiting Professor  
Special Seminar, Krannert Institute of Cardiology, Indianapolis, Indiana (Indiana Health/Indiana University)
- 2014 Non-invasive Detection of Left Ventricular Hypertrophy/Cardiomegaly in Firefighters / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, Dallas, Texas (US Department of Homeland Security)
- 2015 Cardiovascular Poster Session / Invited Faculty  
Discussion Group Leader, Cardiovascular Health and Disease: Occupational and Environmental Factors Conference, University of California San Francisco, California
- 2015 Cardiovascular Disease and Sudden Cardiac Death in Law Enforcement and Firefighting: from Epidemiology to Risk Stratification and Fitness for Duty / Plenary Lecture  
Cardiovascular Health and Disease: Occupational and Environmental Factors Conference, University of California, San Francisco, California
- 2015 Cardiovascular Disease and Sudden Cardiac Death in Law Enforcement and Firefighting /

Visiting Professor

Occupational & Environmental Medicine Grand Rounds, Northwest Center for Occupational Health & Safety, University of Washington, School of Public Health, Seattle, Washington

- 2015 Non-invasive Detection of Left Ventricular Hypertrophy/Cardiomegaly in Firefighters / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, National Harbor, Maryland (US Department of Homeland Security)
- 2015 Mediterranean-Diet-Based Interventions to Change Firefighters' Eating Habits and Improve Cardiovascular Profiles / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, National Harbor, Maryland (US Department of Homeland Security)
- 2015 Current State of the Sciences: Medical Evaluations and Testing, Department Standards, Shift Work / Invited Speaker  
Future Directions in Cardiovascular Research for the U.S. Fire & EMS Service, Washington, District of Columbia (Federal Emergency Management Agency, National Heart, Lung and Blood Institute, National Fallen Firefighters Foundation)
- 2015 State of Science 2: Cardiovascular Health of Firefighters: Cardiovascular Risk Factors and Associated Risk / Invited Speaker  
Physicals, Screening Mechanisms, and Development of a Fire Service Toolkit / Panelist  
Heart to Heart: Strategizing an Evidence-Based Approach to Reduce Cardiac Disease and Death in the Fire Service, Washington, District of Columbia (National Institute for Occupational Safety and Health, National Fallen Firefighters Foundation)
- 2016 Occupational Medicine Training Pipeline: Experience, Challenges and Solutions / Invited Speaker  
National Meeting of Occupational and Environmental Medicine Residency Directors Association, Chicago, Illinois
- 2016 Occupational Sleep Medicine, Session Moderator and Director and Obstructive Sleep Apnea in Occupational Settings / Invited Speaker  
American Occupational Health Conference, American College of Occupational and Environmental Medicine, Chicago, Illinois.
- 2016 Final Report: Non-invasive Detection of Left Ventricular Hypertrophy/Cardiomegaly in Firefighters / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of Homeland Security/Federal Emergency Management Agency, San Antonio, Texas, (US Department of Homeland Security)
- 2016 Update: Mediterranean-Diet-Based Interventions to Change Firefighters' Eating Habits and Improve Cardiovascular Profiles / Principal Investigator Presentation  
Annual Principal Investigators Meeting, Research & Development Grants, Department of

Homeland Security/Federal Emergency Management Agency, San Antonio, Texas  
(US Department of Homeland Security)

- 2016 Mediterranean Diet for Workplace Health Promotion: "Feeding America's Bravest" Trial. Special Invited Seminar, Center for Occupational and Environmental Health, Division of Occupational & Environmental Medicine, University of California at Irvine, Irvine, California.
- 2017 Left Ventricular Hypertrophy and Cardiac Enlargement in Public Safety Personnel. Invited Presentation, Public Safety Medicine Section, American College of Occupational Medicine, American Occupational Health Conference, Denver, Colorado.
- 2018 Survival Mediterranean Style: A Cluster-Randomized Trial in the US Fire Service. Invited Webinar, Society for Nutrition Education and Behavior, Indianapolis.
- 2018 Applied Public Health: Lifestyle Changes to Improve the Health of the US Fire Service. Invited Visiting Professor Lecture in HP131: Introduction to Public Health, Skidmore College, Saratoga Springs, NY.

#### **International:**

Those presentations below sponsored by outside entities are so noted and the sponsor is identified.

- 1995 Occupational Lung Diseases / Visiting Professor  
Fundacao Oswaldo Cruz, National School of Public Health, Rio De Janeiro, Brazil  
(Poison Control Center, Niteroi, Rio De Janeiro, Brazil)
- 1995 Immunotoxicology of Occupational Lung Disease / Grand Rounds  
Department of Pathology, Hospital Universitario Antonio Pedro, Universidade Federal Fluminense, Niteroi, Rio De Janeiro, Brazil (Poison Control Center, Niteroi, Rio De Janeiro, Brazil)
- 1996 Indoor Air Quality and Multiple Chemical Sensitivities / Visiting Professor  
Special Seminar, Aristotelian University of Thessaloniki and the AHEPA Hospital, Thessaloniki, Macedonia, Greece
- 1997 Occupational and Environmental Lung Disease: Changing Epidemiology & Advances in Diagnosis / Plenary Talk  
Medical Developments for the New Millennium, Hellenic Medical Society of New York, Rhodes, Greece
- 1998 Occupational Asthma and Extrinsic Allergic Alveolitis (Hypersensitivity Pneumonitis) / Plenary Talk and  
Lung Cancer and Occupational Risk Factors in Greece / Plenary Talk  
Advances in Medicine and Surgery, Hellenic Medical Association of Quebec, First International Symposium, Zakynthos, Greece
- 1998 Multiple Chemical Sensitivities / Research Presentation

5<sup>th</sup> World Hellenic Biomedical Conference Program, New York, New York

- 1998-1999 Occupational Lung Diseases; Latex Allergy and the Workplace; Methylene Chloride Poisoning; Multiple Chemical Sensitivities / Visiting Professor  
Presented the above seminars, University of Athens, School of Medicine, Athens, Greece
- 1999 Occupational Diseases, The Present Situation and Future Outlook / Invited Panelist  
Round Table Discussion, 25<sup>th</sup> Annual Pan Hellenic Medical Conference (Medical Society for all of Greece), Athens, Greece
- 1999 Environmental Concentrations and Personal Exposure to Benzene in Central Athens /  
Research Presentation  
International Society for Environmental Epidemiology/International Society of Exposure  
Analysis Joint Conference 1999, Athens, Greece
- 2002 Mercury in Dental Fillings, Seafood and Vaccines: the Health Issues in Perspective /  
Plenary Talk  
Advances in Clinical Medicine Symposium, Hellenic Medical Society of New York and  
Hellenic Medical Society of Quebec, Montreal, Canada
- 2006 Risk Assessment for Heavy Metal Exposure / Visiting Professor and  
Heart Disease in Firefighters / Visiting Professor  
University of Athens School of Medicine, Athens, Greece
- 2006 Estimated Burden of Disease from Household Carbon Monoxide Poisonings in Europe /  
Invited Presentation and Workshop Participant  
WHO Second Technical Meeting on Quantifying Disease from Inadequate Housing, WHO  
Regional Office for Europe, Bonn, Germany (WHO)
- 2007 Clinical Syndrome-Based Recognition of Chemical Hazards / Plenary Talk  
European Union Training for Health Professionals on Rapid Response to Health Threats:  
Pilot Course, Athens, Greece (European Union, Prolepsis)
- 2009 Barriers to the Diagnosis and Treatment of Obstructive Sleep Apnea in Commercial Drivers  
/ Invited Presentation  
International Conference on Fatigue Management in Transportation Operations, Boston,  
Massachusetts (U.S. Department of Transportation)
- 2009 Epidemic Obstructive Sleep Apnea among Commercial Drivers: Dangerous Consequence of  
the Obesity Epidemic / Plenary Talk and  
The Obesity Epidemic and U.S. Emergency Responders / Plenary Talk  
Guidelines for the Prevention of Obesity in the Workplace Workshop, Larnaca, Cyprus  
(European Union)
- 2009 Cardiovascular Disease in the Fire Service: State of the Science / Plenary Talk  
International Association of Fire Fighters, John P. Redmond Foundation Symposium on the  
Occupational Health and Hazards of the Fire Service, Los Angeles, California [International  
Association of Fire Fighters (IAFF)]

- 2010 Sleep and Work/Health / Invited Presentation  
The AFA Insurance Advisory Committee on Research and Development Trip to Boston and New York, HSPH, Boston [AFA Insurance (Confederation of Swedish Enterprise, Swedish Trade Union Confederation and Swedish Federation of Salaried Employees and Services)]
- 2010 Developing a Wellness Program in a Police Department (Given with the Holden, Massachusetts Police Department)  
Fitness & Law Enforcement: “The Good, the Bad & the Health Benefits” / Invited Presentation, Police Physicians Section  
IACP 2010- The Annual Meeting of the International Association of Chiefs of Police, Orlando, Florida (Police Physicians Section/IACP)
- 2011 Cardiovascular Disease in Firefighters: Scientific Approaches to Causality and Prevention / Visiting Professor Occupational Medicine Grand Rounds  
St. Michael’s Hospital, Gage Occupational Health Unit, University of Toronto, Toronto, Ontario, Canada (Ontario Telemedicine Network (OTN) Education Program)
- 2011 Migration, Health & Social Care / Session Chair & Moderator  
Pan-European Conference on the Integration of Immigrants: Good Practices in the Sectors of Health, Welfare & Social Security, Athens, Greece (European Union and the Hellenic Republic, Ministry of Interior)
- 2011 Cardiovascular Disease in the Fire Service / Invited Presentation  
Occupational Diseases Workshop, Health, Safety and EMS Conference, International Association of Fire Fighters, New York, New York (International Association of Fire Fighters (IAFF), John P. Redmond Foundation)
- 2012 Occupational Medicine at Harvard: Past, Present and Future Challenges / Visiting Professor  
Department of Environmental and Occupational Health, Universite de Montreal, School of Public Health, Faculty of Medicine, Montreal, Quebec, Canada
- 2013 Excessive Daytime Drowsiness: Screening for Occupational Drivers / Plenary Lecture  
Excessive Daytime Sleepiness, Work and Road Safety: Medicine and the Automotive Industry Meet to Improve Prevention Strategies, Bologna, Italy (University of Bologna, Ducati, Lamborghini, Guggiaro, Italian Ministry for the Environment, Land and Sea)
- 2013 Preview Summary: “Obstructive Sleep Apnea in North American Commercial Drivers” / Invited Speaker  
Special Lecture. Closed seminar on Sleep Disordered Breathing in Occupational Health, Matsuyama, Japan (Japan Society for Occupational Health, Japan Sleep Society)
- 2013 Obstructive Sleep Apnea in North American Commercial Drivers: Screening Strategies; Effects on Crash Risk; and Other Benefits of Driver Treatment / **Keynote Lecture 86<sup>th</sup> Annual Meeting of the Japan Society for Occupational Health Japan Society for Occupational Health**, Matsuyama, Japan (Japan Society for Occupational Health, Ehime University School of Public Health)
- 2013 Preventing Accidents in North American Commercial Drivers with Obstructive Sleep Apnea / **Keynote Lecture**

**International Association for Traffic Safety and Sciences (IATSS), Tokyo, Japan**

- 2013 Innovative Solutions at the Intersection of Sleep Medicine and Occupational Medicine / Invited Speaker  
Sleep Medicine in Occupational Settings, half-day Postgraduate Course, Sleep 2013, 27<sup>th</sup> Annual Meeting of the Associate Professional Sleep Societies, Baltimore, Maryland (APSS)
- 2013 Heart Disease in the Fire Service / Invited Presentation  
Pathways to Success. International Association of Fire Fighters, Health, Safety and EMS Conference, Denver, Colorado (International Association of Fire Fighters (IAFF), John P. Redmond Foundation)
- 2013 Law Enforcement Duties: Relationship to Stress Levels & Sudden Cardiac Death / Invited Presentation  
Police Physicians Section Meeting, Benefits of Implementing a Police Wellness Program, 120<sup>th</sup> Annual IACP Conference and Law Enforcement Education Exposition, Philadelphia, Pennsylvania [International Association of Chiefs of Police (IACP)]
- 2014 Occupational Sleep Medicine / Session Chair and  
Sleep Disorders in Occupational Settings / Invited Speaker  
Occupational Sleep Medicine, Sleep 2014, 28<sup>th</sup> Annual Meeting of the Associated Professional Sleep Societies, Minneapolis, Minnesota (APSS)
- 2014 Putting Your Heart into Your Work (Cardiovascular Outcomes and Work) / Plenary Lecture  
Primary Occupational Healthcare Conference 2014, Dalhousie Medical School, St. John, New Brunswick, Canada
- 2014 Extreme Values, Extreme Situations: Hypertension in Firefighting & Law Enforcement / Invited Speaker  
Israeli Society of Hypertension, Annual Winter Meeting, Dan Panorama, Tel Aviv, Israel (Israeli Society of Hypertension, Israeli Family Physicians Association)
- 2015 Sleep Apnea Screening in North American Commercial Drivers / Visiting Professor  
Graduate School of Medicine, Juntendo University, Tokyo, Japan (International Association for Traffic Safety Sciences)
- 2015 Cardiovascular Disease & Health Among First Responders / Invited Seminar  
Teikyo University Graduate School of Public Health, Tokyo, Japan
- 2015 Interventions and Case Studies at the Intersection of Occupational and Sleep Medicine / Invited Speaker  
Occupational Medicine and Sleep, half-day Postgraduate Course, Sleep 2015, 29<sup>th</sup> Annual Meeting of the Associated Professional Sleep Societies, Seattle, Washington (APSS)
- 2015 Cardiovascular Disease and Health Among Firefighters / Invited Presentation, Working to Death: Occupational Diseases  
Commitment to Excellence. International Association of Fire Fighters, Health, Safety and EMS Conference, National Harbor, Maryland (International Association of Fire Fighters (IAFF), John P. Redmond Foundation)

- 2015 Survival Mediterranean Style – Health Benefits of a Mediterranean Diet / Invited Presentation, Nutrition for the Emergency Responder Commitment to Excellence. International Association of Fire Fighters, Health, Safety and EMS Conference, National Harbor, Maryland (International Association of Fire Fighters (IAFF), John P. Redmond Foundation)
- 2015 Cardiac Deaths in Law Enforcement: A Call for Departmental Wellness / Invited Presentation Police Physicians Section Meeting, IACP-2015, 122<sup>nd</sup> Annual International Association of Chiefs of Police Conference and Law Enforcement Education and Technology Exposition, Chicago, Illinois (IACP)
- 2016 Harvard Special Session 2016: Introduction to Occupational Health / Visiting Professor, Course Director and Sole Lecturer for the 2016 Harvard Special Session on Occupational Health. Taught graduate-level short-course to 19 students from Japan, the Philippines, China, Taiwan, Viet Nam and Thailand at Teikyo University in Tokyo, Japan (Teikyo University, Graduate School of Public Health)
- 2016 Scientific Session Chair and Panel Moderator, Invited Speaker, Introduction and Mediterranean Diet in the Workplace, Mediterranean Diet Roundtable, Beverly Hills, California (Accent Public Relations, Barilla Pasta, Italian-American Chamber of Commerce).
- 2016 Invited Lecture, Obstructive Sleep Apnea in Occupational Settings Given in Spanish to automobile executives, engineers and company occupational health and safety personnel, as well as regional occupational health clinicians, academics and transportation officials. Martorell, Spain (SEAT).
- 2016 Invited workshop presentation, Applying Mediterranean Ways of Eating to the Workplace Given in Spanish to automobile executives, corporate and contracted occupational health and safety personnel to potentially apply these principles to SEAT's more than 10,000 employees. Barcelona, Spain (SEAT, Grupo Ergos, MC Mutual, Centro ITAE).
- 2016 Mediterranean Diet Epidemiological Studies in the Workplace/ Invited Plenary Lecture Oleocanthal International Society Conference & Awards 2016, Olympia, Greece.
- 2016 Occupational Risk in Sudden Cardiac Death in EMS Providers, Fire Fighters, and First Responders/ Invited Visiting Professor Lecture, Seoul National University Medical School, Seoul, South Korea
- 2016 Burns in US firefighters: Trends and Prevention/ **Keynote Lecture, Korean Burn Society** Annual Conference, Seoul, South Korea
- 2016 Acute Chemical Emergencies/ Visiting Professor Lecture, Forum on Public Health Planning Disasters and Emergencies, Seoul National University Graduate School of Public Health, Seoul, South Korea

- 2016 A review of cardiovascular disease and sudden cardiac death among firefighters and police/  
**Keynote Speaker, Symposium on Emergency Service Workers' Safety and Health**,  
Seoul National University Graduate School of Public Health, Seoul, South Korea
- 2016 Obstructive Sleep Apnea and the Trucking Industry/ Invited Speaker, Session on Fatigue,  
Transport Canada's Advisory Council on Rail Safety, Transport Canada, Ottawa, Canada
- 2016 Cardiovascular Disease and Sudden Cardiac Death in Law Enforcement and Firefighting/  
Plenary Speaker, Occupational Medicine Specialists of Canada (OMSOC), 2016 OMSOC  
Annual Scientific Conference, Newton, MA
- 2017 Epidemiology of cardiovascular risk associated with firefighting and law enforcement, and  
their association with physical fitness / **Keynote Presentation Day 1, First International  
Symposium on Health and Physical Fitness among Public Safety Workers**, University of  
Brasilia, Department of Physical Education, Brazilian Federal District, Brazil
- 2017 Minimum entry level physical fitness to improve health and job performance among police  
officer recruits / **Keynote Presentation Day 2, First International Symposium on Health  
and Physical Fitness among Public Safety Workers**, University of Brasilia, Department of  
Physical Education, Brazilian Federal District, Brazil
- 2017 Cardiovascular Disease and Sudden Cardiac Death in Firefighting and Law Enforcement /  
**Keynote Lecture, Tenth Annual Day in Occupational Medicine**, Ontario Medical  
Association, Toronto, Canada
- 2017 Introducing Olive Oil to Americans through Workplace Interventions / Invited Plenary  
Speaker, Olympia Health and Nutrition Awards 2017, European Inter-regional Mediterranean  
ARISTOIL program & Faculty of Pharmacy, Department of Pharmacognosy, & Natural  
Products Chemistry, University of Athens, Athens, Greece
- 2017 Mediterranean Diet Intervention in US Firefighters: "Feeding America's Bravest-Survival  
Mediterranean Style" / Invited Plenary Speaker. Health Matters Convention, 4<sup>th</sup> Oleocanthal  
International Congress, Oleocanthal International Society, Malaga, Spain.
- 2017 Intervención Mediterránea en Bomberos Estadounidenses (Mediterranean Intervention in US  
Firefighters) / Visiting Professor Conference Given in Spanish. Institut de Recerca en Nutrició  
i Seguretat Alimentària (Institute for Nutrition Research and Food Safety), Natural Anti-  
Oxidants Group, School of Pharmacy, University of Barcelona, Barcelona, Spain.
- 2017 Facing Emergencies: US Firefighters Surviving Mediterranean Style / TEDx Talk, TEDx  
Rhodes, St. George Castle, Old City of Rhodes, Rhodes, Greece.
- 2017 Diabesity and Current Challenges / Plenary Talk. Mediterranean Diet & Health.  
Initiative for Productivity & Health Management, Mediterranean Diet Roundtable, The  
Cooking Odyssey, Halkidiki, Greece.
- 2017 "Feeding America's Bravest-Survival Mediterranean Style," A Randomized Cluster Trial of  
Mediterranean Diet Intervention in US Firefighters. Plenary Talk, Mediterranean Diet &



Health. Initiative for Productivity & Health Management, Mediterranean Diet Roundtable, The Cooking Odyssey, Halkidiki, Greece.

- 2018 Survival Mediterranean Style: Year One of a Mediterranean Nutrition Intervention in US Firefighters/ Invited Plenary Speaker, Olympia Health and Nutrition Awards 2018, World Olive Council for Health, European Inter-regional Mediterranean ARISTOIL program & Faculty of Pharmacy, Department of Pharmacognosy, & Natural Products Chemistry, University of Athens, Athens, Greece.
- 2018 Sudden Cardiac Death in Firefighters and Police Officers: Epidemiology & Pathophysiology. Invited Seminar, Dipartimento Interdisciplinare di Medicina Sezione di Scienze e Tecnologia di Medicina di Laboratorio, Faculty of Medicine, Università degli Studi di Bari Aldo Moro, Bari, Italy.
- 2018 Γιατί η Ελληνική Μεσογειακή Διατροφή είναι η πλέον Υγιεινή (Why is the Greek Mediterranean Diet is Healthy?). **Invited Speaker (Session Keynote)**, Fourth FORUM Υγείας (Health): Diet, Health, Beauty. DYO Forum, Hellenic Ministries of Tourism, Interior, Region of Central Macedonia, Pan-Hellenic Medical Society, University of Macedonia, Thessaloniki, Greece.

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Certification:**

- 1990 Massachusetts Medical License
- 1990 Diplomate, National Board of Medical Examiners
- 1992 American Board of Internal Medicine  
Recertified 2002
- 1995 American Board of Preventive Medicine, Occupational Medicine
- 2001 Certified Medical Review Officer, Medical Review Officer Certification Council  
Recertified 2007; 2013
- 2014 Certified Medical Examiner, National Registry of Certified Medical Examiners, Federal Motor Carrier Safety Administration

### **Practice Activities:**

- |             |                   |   |                        |
|-------------|-------------------|---|------------------------|
| 1992 – 1993 | Outpatient Clinic | Internal Medicine, East Cambridge Health Center, Cambridge Hospital | Two sessions per week  |
| 1992 – 2000 | Inpatient Service | Internal Medicine, Cambridge Health Alliance                        | Daily rounds as needed |

1993 – 2000	Outpatient Clinic	Internal Medicine, East Cambridge Health Center, Cambridge Hospital	Four sessions per week
1993 – 2012	Outpatient Consultation Clinic	Occupational & Environmental Medicine, Cambridge Health Alliance	One session per week
2000 – 2010	Outpatient Clinic	Employee Health & Industrial Medicine, Cambridge Health Alliance	Four sessions per week
2010 –	Outpatient Clinic	Employee Health & Industrial Medicine, Cambridge Health Alliance	Two sessions per week
2012 –	Outpatient Consultation Clinic	Occupational & Environmental Medicine, Cambridge Health Alliance	Two sessions per month

## Clinical Innovations:

As a leading clinical innovator in Occupational and Environmental Medicine (OEM), I have been quite productive in several different areas within the field, including: the health of public safety personnel; clinical toxicology and occupational sleep medicine. While OEM is often viewed as a niche field, I have succeeded in bringing wide attention and greater interest to our specialty by publishing our most important findings in high-impact general medical and medical specialty journals outside of OEM.

### First Responders' Health and Cardiovascular Disease (1993 – )

My work with first responders began with a post-doctoral fellowship focused on a special cohort of firefighters serving on a hazardous materials team. This led to a NIOSH KO1-Career Award, and then an RO1, which allowed our group to conduct cross-sectional and longitudinal studies of firefighters' health.

### Epidemiology of On-Duty CVD Events among Firefighters

Our investigations began to focus on cardiovascular risk and eventually the clinical epidemiology of cardiovascular disease (CVD) events in firefighters and police officers, in particular sudden cardiac death (SCD). In approaching the then, three-decade old question- Why does SCD cause nearly half of on-duty deaths among US firefighters- rather than attempt yet another cohort mortality study, we created a design using statistical odds to compare the relative probabilities of SCD across different types of firefighter job duties. This design would allow us to investigate the hypothesis that stressful work events could trigger for SCD. We demonstrated and replicated the first definitive statistical associations between strenuous job tasks and on-duty SCD and cardiovascular events (2003 and 2006). Then, in a much larger, decade-long study of all US firefighter, on-duty deaths due to coronary heart disease (CHD), we were able to show across various sensitivity analyses that the risk of sudden cardiac death (SCD) was 10- to over 100-fold higher while putting out a fire as compared to the risk of SCD during non-emergency duties (NEJM 2007).

### Epidemiology of On-Duty SCD among Law Enforcement Officers

Later, by performing original surveys of police officers regarding their annual working time across various law enforcement tasks and comparing these to a database of national police SCD cases we compiled, we were able to extend and cross-validate the firefighter findings to the risk of SCD among police. Thus, we demonstrated that SCD risk was significantly higher in a variety of stressful police duties compared to routine ones, including 30- to 70-fold excess risk of SCD during suspect pursuits and altercations (BMJ 2014).

In terms of clinical and public health prevention, however, it was essential for us to determine which first responders were most susceptible to on-duty SCD and other CVD events. Therefore, using the large amounts of medical data we had collected on healthy working firefighters and the SCD autopsy and CVD retirement databases we assembled, we performed various case-control and case-fatality investigations.

### CVD risk factors and Susceptibility to Strenuous Job Duties in Public Safety

These epidemiologic studies identified robust associations between well-recognized CVD risk factors (e.g. smoking, obesity and uncontrolled hypertension and prior CVD events) and the risk of on-duty CVD events, particularly SCD. Although the results were expected, the US fire service had largely ignored medical risk factors, instead focusing heavily on heat stress and dehydration as explanations for CVD among firefighters.

Evidence-based Models of CVD and SCD in Public Safety Personnel

Our epidemiologic findings regarding CVD risk factors coupled with our studies of duty-related risk revealed an overall conceptual model illustrating how personal risk factors interact with occupational ones to increase individual responders' susceptibility to CVD and SCD. In addition, we have highlighted the important pathologic roles that left ventricular hypertrophy and cardiomegaly play, with and without obstructive CHD, as major underlying causes of SCD among public safety personnel, just as they are in the general population.

Influence on Medical Standards and Translation of Research Findings to Preventive Medicine Policy

We have combined our epidemiologic findings with those of Prof. Denise Smith, an exercise physiologist, who has extensively studied the physiologic changes and strain of firefighting duties to develop evidence-based models of CVD and SCD among public safety personnel. Through numerous presentations (regional to international), state of the art reviews, white papers, monographs and invited editorials, we have translated our original investigations to cardiologists, occupational medicine physicians and directly to police and fire services. As a result, we have greatly influenced preventive recommendations and practices regarding wellness and fitness for duty among emergency responders/public safety workers, including improved risk factor control.

Cardiovascular Prevention, including primary prevention with Mediterranean lifestyle programs

Our most recent grant awards have built upon previous results, and are now heavily focused on cardiovascular prevention, including the non-invasive detection of left ventricular hypertrophy, as well as the novel approach of broadly reducing cardiovascular risk among firefighters through workplace-based Mediterranean diet nutritional changes and other lifestyle interventions such as increased physical activity and improved sleep hygiene. We are now expanding the unique workplace approach of using Mediterranean nutrition principles to the fire service nationally as well as to other occupations in the US and abroad, including law enforcement and auto manufacturing in Spain.

**Clinical Toxicology**  
(2001 – )

Building on my early work with carbon monoxide exposures, hazardous materials technicians and chemical accidents; after September 11, 2001, I initiated the development of a Chemical Terrorism Guide for the American College of Physicians. I was also invited to deliver "Meet the Professor" presentations at two of their annual meetings on this syndrome-based recognition of classes of chemical toxins via "toxidromes" in the setting of emergencies, where the identity of the agent may be unknown.

Empiric approaches to Chemical Emergencies and Chemical Terrorism

The above clinical approach of toxidromes is applicable regardless of the source of the chemical (i.e., transportation or industrial accidents, chemical terrorism or chemical warfare). This framework was further developed, refined and eventually summarized as a "Current Concepts" review in the NEJM (2004).

Lead Poisoning from Traditional Medications

Another area of my toxicology work which has had wide public health impact is related to lead exposure from traditional Indian (Ayurvedic) medications. This focus of research grew out of my consultation practice where I evaluated three cases of occult lead poisoning in patients originally from India and Nepal. Tracing the patients' poisoning to high levels of lead in their Ayurvedic remedies, we contributed the cases to a national report from the Center for Disease Control (MMWR 2004).

### Prevalence of Heavy Metals in Ayurvedic Medications

Based on the sentinel clinical cases, together with a former HSPH student who is now a national academic leader in alternative medicine, Dr. Robert Saper, we sought to further understand the extent of the problem and developed a study of the prevalence of toxic heavy metals among Ayurvedic remedies sold in ethnic markets in the Boston area eventually published in JAMA (2004). The follow-up study looked at Ayurvedic medications available via the internet (JAMA 2008).

We went on to publish additional reviews, case series and an invited editorial that have emphasized the serious, yet, insidious clinical presentation of this source of lead poisoning and its widespread, international character. This body of work has led to increased recognition of this hazard, as well as greater regulatory scrutiny of these folk remedies within India and beyond.

### Common Heavy Metal Exposures in Primary and Specialty Care

As a further extension of my consultation clinic, we have also published a number of clinical series and reviews illustrating common heavy metal exposure scenarios that often challenge primary care physicians. These include methylmercury over-exposure from frequent consumption of predator fish (e.g., swordfish and shark); patients who are needlessly worried about high total arsenic in the urine (almost always resulting from benign forms of organic arsenates naturally occurring in fish and shellfish); and the misguided use of “commercial” heavy metals tests by unconventional practitioners (e.g. in hair, or urine after provocative chelation) that are usually of questionable reliability and validity.

I eventually developed this clinical experience and research into a handbook in 2010 for clinicians to manage common heavy metal scenarios, and I continue to publish reviews of these topics, including a 2016 invited “Decisions” paper for CMAJ.

### Occupational Sleep Medicine (2007 – )

A more recent focus of clinical innovation regards the mitigation of fatigue in transportation and other safety-sensitive occupations and grows out of my industrial medicine practice and research expertise on obesity and cardio-metabolic risk.

### Clinical Screening for Obstructive Sleep Apnea (OSA) among Commercial Drivers

My research in occupational sleep medicine, started in 2007, with screening for sleep-disordered breathing/ obstructive sleep apnea (OSA) among commercial drivers and other safety sensitive workers. As the clinic’s medical director, I was an early adopter of 2006 consensus guidelines for objectively screening commercial drivers for OSA during their federally-mandated medical certification exams. Our published research documents a significant prevalence of OSA among commercial drivers and that under current regulations most of these cases remain undiagnosed and untreated and continue to drive professionally at great hazard to themselves and the general public.

Additionally, we have examined psychomotor vigilance testing via a handheld device and driving simulation in relationship to body mass index (BMI) and adiposity and OSA diagnoses, as potential future “in clinic” tools for detecting impairment from fatigue/sleep disorders in the occupational health setting.

Education of  
Physicians on Sleep  
Disorders among  
Commercial Drivers

Given my innovations and expertise in this area, I was chosen by the National Sleep Foundation (NSF) and awarded an NSF contract through Harvard to direct a continuing medical education course (2015-17) on sleep disorders in the context of federally-regulated medical certification examinations of professional drivers.

OSA and Preventable  
Accident Risk among  
Commercial Drivers

In 2016, we published the first study demonstrating the results of a large, employer-mandated OSA screening, diagnosis and treatment compliance monitoring program in the journal SLEEP. Our work demonstrated that drivers with OSA who did not adhere to treatment had a rate of preventable crashes five-fold greater than that of the control group which had similar driving experience. We also found that drivers with OSA who were fully compliant with the company-mandated treatment had a crash rate no different than that of the control group. Ours was the first large-scale work to confirm previous findings regarding increased crash risk and OSA among passenger car drivers.

Regulatory Policy  
regarding OSA in  
Transportation

Thus, our work is strongly impacting the more than decade-old debate as to whether screening drivers and other transportation operators for OSA should be mandated by federal regulations. For example, I have been asked to share my expertise in this area with the Chief of Prevention at the Catalan Railways in Spain (Ferrocarrils de la Generalitat de Catalunya) and the Canadian Advisory Council on Railway Safety.

Occupational Sleep  
Medicine as a multi-  
disciplinary field

In a larger context, I am a leading contributor of clinical and research expertise to the development of a new field- "Occupational Sleep Medicine"- where sleep medicine, chronobiology and occupational health intersect around our "24/7" society which promotes fatigue and chronic partial sleep deprivation through challenging schedules and conflicting time demands, as well as medical problems including sleep disorders.

My expertise in this area has been further disseminated with invited participation in Occupational Sleep Medicine courses at the international Associated Professional Sleep Societies (APSS) meetings, the 2016 American Occupational Health Conference (ACOEM) and invited publications. For example, from 2013-15, I was part of an ad hoc committee for the American Thoracic Society (ATS) on the public health impacts of sleep, which lead to an official ATS Statement, "The Importance of Healthy Sleep", published in 2015 in the society's journal.

## **Report of Education of Patients and Service to the Community**

### **Activities:**

Those activities below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

### **Local:**

- 1993 – 1995 City of Cambridge, Massachusetts / Emergency Planning Committee for Hazardous Materials Incidents
- 2001 – During my tenure as Medical Director of Employee Health, Cambridge Health Alliance has adopted many important policy changes with respect to the health of its employees. These include a system-wide, transitional return to work policy, becoming a tobacco-free campus and developing a significant employee wellness program. Our wellness program has been recognized by the American Heart Association, the *Boston Business Journal* and the Worksite Wellness Council of Massachusetts with awards.

### **Regional:**

- 1993 – 1995 University of Massachusetts Boston / Advisor and Preceptor  
“Doctor for a Day” introduced University of Massachusetts Boston pre-medical students to clinical medicine.
- 1996 Massachusetts Association of Hazardous Materials Technicians / Invited Speaker  
“Medical Surveillance.” Annual Seminar.
- 1998 Pollard Middle School, Needham Public Schools / Invited Speaker  
“Respiratory Aspects of Indoor Air Quality”
- 2000 Massachusetts Hazardous Materials Technicians / Invited Speaker  
“Epidemiology of Massachusetts Hazmat Incidents 1990-1996, and Medical Surveillance of Hazmat Firefighters 1993-1998.” Annual Conference.
- 2000 Massachusetts Coalition for Occupational Safety and Health / Invited Faculty  
Designing an Occupational Health Protocol for Primary Care Physicians Workshop.
- 2001 Massachusetts Department of Public Health Southeast Region / Invited Interview  
“Lead poisoning and its Prevention.” Live radio broadcast in Portuguese.
- 2003 Massachusetts Association of Portuguese Speakers / Invited Speaker – Plenary Talk  
Lead Toxicity in Portuguese Speaking Workers  
Healthy Mind, Healthy Body II: Conference on the Health of Portuguese-Speaking Immigrants, Boston, Massachusetts
- 2003 – 2006 Massachusetts Medical Schools / Mentor  
Hispanic Medical Students Mentorship Program

- 2004; 2006 Public Employee Retirement Administration Commission, Commonwealth of Boston /  
Invited Speaker  
“Coronary Heart Disease in Firefighters”
- 2005 Jim Pillsbury Show, Comcast Television / Invited Guest  
Toxic Metals in Herbal Remedies
- 2005 Public Employee Retirement Administration Commission, Commonwealth of Boston /  
Invited Speaker  
“Disability in Firefighters: Lessons for Prevention.” Public Employee Retirement  
Administration Commission of Massachusetts’ Emerging Issues Forum 2005.
- 2006 Graphic Arts Compensation Corporation (consortium of Boston-area printing companies)  
/ Invited Speaker  
“The Value of Occupational Health Partnerships”
- 2006 Meadowbrook Insurance and consortium of Boston-area construction companies /  
Invited Speaker  
“Workplace Drug Testing, Pre-placement Examinations and Management of Workers  
Compensation Costs”
- 2008 Basic Bioscience for Community Representatives of Institutional Bio-safety Committees,  
Safety Partners/Eagleson Institute/Cambridge Department of Public Health /  
Invited Speaker  
Occupational Health, Basic Bioscience for Community Representatives of Institutional  
Bio-safety Committees
- 2008 – 2009 Cambridge Chamber of Commerce / Member  
Wellness Initiative
- 2010 Professional Firefighters of Massachusetts / Invited Speaker  
“Cardiovascular Disease in Firefighters”
- 2011 Massachusetts Municipal Managers Association / Invited Speaker and Panelist  
Creating a Wellness Program for a Police Department
- 2012 Cambridge Health Alliance and Occupational & Environmental Health Network / Plenary  
Speaker and Expert Panelist  
“Worker’s Compensation Risk Management in the Life Sciences.” Life Sciences and  
Employee Health Seminar. We provided a free seminar to Boston-area Life Sciences  
companies and University Biosafety Personnel to help them with occupational health  
issues of various types common to pharmaceutical, biotechnology and health-related  
researchers.
- 2012 Cambridge Health Alliance and Sargent & Associates / Director, Moderator and Plenary  
Speaker  
“Cardiovascular Disease in Public Safety Personnel – State of the Science.” Health &  
Wellness Symposium for Public Safety Personnel Program. We provided a free  
symposium to Massachusetts Police, Fire and Ambulance Personnel and their



departments to better understand the cardiovascular and other hazards they face due to interactions of personal characteristics, lifestyle choices and occupational exposures and circumstances. Problems were approached in a multi-disciplinary fashion with medical, nursing, wellness and physical fitness strategies.

- 2012 Boston Fire Department / Plenary Talk  
“Heart Disease in the US Fire Service.” Annual Health Fair.
- 2015 Massachusetts Municipal Police Training Committee / Invited Presentation  
Baseline Physical Fitness in Police Recruits and Subsequent Performance in Massachusetts Police Academies.
- 2015 – Massachusetts Association of Portuguese Speakers / Co-Founder and Selection Committee Member  
Dr. Edward O. Leitao Memorial Scholarship Award. This new fund provides scholarships to individuals of Portuguese descent pursuing medical studies in memory of Dr. Leitao, a Portuguese-American physician, who served the communities around Cambridge and Somerville for many years.
- 2016 A. Michael Mullane Health and Safety Symposium / Plenary Presentation  
“Cardiovascular Disease in the Fire Service” given with Drs. Denise Smith and Gavin Horn. Presentation given to New England firefighters to help understand the cardiovascular stressors they encounter and how these interact with personal health/fitness and lifestyle in order to decrease their risk profiles. Boston Fire Department, Local 718 and the International Association of Fire Fighters.
- 2018 American Hellenic Educational and Progressive Association (AHEPA), Boston Chapter/  
Invited Lecture  
“The Benefits of the Traditional Greek Diet”
- National:**
- 2006 Office of Congresswoman Carolyn Maloney of New York / Ad hoc, Medical Advisor  
Provided *pro bono* expertise regarding Autopsy Guidelines for Individuals Dying after Environmental Exposures related to September 11, 2001.
- 2007 United States Fire Academy / Invited Speaker  
Special Lecture – “Heart Disease in Firefighters.” During any given week, the Academy is attended by hundreds of veteran volunteer and career firefighters from across the country and I was able to educate several hundred of them. Emmitsburg, Maryland.
- 2009 Multiple Chemical Sensitivity: Fact or Fiction / Plenary Talk  
National Pesticide Inspector Residential Training, Wakefield, Massachusetts (Massachusetts Pesticide Bureau)
- 2011 United States Fire Academy / Plenary Lecture and Symposium Participant  
2<sup>nd</sup> National Fire Service Research Agenda Symposium, National Fallen Firefighters Foundation, Emmitsburg, Maryland. The National Fallen Firefighters Foundation is a fire

service organization working to decrease line of duty deaths and injuries in the fire service. The Foundation's symposium seeks to identify and prioritize research needs that will ultimately lead to a safer and healthier fire service.

- 2013 Sudden Cardiac Death in the Fire Service: Risk Factors, Causes and Unanswered Questions / Invited Presentation with Dr. Denise Smith  
International Association of Fire Chiefs, Volunteer and Combination Officers Section, Clearwater Beach, Florida (National Fallen Firefighters Foundation)
- 2013 Brownsburg Fire Territory / Plenary Lecture  
Cardiovascular Health in the Fire Service. Annual Joint Wellness-Fitness Symposium of the Indiana Fire Chiefs Association and the Professional Fire Fighters Union of Indiana which brought several hundred firefighters from Indiana, Ohio and Illinois. Brownsburg, Indiana.
- 2014 National Fallen Firefighters Foundation / Invited Faculty  
Workshop participant for medical and health issues, Tampa2, 10<sup>th</sup> Anniversary of the 16 Firefighter Life Safety Initiatives and the "Everyone Goes Home Program," National Fallen Firefighters Foundation. All major US fire service organizations were represented.
- 2015 International Association of Fire Chiefs / Lead Speaker  
"Survival Mediterranean Style." Along with two veteran fire Chiefs, led a national webinar on the benefits of Mediterranean-style diets for improving risk factor profiles, health and quality of living in the US fire service.
- 2015 Yale-New Haven Health System / Plenary Talk  
"Cardiovascular Health in Firefighters and Law Enforcement." Wellness Symposium for fire, police and EMS officials for fire and law enforcement officials from throughout the state of Connecticut. Trumbull, Connecticut.
- 2015 Indiana Association of Chiefs of Police and the National Institute for Public Safety Health / Plenary Talk  
"Fitness and Cardiovascular Health in Law Enforcement." Inaugural Law Enforcement Wellness-Fitness Symposium for Police and Law Enforcement, Indianapolis, Indiana.
- 2016 International Association of Fire Chiefs (IAFC) / Expert Reviewer  
Pro Bono content reviewer of the IAFC's "Physician's Guide to Firefighter Physicals"
- 2016 Florida Justice Association / Plenary Talk  
"Obstructive Sleep Apnea in the Trucking Industry." Florida Justice Association, Continuing Legal Education, Masters of Justice Program, Orlando, Florida.
- 2017 Indianapolis Professional Firefighters Union Local 416  
"Survival Mediterranean Style: Cancer Prevention with Nutrition." Local 416, Cancer Summit: The Science of Cancer in the Fire Service: Prevention to Survivorship, Indianapolis, Indiana
- 2017 Indiana Association of Chiefs of Police and the National Institute for Public Safety Health / Plenary Talk

“Feeding America's Finest: Re-thinking Nutrition to Improve the Health of your Department.” Law Enforcement Wellness-Fitness Symposium for Police and Law Enforcement, Indianapolis, Indiana.

### **International:**

- 2005 Radiotelephonic Foundation of Cyprus / Invited Guest  
Live television show in Greek on “Occupational Health,” Nicosia, Cyprus.
- 2005 Lead and Other Metal Hazards in Construction / Plenary Talk  
Symposium on Health and Safety in the Construction Industry, Technical Chamber of Commerce of Cyprus and Cyprus International Institute, Nicosia, Cyprus (Cyprus International Institute)
- 2007 Hellenic Fire Academy / Plenary Talk  
“On-Duty Heart Disease in the Fire Service.” First Annual Symposium on Health and Safety in the Workplace, Athens, Greece.
- 2009 International Association of Fire Fighters, John P. Redmond Foundation / Workshop  
Moderator and Invited Faculty  
Cardiovascular Disease Workshop and “Ask the Doctor” Roundtable. Symposium on the Occupational Health and Hazards of the Fire Service, Los Angeles, California.
- 2011 Ontario Association of Fire Chiefs / Plenary Talk  
“Heart Disease in the Fire Service: Interacting Roles of Strenuous Duty, Aging, Lifestyle & Fitness.” Annual Conference, Toronto, Ontario, Canada.
- 2015 Greek Economic Forum / Plenary Talk  
“Capitalizing on the Traditional Greek Diet: Ideas for Development & Entrepreneurship.” A Modern Greece, Economic Forum, Cambridge, Massachusetts.
- 2016 South Korean Firefighters / Question and Answer Session and Luncheon regarding Occupational Injuries and Illness.  
Emergency Services Workers Symposium, Seoul National University, Graduate School of Public Health, Seoul, South Korea
- 2016 National Research Council (NRC) of Canada / Ad hoc, Expert Medical Advisor  
Provided *pro bono* expertise regarding the Medical Surveillance Program for NRC employees working in NRC fire test laboratories.
- 2017 International Association of Fire Fighters, Vincent J. Bolton, Affiliate Leadership Training Summit / Workshop Invited Speaker to US and Canadian firefighter union leaders, “Cardiovascular Disease in the Fire Service”, Anaheim, California.
- 2018 International Association of Fire Fighters, Vincent J. Bolton, Affiliate Leadership Training Summit / Workshop Invited Speaker to US and Canadian firefighter union leaders, “Cardiovascular Disease in the Fire Service”, Orlando, Florida.

2018 Region of Puglia: Apulian Lifestyle Conference (Stili Di Vita E Sicurezza Alimentare Nella Promozione Della Blue Growth - Crescita Blu) / Invited Plenary Presentation, to members of the public and the media “Apulian Lifestyle: Your Past is Your Future”, Taranto Italy.

### Recognition:

2000	Keynote Speaker, Annual Conference	Massachusetts Hazardous Materials Technicians
2003 – 2006; 2009 – 2013	America’s Top Physicians	Consumer Research Council of America/ SLD Industries
2007	Who’s Who Among American Teachers & Educators	Who’s Who
2007	Keynote Speaker, First Annual Symposium on Health and Safety	Hellenic Fire Academy, Athens, Greece
2011	“Showcase” Research Presentation One of three PI’s selected to present “major subject areas and noteworthy accomplishments”	U.S. Department of Homeland Security, Assistance to Firefighters Grant Program
2013	Keynote Speaker, Annual Joint Wellness-Fitness Symposium	Indiana Fire Chiefs Association & Professional Fire Fighters Union of Indiana
2015	Keynote Speaker, First Responders Lecture Series and Panel Discussion	Yale-New Haven Health, Occupational Medicine Services
2015	Keynote Speaker, Entrepreneurship Panel, Greek Economic Forum	Harvard Hellenic Society
2015	Keynote Speaker, Inaugural Law Enforcement Wellness-Fitness Symposium	Indiana Association of Chiefs of Police and the National Institute for Public Safety Health
2016	Certificate of Appreciation, Sioux Falls Fire Rescue Training Center Team	Sioux Falls Fire Rescue, Sioux Falls, South Dakota
2017	Recognition Award for Firefighter Education	Corps of Military Firefighters, Brazilian Federal District, Brazil

## **Report of Scholarship**

### **Peer-Reviewed Publication in print or other media:**

#### **Research investigations:**

1. Mattison RE, Humphrey FJ 2<sup>nd</sup>, **Kales SN**, Handford HA, Finkenbinder RL, Hernit RC. Psychiatric Background and Diagnoses of Children Evaluated for Special Class Placement. *Journal of the American Academy of Child Psychiatry* 1986; 25(4):514-520.
2. Mattison RE, Humphrey FJ 2<sup>nd</sup>, **Kales SN**, Wallace DJ. An Objective Evaluation of Special Class Placement of Elementary Schoolboys with Behavior Problems. *Journal of Abnormal Child Psychology* 1986; 14(2):251-262.
3. Ramos Platon MJ, Vela Bueno A, Espinar Sierra J, **Kales SN**. Hypnopolygraphic Alteration in Attention Deficit Disorder (ADD) Children. *International Journal of Neuroscience* 1990; 53(2-4):87-101.
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5. **Kales SN**, Feldman J, Pepper L, Fish SS, Christiani DC, Ozonoff D. Carboxyhemoglobin Levels in Patients with Cocaine-Related Chest Pain. *CHEST* 1994; 106(1):147-150.
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8. **Kales SN**, Castro M, Christiani DC. Epidemiology of Hazardous Materials Responses by Massachusetts District Hazmat Teams. *Journal of Occupational and Environmental Medicine* 1996; 38(4):394-400.
9. **Kales SN**, Polyhronopoulos GN, Christiani DC. Medical Surveillance of Hazardous Materials Response Firefighters: A Two-Year Prospective Study. *Journal of Occupational and Environmental Medicine* 1997; 39(3):238-247.
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13. **Kales SN**, Aldrich JM, Polhronopoulos GN, Artzerounian D, Gassert T, Hu H, Kelsey K, Sweet C, Christiani DC. Fitness for Duty Evaluations in Hazardous Materials Firefighters. *Journal of Occupational and Environmental Medicine* 1998; 40(10):925-931.

14. **Kales SN**, Polyhronopoulos GN, Aldrich JM, Dimitriadis EA, Christiani DC. Interlaboratory Comparisons of Red Blood Cell Cholinesterase Activity. *Journal of Environmental Medicine* 1999; 1(1):19-26.
15. Chatzis C, Danaka G, Linos A, **Kales SN**, Christiani DC. Lung Cancer and Occupational Risk Factors in Greece. *Journal of Occupational and Environmental Medicine* 1999; 41(1):29-35.
16. **Kales SN**, Polyhronopoulos GN, Aldrich JM, Leitao ED, Christiani DC. Correlates of Body Mass Index in Hazardous Materials Firefighters. *Journal of Occupational and Environmental Medicine* 1999; 41(7):589-595.
17. **Kales SN**, Aldrich JM, Polyhronopoulos GN, Leitao EO, Artzerounian D, Gassert TH, Hu H, Kelsey KT, Sweet C, Christiani DC. Correlates of Fitness for Duty in Hazardous Materials Firefighters. *American Journal of Industrial Medicine* 1999; 36(6): 618-629.
18. **Kales SN**, Polyhronopoulos GN, Aldrich JM, Mendoza PJ, Suh JH, Christiani DC. A Prospective Study of Hepatic, Renal, and Haematologic Surveillance in Hazardous Material Firefighters. *Occupational and Environmental Medicine* 2001; 58(2):87-94.
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20. **Kales SN**, Mendoza PJ, Hill JM, Christiani DC. Spirometric Surveillance in Hazardous Materials Firefighters: Does Hazardous Materials Duty Affect Lung Function? *Journal of Occupational and Environmental Medicine* 2001; 43(12):1114-1120.
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29. **Kales SN**, Huyck KL, Goldman RH. Elevated Urine Arsenic: Un-Speciatiated Results Lead to Unnecessary Concern and Further Evaluations. *Journal of Analytical Toxicology* 2006; 30(2):80-85.
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## **Narrative Report**

I have engaged in occupational/environmental health activities on five continents as a clinical expert, investigator, educator and leader; making continuous academic contributions with over 165 publications, regular editorial work and stimulating trainees to conduct and publish research. My current efforts include: clinical occupational/environmental medicine (OEM); directing the Harvard T.H. Chan School of Public Health (HSPH) Occupational Medicine Residency and other teaching; hospital administration; and funded research. I am also consulted regularly by government agencies and colleagues throughout North America and beyond regarding the health of emergency responders, fatigue and sleep disorders in safety-sensitive occupations, carbon monoxide poisoning, and other toxicology and workplace issues.

As a **clinical innovator and researcher**, I have been quite productive in several areas within the field of OEM. **First Responder Cardiovascular Health and Disease**: Our group has performed the most extensive collection of epidemiologic studies regarding cardiovascular disease (CVD) among first responders, including seminal contributions on the risk of on-duty cardiovascular events. By applying a novel approach to a previously unsolved, three-decade old question- Why are almost half of on-duty deaths among US firefighters due to sudden cardiac death (SCD)?- we demonstrated the first definitive statistical associations between strenuous job tasks and SCD (2003). We then re-confirmed these findings in a much larger, landmark study in the *New England Journal of Medicine* (2007). In 2014, in the *British Medical Journal*, we extended and cross-validated these findings to the risk of SCD in the course of policing. We have also identified lifestyle risk factors (e.g. smoking, obesity and uncontrolled hypertension) which interact with occupational exposures and the workplace environment to increase individual responders' susceptibility to CVD. Moreover, we have demonstrated that in addition to obstructive coronary artery disease, left ventricular hypertrophy and cardiomegaly are major underlying causes of SCD in these populations.

Our body of work has greatly influenced national and international thinking regarding fitness for duty among public safety workers, and the need for improved wellness programs and risk factor control. We published a "state of the art review" on blood pressure and emergency responders in the *American Journal of Hypertension* (2009), which along with previous work has begun to change occupational blood pressure standards for public safety personnel. Additionally, we have published several other "state of the science" reviews. Our paper in *Cardiology in Review* (2011) has become the standard reference on this topic, and a 2015 NIH-sponsored translational meeting, used this article to organize its agenda. This publication track record, ongoing competitive Federal grants and frequent speaking engagements at US and international events have made me the world's foremost expert on cardiovascular disease and its prevention among police and fire personnel. Accordingly, I was recently invited to contribute an editorial on this topic by *Circulation*.

**Clinical Toxicology**: After 9/11/2001, I led the development of a Chemical Terrorism Guide and other materials for the American College of Physicians. We expanded this "toxidrome-based" approach (syndrome-based recognition of chemical toxins) with a 2004 *New England Journal of Medicine* review on Chemical Emergencies. As an extension of my work in this area, I was invited by the World Health Organization to assist in determining the impact of household carbon monoxide poisonings in Europe and in setting carbon monoxide indoor air quality guidelines.

Another important toxicology focus is heavy metal exposure. After diagnosing several "sentinel" cases of lead intoxication due to Ayurvedic (traditional Indian) remedies, we contributed to a national series in the Center for Disease Control's *Morbidity Mortality Weekly Report* (2004). This led us to direct investigations of heavy metal prevalence in Ayurvedic medications in the US marketplace producing two original articles in *JAMA* (2004 and 2008), and an invited editorial in a leading Indian medical journal which triggered regulatory changes by the Indian and Canadian governments and various local US health departments.

I have also published on common clinical scenarios such as: methylmercury over-exposure from frequent consumption of predator fish (e.g., swordfish and tuna); referrals for elevated urine arsenic that almost always result from harmless seafood-related forms of organic arsenates; and the ill-advised use of unconventional

“commercial” heavy metals tests by alternative medicine practitioners. My expertise in this area led to a recent invited “Decisions” review in the *Canadian Medical Association Journal* (2016).

**Occupational Sleep Medicine:** As one of the first occupational medicine clinic directors to implement objectively-based screening of commercial drivers for obstructive sleep apnea (OSA) in the context of federally-regulated medical certification examinations, our publications have demonstrated significant gaps in current regulations that allow operators with undiagnosed and or untreated OSA to continue to drive, constituting a significant risk to themselves and the general public. I have lectured at regional, national and international meetings on this subject, and am a recognized international leader regarding occupational OSA screening, including keynote lectures at the Japan Society of Occupational Health; joint activities with the International Association for Traffic Safety Sciences and as the invited senior author of a chapter on OSA in the workplace for foremost sleep medicine textbook, The Principles and Practice of Sleep Medicine. In 2015, I was awarded and completed a National Sleep Foundation contract through Harvard to create a continuing medical education video course on sleep disorders for commercial driver medical examiners and sleep clinicians. Most recently, I was the senior author of the largest and most rigorous study to date of OSA and truck crash risk among commercial drivers (SLEEP 2016). We demonstrated that drivers who were non-compliant with OSA treatment had a rate of preventable crashes five-fold greater than control drivers matched for driving experience. We also found that fully-treatment-compliant drivers with OSA had a crash rate no different than that of the controls. These new findings and a separate invited commentary in *SLEEP* (2016) are influencing the national debate on federally-mandating the screening of drivers and other transportation operators for OSA.

**Education:** I supervise Harvard Chan occupational medicine residents, HMS toxicology, pediatric environmental medicine and contact dermatology fellows, HMS and visiting residents and medical students; participate in several Harvard courses; CME commitments; and speak/teach frequently at the local, national and international level. In 2006, I was selected to lead the HSPH Occupational Environmental Medicine (OEM) Residency, Harvard’s only preventive medicine residency and a premier US program. In the face of constant budgetary challenges, I have been able to attract high-caliber candidates; maintain one of the largest civilian OEM residencies in the US; and have had unprecedented success as a fundraiser, attracting grants and over \$2.0 million in endowed and other gifts (including bequests) to support training. Since 2006, our trainees have received over 20 national awards, publish frequently and have achieved many leadership positions here and abroad. I also founded an Initiative for Productivity & Health Management to educate the residents about maximizing workforce health to benefit both employees and employers. In collaboration with the residency, my hospital division is an internationally recognized center of excellence. Since 2008, I have hosted over 15 trainees from ten countries. My achievements as a scientist and educator are recognized with prestigious honors: the Kehoe Award (2013, American College of Occupational & Environmental Medicine) and the Harriet Hardy Award (2014, New England College of Occupational & Environmental Medicine).

**Administration:** My hospital leadership as Division Chief, Occupational & Environmental Medicine, and Medical Director of Employee Health is another significant supporting activity. Our division coordinates occupational health services for some 4,000 Cambridge Health Alliance employees and external clients. The latter have rapidly grown under my leadership from 60 to roughly 850 entities ranging from municipalities to life sciences companies. We provide high quality care to injured workers; maintain workers compensation costs below the industry benchmark; determine the ability of employees with illness/impairment to engage in safety-sensitive functions; and provide expert consultation to human resources and senior administration.

In summary, I have a strong record of clinical innovation, as well as clinical/epidemiologic research expertise, while teaching frequently- locally to internationally- and establishing myself as the leader of important research grants, residency/educational programs and clinical services. I have demonstrated my productivity consistently through publications, sponsored research, editorial work, educational activities, trainee achievements and clinical leadership.