

## **CURRICULUM VITAE**

**DATE:** August 2016

**NAME:** Reynold A. Panettieri, Jr., M.D.

**PRESENT TITLE:** Professor of Medicine, Robert Wood Johnson Medical School  
Vice Chancellor for Translational Medicine and Science  
Director, Rutgers Institute for Translational Medicine and Science

**HOME ADDRESS:** 423 Brister Road Bensalem, PA 19020

**OFFICE ADDRESS:** Child Health Institute of New Jersey  
Rutgers, The State University of New Jersey  
89 French Street, Suite 4210  
New Brunswick, NJ 08901

**TELEPHONE NUMBER / E-MAIL ADDRESS:**

Phone: 732-235-6404

E-Mail: rp856@ca.rutgers.edu

**CITIZENSHIP:** USA

**EDUCATION:**

- A. Undergraduate  
St. Joseph's University  
Philadelphia, PA  
B.S. (Biology) Summa cum laude 1979
  
- B. Graduate and Professional  
University of Pennsylvania  
Philadelphia, PA  
M.D. 1983

**POSTGRADUATE TRAINING:**

- A. Internship and Residencies  
Hospital of the University of Pennsylvania  
Philadelphia, PA  
Internal Medicine  
1983-1986
  
- B. Research Fellowships  
Hospital of the University of Pennsylvania  
Philadelphia, PA  
Pulmonary Diseases  
1986-1989

**MILITARY:** N/A

**ACADEMIC APPOINTMENTS:**

University of Pennsylvania  
Department of Medicine  
Research Associate  
1989-1990  
Assistant Professor  
1990 – 1996

Associate Professor with tenure  
1996-2001  
Robert L. Mayock & David A. Cooper Professor with tenure  
2001-2015  
Emeritus Professor  
2015- present

Wistar Institute – Philadelphia, PA  
Adjunct Assistant Professor  
1995-1996  
Adjunct Associate Professor  
1996-2001  
Adjunct Professor  
2001-15

Rutgers University  
Professor of Medicine, Robert Wood Johnson Medical School  
2015- present

**ADMINISTRATIVE APPOINTMENTS:**

University of Pennsylvania  
Director, Airways Biology Initiative  
2003-2015  
Director, Integrative Health Sciences Facility Core, Center of Excellence in  
Environmental Toxicology  
2007-2015  
Deputy Director, Center of Excellence in Environmental Toxicology  
2009-2015

Rutgers University  
Vice Chancellor, Translational Medicine and Science  
Rutgers Biomedical and Health Sciences  
2015- present  
Director, Rutgers Institute for Translational Medicine & Science  
2015- present

**HOSPITAL APPOINTMENTS:**

University of Pennsylvania Health System,  
Philadelphia, PA  
Associate Director, Pulmonary Diagnostic Services  
1990-1991  
Director, Pulmonary Diagnostic Services  
1991-1994  
Co-Director, Cardiopulmonary Exercise Program  
1991-1994  
Pulmonary Director, Asthma Program  
1994-1995  
Director, Comprehensive Asthma Program  
1995-2015  
Chief, Asthma Section, Pulmonary, Allergy & Critical Care Division  
1999-2015  
Associate Program Director, General Clinical Research Center  
2005-2015  
Robert Wood Johnson University Hospital  
Attending Physician  
2015 – present

**OTHER EMPLOYMENT OR MAJOR VISITING APPOINTMENTS: N/A**

**PRIVATE PRACTICE:** Robert Wood Johnson Physician Enterprise  
2015 - present

**LICENSURE:** Pennsylvania - MD032459E, exp 12/31/2016  
New Jersey - 25MA09773100, exp 6/30/2017

**DRUG LICENSURE:** New Jersey CDS: D1070150  
DEA: AP2928630, exp. 3-31-19

**CERTIFICATION:** ABIM – 1986  
Pulmonary Medicine – 1988

**MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:**

American College of Physicians  
American Thoracic Society  
Sigma Xi Scientific Research Society  
American College of Chest Physicians, Fellow  
Member, Nominating Committee, American Lung Association  
Member, Research Review Committee, American Lung Association  
Member, Program Committee, American Lung Association/American Thoracic Society,  
Respiratory Structure and Function Assembly  
Member, National Long Range Planning Committee, American Lung Association/American  
Thoracic Society, Respiratory Structure and Function Assembly  
Chairman, National Long Range Planning Committee, American Lung Association/American  
Thoracic Society, Respiratory Structure and Function Assembly  
Chairman, Program Committee, American Lung Association/American Thoracic Society,  
Respiratory Structure and Function Assembly  
Member, World Allergy Organization Scientific and Clinical Issues Council  
Chair, Nominating Committee, Respiratory Structure and Function Assembly, American Thoracic  
Society, 2012-13  
Chair, Respiratory Structure and Function Assembly, American Thoracic Society, 2014-16  
Member, Finance Committee, Respiratory Structure and Function Assembly, American Thoracic  
Society  
Member, Awards Committee, Respiratory Structure and Function Assembly, American Thoracic  
Society

**HONORS AND AWARDS:**

1975-79 Presidential Scholarship Award  
1975-79 Dean's List  
1978-79 Alpha Sigma Nu (National Jesuit University Honor Society)  
1980 Alpha Epsilon Delta Northeastern United States Scholar Award for Medical  
School  
1983 American Heart Association Undergraduate Research Award  
1987 Outstanding Case Presentation Award, Eastern Regional American College of  
Physicians Meeting, Pittsburgh, PA  
1988 Alpha Omega Alpha, National Medical School Honor Society  
1991 Faculty, National Asthma Education Program, NHLBI/AAAI  
1996 Career Investigator Award, American Lung Association/American Thoracic  
Society  
1999 39<sup>th</sup> Recipient of the Robert E. Cooke Memorial Lectureship, American  
Academy of Allergy, Asthma & Immunology (AAAAI) Meeting, Orlando, FL  
1999 Member, John Morgan Society, Univ. of Pennsylvania  
2000 Member, American Society for Clinical Investigation  
2003 LAM Foundation Excellence in Research Award  
2005 The John E. Salvaggio Memorial Lectureship, "Airway Remodeling," AAAAI  
61<sup>st</sup> Annual Meeting, San Antonio, TX (March)

- 2005 American Thoracic Society Parker B. Francis Speaker (May)
- 2007 Member, Association of American Physicians
- 2013 Joseph R. Rodarte Award for Distinguished Achievement and Contributions  
in Respiratory Physiology and Medicine, Respiratory Structure and Function  
Assembly, American Thoracic Society
- 2015 American Thoracic Society Recognition Award for Scientific  
Accomplishments

**BOARDS OF DIRECTORS/TRUSTEES POSITIONS:**

- 2014-16 American Thoracic Society Board of Directors

**SERVICE ON NATIONAL GRANT REVIEW PANELS:**

- The Wellcome Trust, London, England, 1995
- National Health and Medical Research Council, Canberra, Australia, 1996
- Invited Ad Hoc Reviewer, National Institutes of Health, Lung Biology and Pathology Study Section, 1997
- Invited Ad Hoc Reviewer, National Institutes of Health-National Institute of Allergy and Infectious Disease, 1997
- Invited Ad Hoc Reviewer, National Institute of Environmental Health Science, 1997
- Member, National Institutes of Health, Lung Biology and Pathology A Study Section, 2001-2004
- Reviewer, LAM Foundation Research Grants, 2002- 2015
- Chairman, National Institutes of Health, Lung Cellular, Molecular, and Immunobiology Study Section, 2004-2006
- Ad Hoc Reviewer, National Institutes of Health, Lung Cellular, Molecular, and Immunobiology Study Section, Special Emphasis Panel, 2006-present
- Reviewer, National Heart, Lung, and Blood Institute Loan Repayment Program, 2007-2010
- Reviewer, National Heart, Lung, and Blood Institute Program Project Special Emphasis Panel (Wagner), 2007-08
- Reviewer, American Medical Association Foundation Seed Grant Research Program, Secondhand Smoke Committee, 2008-09
- Reviewer, National Institute of Environmental Health Sciences, ONES RFAs, March 2008
- Reviewer, National Heart, Lung, and Blood Institute, Special Emphasis Panel, Small Grants for Lung Tissue Research (R03) RFA, July 2008
- Reviewer, Raine Medical Research Foundation, University of Western Australia, Nedlands, Western Australia, 2008
- Reviewer, Innovative Medicines Initiative Joint Undertaking, European Commission, Brussels, Belgium, 2008-09
- Reviewer, National Heart, Lung, and Blood Institute LCMI Member Conflicts Panel, October 2008
- Reviewer, National Heart, Lung, and Blood Institute, Special Emphasis Panel for LCMI Member Conflicts, June 2009
- Reviewer, Cardiovascular and Respiratory Sciences Distinguished Editorial Panel, RFA-OD-09-003: Challenge Grants Panel 19, National Institutes of Health, July 2009
- Chair and Reviewer, Shared Instrumentation Scientific Review Group, National Institutes of Health, November 2009
- Reviewer, National Institutes of Health, Center for Scientific Review College of Reviewers, 2010-2012
- Reviewer, Small Business Respiratory Sciences Special Emphasis Panel, National Institutes of Health, March 2010
- Reviewer, College of CSR Reviewers, National Centers for Biomedical Computing (U54), NIH, April 2010
- Reviewer, Hematology and Cardiovascular-Respiratory Sciences Distinguished Editorial Panel, ZRG1 VH-D55R-R-OD-10-005: RC4 Challenge Grants, National Institutes of Health, June 2010
- Reviewer, NIH Childhood Asthma Management Program (CAMP) CS/3 CT Scan Recommendation, October 2010
- Reviewer, Centers for Advanced Diagnostics and Experimental Therapeutics in Lung Diseases Stage I (CADET I) (P50) Special Emphasis Panel, November 2010
- Reviewer, Parker B. Francis Fellowship Program Council of Scientific Advisors, January 2011-2014
- Reviewer, National Heart, Lung, and Blood Institute, Special Review Committee, Program Project: Microbiome, Immunoregulation and Vitamin D Status in Allergy, February 2011

Reviewer, National Heart, Lung, and Blood Institute, Cross Organ Mechanism-Associated Phenotypes for Genetic Analyses of Heart, Lung, Blood, and Sleep Diseases, March 2011

Reviewer, Agency for Healthcare Research and Quality Evidence-Based Practice Center Program, January 2012

Reviewer, National Institutes of Health, PAR Developmental Pharmacology Special Emphasis Panel, March 2012

Reviewer, National Institute of Environmental Health Sciences, Environmental Health Sciences P30 Review Committee, September 2013

Reviewer, National Heart, Lung, and Blood Institute Loan Repayment Program, April-May 2014

Reviewer, Creighton University/State of Nebraska LB595 Cancer and Smoking Disease Research Program Development Grants, June 2015

Reviewer, Outstanding New Environmental Scientist R01 Award, National Institute of Environmental Health Sciences, July 2015

Reviewer, Member Special Emphasis Panel, National Institutes of Health, October-November 2015

Reviewer, Penn Orphan Disease Center LAM Pilot Grant Application, November 2015

Reviewer, Member Special Emphasis Panel, National Institutes of Health/National Center for Advancing Translational Sciences, May 2016

**SERVICE ON MAJOR COMMITTEES: (see above also)**

Advisory Boards:

LAM Foundation Scientific Advisory Board  
2001-present

Chair, Data Safety and Monitoring Board for the Severe Asthma Research Program, NIH/NHLBI  
2002-present

Member, Protocol Review Committee for the Asthma Clinical Research Network II, NIH/NHLBI  
2004-present

Member, NIAID Allergy/Asthma H1N1 Ad Hoc Data Safety and Monitoring Board  
2009

Member, NHLBI Asthma Outcomes Workshop  
2009-10

Member, NIEHS Workshop for Human Exposure Studies  
2010

Member, NIH CounterACT Steering Committee  
2011

Member, Asthma and Allergy Foundation of America Medical-Scientific Council  
2015

Member, American College of Allergy, Asthma and Immunology Asthma Yardstick Committee  
2016

**ORGANIZING/PARTICIPANT ROLES IN SCIENTIFIC MEETINGS:**

1993 Mini-Symposium Chairman, "Airway Smooth Muscle Cell Hyperplasia," American Lung Association (ALA)/American Thoracic Society (ATS) International Conference, San Francisco, CA

1994 Poster Discussion Symposium Chairman, "Airway Smooth Muscle Cell Proliferation," ALA/ATS International Conference, Boston, MA

1995 Chairman, Symposium on Asthma Management in Managed Care Organizations, Chicago, IL

1995 Poster Discussion Symposium Chairman, "Airway Smooth Muscle Cell Proliferation," ALA/ATS International Conference, Seattle, WA

1995 Co-Chairman, Symposium on Airway Smooth Muscle Cell Proliferation, Joint ALA/ATS and AAAI Conference, Chicago, IL

1996 Chairman, Grand Symposium, "Case for Case Management in Asthma," New Orleans, LA

1996 Co-Chairman, "Airway Smooth Muscle Cell Activation," ALA/ATS International Conference, New Orleans, LA

1997 Chairman, Symposium on Airway Remodeling, ALA/ATS International Conference, San Francisco, CA

1997 Chairman, Symposium on Asthma Disease State Management, ALA/ATS International Conference, San Francisco, CA

1997 Workshop Moderator, "Reactive Airways Disease: Etiology, Diagnosis and Management," Cottle International Rhinology Centennial, Philadelphia, PA

- 1998 Chairman, Symposium on Airway Smooth Muscle Function in Asthma, ALA/ATS International Conference, Chicago, IL
- 1998 Chairman, Workshop on Airway and Pulmonary Vascular Smooth Muscle Function in Health and Disease,” Sundance, Utah
- 1999 Chairperson and Plenary Speaker, Respiratory Pharmacology and Airways Disease, Southeast Asia-Western Pacific International Pharmacology Meeting, Taipei, Taiwan
- 1999 Chairperson, Research Directions in Asthma, Mid-Atlantic Regional Asthma Consortium, Johns Hopkins University, Baltimore, MD
- 2000 Chairman, Nominating Committee, Respiratory Structure and Function Assembly, American Thoracic Society
- 2000 Chairman and Presenter, Session on Airway Smooth Muscle Function, World Congress on Lung Health and 10<sup>th</sup> European Respiratory Society Annual Congress, Florence, Italy
- 2001 Co-Chairman, Minisymposium, “New Understandings in the Basic Mechanisms of Asthma,” AAAAI 57<sup>th</sup> Annual Meeting, New Orleans, LA
- 2002 Chair, Basic/Clinical Science LAM Conference, “Smooth Muscle,” The LAM Foundation/NHLBI Research Conference, Cincinnati, OH
- 2003 Chair, Basic Science, The LAM Foundation/NHLBI Research Conference, Cincinnati, OH
- 2003 Work Group Leader, Future Research Directions in Asthma Workshop, National Institutes of Health, Rockville, MD
- 2003 Chairman, International Congress on Airway Smooth Muscle Function in Asthma & COPD, Miami, FL
- 2004 Chairman, Pathophysiology Special Issues Board, New York, NY
- 2005 Co-Director, Clinical Skills Workshop on Office-Based Procedures: Spirometry, American College of Physicians Annual Session, San Francisco, CA
- 2005 Chairman, Poster Discussion Session on “Modulation of Allergic Inflammation,” American Thoracic Society International Conference, San Diego, CA
- 2005 Participant, National Center for Complementary and Alternative Medicine Symposium on Integrating Mind, Brain and Periphery: Mechanisms in Asthma and Atherosclerosis, Airlie Conference Center, Warrenton, VA
- 2005 Participant, Cystic Fibrosis Foundation/National Heart, Lung, and Blood Institute Workshop on Adult Stem Cells, Lung Biology, and Lung Disease, University of Vermont, Burlington, VT
- 2006 Discussion Leader, “Airway Remodeling in Asthma,” American Academy of Allergy, Asthma & Immunology 62<sup>nd</sup> Annual Meeting, Miami, FL
- 2006 Co-Director, Clinical Skills Workshop on Office-Based Procedures: Spirometry, American College of Physicians Annual Session, Philadelphia, PA
- 2006 Speaker, Educational Symposium for AIR2 Trial: Investigating Bronchial Thermoplasty for Severe Asthma, “The Role of Airway Smooth Muscle in Asthma,” San Diego, CA
- 2006 Panel Discussion Leader, Workshop on Advances in Small Animal Imaging: Application to Lung Pathophysiology, American Thoracic Society International Conference, San Diego, CA
- 2006 Chair, Scientific Symposium on Intracellular or Extracellular Strategies for Controlling Asthma/COPD Remodeling: Which is Best? and Speaker, “Pros and Cons of Targeting Extracellular vs. Intracellular Mechanisms: What Can We Learn?” American Thoracic Society International Conference, San Diego, CA
- 2006 Chair, National Heart, Lung, and Blood Institute Workshop, “Role of Airway Smooth Muscle in Bronchomotor Tone, Inflammation and Remodeling: Advancing from Basic Knowledge to Clinical Relevance,” Rockville, MD
- 2006 Chairperson and Invited Speaker, “Airway Remodeling: Fact or Fiction?” International Symposium on Recent Research Advances in Asthma Pathogenesis, St. John’s, Antigua
- 2007 Co-Chair, Mini Symposium, “Mechanisms Regulating Airway Smooth Muscle Phenotype and Function,” American Thoracic Society International Conference, San Francisco, CA
- 2007 Co-Chair, Scientific Symposium, “Controversies in Pulmonary and Critical Care Medicine,” American Thoracic Society International Conference, San Francisco, CA
- 2007 Chairperson, Workshop on the Impact of Environmental Nano Particles on Allergy and Asthma, XXVI Congress of the European Academy of Allergology and Clinical Immunology (EAACI), Göteborg, Sweden
- 2008 Symposium Co-Chair, “New Drugs: Targeting Inflammation in Disease,” 15<sup>th</sup> International Inflammation Research Association Conference, Chantilly, VA
- 2009 Co-Chair, Symposium on MicroRNA: Regulation of Lung Cell Function, and Speaker, “MicroRNAs Modulate Beta 2 Tolerance in Human Airway Smooth Muscle,” American Thoracic Society International Conference, San Diego, CA

- 2009 Lead Facilitator, Thematic Poster Session on The Cytoskeleton and Cell Contractility, American Thoracic Society International Conference, San Diego, CA
- 2009 Thematic Poster Session Presenter, "Comparison of Efficacy and Safety of Arformoterol 15 µg Twice Daily with Arformoterol 30 µg Once Daily in Patients with COPD," American Thoracic Society International Conference, San Diego, CA
- 2009 Mini Symposium Presenter, "miR-132 Modulates β<sub>2</sub>-Adrenergic Receptor Desensitization in Human Airway Smooth Muscle Cells," American Thoracic Society International Conference, San Diego, CA
- 2010 Symposium Speaker, "Vitamin D and Human Airway Smooth Muscle Function in Asthma," Scientific Symposium on Vitamin D and the Lung: Emerging Concepts, American Thoracic Society International Conference, New Orleans, LA
- 2011 Symposium Speaker, "Environment-Driven Epithelial Effects on Smooth Muscle Function," Scientific Symposium on Epithelial-Mesenchymal Crosstalk: A Matrix for Lung Remodeling, American Thoracic Society International Conference, Denver, CO
- 2011 Poster Discussion Session Co-Chair, Mechanisms of Airway Hyperresponsiveness in Asthma, American Thoracic Society International Conference, Denver, CO
- 2011 Mini Symposium Presenter, "RGS4 Modulates PDGF-Induced MMP-9 Expression in Human Airway Myocytes," American Thoracic Society International Conference, Denver, CO
- 2011 Discussant, Sixth Annual Nemaclin Asthma Conference, Farmington, PA
- 2011 Symposium Speaker, "Response Element," Smooth Muscle and Asthma Symposium, World Allergy Congress, Cancun, Mexico
- 2011 Session Co-Chair, Long-Acting Beta Agonists vs. Tiotropium for Asthma, World Allergy Congress, Cancun, Mexico
- 2011 Symposium Discussant, Overview of Asthma and Mind Brain Body Research, Mind Brain Body Health Initiative Final Symposium, Palm Beach, FL
- 2011 Symposium Speaker, "Animal Models in Asthma," Mind Brain Body Health Initiative Final Symposium, Palm Beach, FL
- 2012 Discussant, Seventh Annual Nemaclin Asthma Conference, Farmington, PA
- 2013 Primary Speaker, "New Therapeutic Strategies Targeting Airway Smooth Muscle," Q&A Workshop on Airway Smooth Muscle Signaling: New Insights in Asthma, AAAAI Annual Meeting, San Antonio, TX
- 2013 Faculty, Ninth Annual Respiratory Disease Young Investigators Forum, Austin, TX
- 2013 Fellows Program Co-Director and Conference Discussant, Eighth Annual Nemaclin Asthma Conference, Farmington, PA
- 2014 Co-Chair, Plenary Session: COPD: Effects Beyond the Lungs, COPD Istanbul 2014, Istanbul, Turkey
- 2014 Symposium Speaker, "Developing Biological Options for Patients with Severe Asthma and Eosinophilic Inflammation," International Pipeline Symposium, American Thoracic Society International Conference, San Diego, CA
- 2014 Chair and Primary Reviewer, Grant 1, Career Development Workshop: Understanding the Grant Review Process, American Thoracic Society International Conference, San Diego, CA
- 2014 Symposium Speaker, "Molecular and Cellular Mechanisms of Airway Obstruction in Asthma," World Allergy Forum Symposium, "Origins of Severe Airway Diseases," European Academy of Allergy and Clinical Immunology Congress, Copenhagen, Denmark
- 2014 Faculty, Tenth Annual Respiratory Disease Young Investigators Forum, Washington, DC
- 2014 Symposium Speaker, "Asthma: Novel Approaches and New Targets," Veterinary Comparative Respiratory Society, New Bolton Center Hospital, Kennett Square, PA
- 2014 Symposium Speaker, "Immunologic and Physiologic Assessment of Chronic Airway Obstruction," American College of Allergy, Asthma & Immunology Annual Scientific Meeting, Atlanta, GA
- 2014 Plenary Session Speaker, "Systemic Manifestations and Co-Morbidities of COPD," American College of Allergy, Asthma & Immunology Annual Scientific Meeting, Atlanta, GA
- 2014 Meet the Professor Session Speaker, "Severe Asthma," American College of Allergy, Asthma & Immunology Annual Scientific Meeting, Atlanta, GA
- 2015 Symposium Speaker, "Genotype-Specific Rhinovirus Induced Changes in Airway Smooth Muscle Hyperresponsiveness," American Thoracic Society International Conference, Denver, CO
- 2015 Workshop Speaker, "Writing for Success," Workshop on Making an Impact with Your Science, American Thoracic Society International Conference, Denver, CO
- 2015 Co-Chair, Poster Discussion Session: Airway Inflammation and Hyperresponsiveness: Novel Mechanisms and Therapy, American Thoracic Society International Conference, Denver, CO
- 2015 Co-Chair, Poster Discussion Session: Fresh Perspectives on Airway Remodeling: From the Rocky Mountain High to Country Roads, American Thoracic Society International Conference, Denver, CO

- 2015 Oral Presentation: What Is the Role of Lung Inflammation in Mediating Particulate Matter and Ozone Exposure Effects on Health and Disease? Session on Health Impacts of Atmospheric Particles, Goldschmidt Conference, Prague, CZ

#### **Other Participant Roles**

- 1991 Director, Adult Asthma Patient Education Program, city-wide program sponsored by the American Lung Association
- 1995 Spokesperson Concerning Asthma, American Lung Association of Southeastern Pennsylvania
- 1995-05 Advisory Council, American Lung Association of Southeastern Pennsylvania Metropolitan Area
- 1995-05 Research Council, American Lung Association of Southeastern Pennsylvania
- 1995-05 Philadelphia Asthma Task Force
- 1996-07 Asthma Task Force, American Lung Association of Southeastern Pennsylvania
- 1996-05 National Research Grant Review Committee, American Thoracic Society
- 1996-04 Program Committee, Respiratory Structure and Function Assembly, American Thoracic Society
- 1997-04 Long Range Planning Committee, Respiratory Structure and Function Assembly, American Thoracic Society
- 1997-07 Member, Board of Directors, American Lung Association of Southeastern Pennsylvania
- 2000 Co-Chairperson, Attack Asthma Program, American Lung Association of Southeastern Pennsylvania
- 2001-08 Co-Chairperson, Allies Against Asthma, Robert Wood Johnson Foundation Award
- 2006 Chairman, Pri-Med Updates, SCIOS Continuing Education
- 2006 Chairman, Pri-Med Online Asthma Condition Center, SCIOS Continuing Education

#### **EDITORSHIPS**

- Co-Editor-in-Chief: Respiratory Research
- Editor: British Journal of Pharmacology
- Editor: Scientia, Medical Education Network, New York
- Associate Editor: American Journal of Respiratory Cell & Molecular Biology
- Associate Editor: Frontiers in Pharmacotherapy of Respiratory Diseases
- Managing Editor, Frontiers in Bioscience

#### **EDITORIAL BOARD:**

- American Journal of Respiratory Cell & Molecular Biology
- American Journal of Physiology: Lung Cellular and Molecular Physiology
- British Journal of Pharmacology
- Current Respiratory Medicine Reviews
- Journal of Pulmonary and Respiratory Medicine
- Pharmacologia
- Respiratory Research
- Therapeutic Advances in Respiratory Disease
- Thorax

#### **REVIEWER:**

- American Journal of Physiology: Cell Physiology
- American Journal of Physiology: Lung Cellular and Molecular Physiology
- American Journal of Respiratory & Critical Care Medicine
- American Journal of Respiratory Cell & Molecular Biology
- Annals of Internal Medicine
- Canadian Journal of Physiology & Pharmacology
- Cleveland Clinic Journal of Medicine
- Current Respiratory Medicine Reviews
- European Journal of Pharmacology
- European Respiratory Journal
- Journal of Allergy and Clinical Immunology
- Journal of Applied Physiology
- Journal of Clinical Investigation
- Journal of Immunology
- Nature Medicine
- New England Journal of Medicine



Proceedings of the National Academy of Sciences, USA  
Proceedings of the American Thoracic Society  
Pulmonary Pharmacology & Therapeutics  
Respiratory Research  
Thorax

**SERVICE ON GRADUATE SCHOOL COMMITTEES:**

University of Pennsylvania  
1989-90 Student-Faculty Interaction Committee  
1990-92 Student-Faculty Advisor  
1992-02 Internship Selection Committee  
2004-06 Member, Committee for Academic Review of Department of Physiology  
2010-15 Reviewer, University Research Foundation Biomedical Review Panel  
2011-15 Member, Department of Medicine Committee on Appointments and Promotions  
2013- Member, Pharmacology Graduate Group  
present

**SERVICE ON HOSPITAL COMMITTEES:** None

**SERVICE TO THE COMMUNITY:**

1991 Director, Adult Asthma Patient Education Program, City-Wide Program Sponsored by the American Lung Association  
1995-05 Research Council, American Lung Association of Southeastern Pennsylvania  
1996-07 Asthma Task Force, American Lung Association of Southeastern Pennsylvania  
2000 Co-Chairperson, Attack Asthma Program, American Lung Association of Southeastern Pennsylvania  
2001-08 Co-Chairperson, Allies Against Asthma, Robert Wood Johnson Foundation Award

**SPONSORSHIP (Primary Mentorship) OF PRE-/POSTDOCTORAL FELLOWS:**

1991-93 Gulsevil Bilgen, M.D., Postdoctoral Fellow  
1991-93 Nathalie Frey, M.D., Postdoctoral Fellow  
1993-98 Aili L. Lazaar, M.D., Postdoctoral Fellow (K08 Awardee, R01 Recipient, ALA Career Investigator Awardee)  
1994-96 Melissa Cohen, M.D., Postdoctoral Fellow  
1995-01 Vera Krymskaya, Ph.D., Visiting Scientist, Institute of Experimental Cardiology, Moscow, Russia (American Heart Association Research Grant Recipient, LAM Foundation Research Grant Recipient, R01 Recipient, currently Professor of Medicine with Tenure, University of Pennsylvania)  
1996-01 Dr. Yassine Amrani, Postdoctoral Fellow (Parker B. Francis Fellow, R01 Recipient, currently Associate Professor, University of Leicester, UK)  
1996-01 Dr. Hang Chen, Postdoctoral Fellow  
1995-96 Indira Gurubhagavatula, M.D., Postdoctoral Fellow (currently Associate Professor of Medicine, University of Pennsylvania)  
1996-01 Rebecca Hoffman, Ph.D., Research Associate (currently Assistant Professor, Rowan University)  
1996-01 Alaina J. Ammit, Ph.D., CJ Martin Fellowship Awardee, NHMRC, Australia  
1997-98 Evgenia Gerasimovskaya, Ph.D., Postdoctoral Fellow  
1998 Daniela Levi, M.D., Postdoctoral Fellow  
1999-00 Liza C. O'Dowd, M.D., Research Associate (K23 NIH Grant Awardee)  
2000-01 Angela Haczku, M.D., Ph.D., Research Associate Professor (Parker B. Francis Awardee, R01 Recipient, currently Professor of Medicine, University of California, Davis)  
2001-05 Elena Goncharova, Ph.D., Postdoctoral Fellow (currently Associate Professor, Vascular Medicine Institute, University of Pittsburgh)  
2001-03 Chien-Da Huang, M.D., Visiting Professor  
2002-05 Jenny Kim, M.D., Postdoctoral Fellow  
2002-05 Omar Tliba, D.V.M., Ph.D., Postdoctoral Fellow  
2005-07 Omar Tliba, D.V.M., Ph.D., Research Associate (Recipient of ALA Grant, Parker B. Francis Fellowship, NIH K99, currently Associate Professor, Thomas Jefferson University School of Pharmacy)  
2006-11 Gautam Damera, Ph.D., Postdoctoral Fellow (Scientist, Respiratory & Translational Sciences Division, MedImmune)

- 2006-10 Audreesh Banerjee, M.D., K08 Awardee, Adjunct Assistant Professor of Medicine, University of Pennsylvania; Pulmonary Fellowship Director, Christiana Hospital
- 2007-10 Philip R. Cooper, Ph.D., Postdoctoral Fellow (Research Scientist, J&J Biologics Center of Excellence)
- 2007-12 Michael W. Sims, M.D., K23 Awardee, Assistant Professor of Medicine, University of Pennsylvania
- 2009-14 Cynthia Koziol-White, Ph.D., Postdoctoral Fellow, Research Associate, University of Pennsylvania
- 2010 Yuki Muroyama, Exchange Student, University of Tokyo Graduate School of Medicine
- 2011 Ikuo Takazawa, Exchange Student, University of Tokyo Graduate School of Medicine
- 2012-15 Joseph Jude, B.V.Sc., Ph.D., CEET Postdoctoral Fellow, University of Pennsylvania
- 2012- Edwin Yoo, B.S., M.S., Pharmacology Graduate Student, University of Pennsylvania
- 2014- Christie Ojiaku, B.S., Pharmacology Graduate Student, University of Pennsylvania
- 2014 Sarah Orfanos, M.D.
- 2014-15 Bilal Haq, M.S.
- 2015 Zhiyun Guo, Ph.D., Visiting Scholar, Associate Professor, Southwest Jiaotong University, Chengdu City, China
- 2015 Jia Hou, M.D., Ph.D., Visiting Scholar, Associate Chief Physician, Respiratory and Critical Care Medicine, General Hospital of Ningxia Medical University, Ningxia, China

**Undergraduate Student Research Trainees:**

- 2010 Colleen McNulty
- 2010 Evan Huzinec
- 2011-14 Jackie Scala
- 2011-14 Michael Phan
- 2011-14 Martin Johnson
- 2012 Christina Nikolos
- 2012 Caroline Zhong
- 2012 Edwin Yoo (medical student)
- 2012-13 Stephane Guillou
- 2012-13 Mi Thant Mon Soe
- 2012-14 Kevin MacDonald
- 2013 Kevin Truskowski
- 2013 Aakanksh Jaikumar
- 2013 Andrew Parambath
- 2013-14 Alexa Carboni
- 2013-14 Yuxin Ouyang
- 2013-14 Eleni Papanikolaou
- 2014 Megan Levis
- 2014 Michael Klichinsky
- 2014 Isabelle Lee
- 2014 Kim Nguyen (medical student)
- 2014 Stephen Zachariah
- 2014-15 Ngan Nguyen
- 2014-15 Sayaka Ogawa
- 2014-15 Sofia Gomez
- 2014-15 Ricki Levitus
- 2015 Hollie Brown
- 2015 Damie Juat
- 2015 Jennifer Viveiros
- 2015 Ankit Shah
- 2015 Akber Sheikh
- 2015 Krishna Sunder

**MAJOR TEACHING RESPONSIBILITIES:**

- 1989-15 Attending Physician, Hospital of the University of Pennsylvania
- 1989-15 Ambulatory Care Lecturer, Section of General Medicine, Hospital of the University of Pennsylvania
- 1990-15 ID-205, Pathophysiology of Emphysema
- 1991-92 ME100, Patient-Doctor Relations
- 1992-93 ID-302, Interdisciplinary Emergency Management, “Approach to the Dyspneic Patient”

1993-15 Pharmacology 100, "Asthma"

1990 "Management of Life-Threatening Asthma," Grand Rounds, Crozer-Chester Medical Center, Chester, PA

1990 "Management of the Asthmatic Patient," Annual Meeting of Philadelphia Health PASS Physicians, Philadelphia, PA

1991 "Life-Threatening Asthma," Grand Rounds, Sacred Heart Hospital, Allentown, PA

1991 "Alternative Therapies for Severe Asthmatic Patients," Grand Rounds, Chester County Hospital

1991 "Increasing Asthma Mortality: Possible Etiologies," Grand Rounds, Riddle Memorial Hospital

1991 "Who Is at Risk for Death From Asthma?" Warminster General Hospital

1991 "Insights Into Asthma Management," Doylestown Hospital

1991 "Cellular Mechanisms Regulating Airway Smooth Muscle Cell Growth," American Institute of Biological Sciences, St. Joseph's University

1991 "New Therapy for Severe Asthma," Medical Grand Rounds, Veterans Administration Hospital

1991 "Pulmonary Function and Exercise Testing," Research Seminar, Bio-Pharm Clinical Services

1991 "Therapy for the COPD Patient," Visiting Professor, Fairmount Medical Center

1992 "Asthma Therapy in the '90s," Medical Grand Rounds, Taylor Hospital

1992 "Update – Treatment of COPD," Medical Grand Rounds, Riddle Memorial Hospital

1992 "Asthma: Morbidity and Mortality Increases," Medical Grand Rounds, North Penn Hospital

1992 "Asthma Therapy: New Perspectives," Hahnemann University Hospital

1992 "Asthma: A Need for Better Therapy," Medical College of Pennsylvania

1992-94 "Asthma: New Approaches for Therapy," Medical Grand Rounds, Christiana Hospital

1993 "Asthma Management: The Changing Approach," Grand Rounds, Episcopal Hospital

1993 "Fatal Asthma," Grand Rounds, Abington Hospital

1993 "Asthma: New Insights into Pathogenesis and Management," Grand Rounds, Holy Redeemer Hospital

1993 "Asthma in the '90s," Grand Rounds, Lower Bucks Hospital

1993 "Asthma," Grand Rounds, St. Francis Hospital, Delaware

1993 "Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Proliferation: In Vivo Correlates," Research Seminar, Pulmonary Division, Temple University School of Medicine

1993 "Asthma in the '90s," Grand Rounds, Frankford Hospital

1993 "Fatal Asthma," Grand Rounds, Riverview Medical Center

1994 "The Use of Pulmonary Function Tests," Medical Grand Rounds, St. Agnes Medical Center

1994 "Airway Smooth Muscle: More Than a Contractile Cell," SmithKline Beecham Pharmaceuticals, King of Prussia, PA

1994 "Asthma," Grand Rounds, Albert Einstein Medical Center

1994 "Asthma Therapy Today," Grand Rounds, Fitzgerald Mercy Hospital, Darby, PA

1994 "New Therapies in Asthma," Surgical Grand Rounds, University of Pennsylvania Medical Center

1994 "Asthma in the '90s," Medicine Grand Rounds, Allentown Hospital

1994 "Asthma: An Irreversible Disease," Medical Grand Rounds, University of Pennsylvania Medical Center

1995 "Asthma Today," Deborah Heart & Lung Center, Browns Mills, NJ

1995 "Update on Asthma," North Penn Hospital, Lansdale, PA

1995 "Therapy for the Asthmatic Patient," Fairmount Medical Center

1996-97 "Update on Asthma Therapy," Grand Rounds, VA Medical Center, Philadelphia, PA

1996 "Update on Asthma Therapy," Grand Rounds, Presbyterian Medical Center, Philadelphia, PA

1996 "Asthma in the '90s," Grand Rounds, Pottsville Hospital

1996-97 ME100, Patient-Doctor Relations

1997 "Asthma in the '90s," Grand Rounds, Albert Einstein Medical Center, Philadelphia

1998 "Management of COPD/Asthma," Temple University School of Pharmacy, Philadelphia, PA

1999-14 Curriculum 2000, Respiratory Medicine: Obstructive Diseases: Asthma, Pharmacology

2000-02 "Update on Asthma," University of Pennsylvania

2002-06 Participating Faculty, Pre-Medical Summer Enrichment Program, Center of Excellence on Minority Health

2004-15 Curriculum 2000, Module 4, Clinical Therapeutics Course, Asthma Presentation

2007-present Lecturer, ENV5 408: Urban Asthma Epidemic Course, Earth & Environmental Science Department

2008 Judge, 7<sup>th</sup> Annual Biomedical Postdoctoral Research Symposium

2009-10 Moderator, Internal Medicine Core Clerkship: From Bedside to Bench (and Back)

2010-14 Participant, Careers in Medicine Core Clerkship Mentoring Lunch

2010-present Lecturer, Frontiers in Environmental Health Science Course

2011-14 Pulmonary Module 2 Workshop Leader

2012-present Lecturer, ENVS 406: Community-Based Environmental Health Course

2015 Lecturer, BIOM 502: Molecular Basis of Disease: Asthma

2015-16 Lecturer, PHRM 590: Inhalation Toxicology: Respiratory Physiology and Mechanisms of Lung Injury

2015 “Occupational Asthma,” Lecture for Occupational Medicine Residency Program, Hospital of the University of Pennsylvania

2016 “Airway Smooth Muscle: A Therapeutic Target in Severe Persistent Asthma”. The Joseph and Suzanne Seidemann Lecture in Pulmonary and Critical Care, Robert Wood Johnson Medical School, Rutgers University

**CLINICAL RESPONSIBILITIES:**

1990-2015 Attending Physician, Pulmonary Consult and Intensive Care Unit Services, Hospital of the University of Pennsylvania

2015-present Attending Physician, Pulmonary and Critical Care Medicine, Robert Wood Johnson University Hospital

**GRANT SUPPORT:**

**CURRENT - PRINCIPAL INVESTIGATOR**

National Institutes of Health/NHLBI, 1P01-HL114471-01A1, “Novel Molecular Mechanisms Promote GPCR-Induced Bronchodilation in Asthma,” Program Director/PI, 2013-2018, 3.15 Calendar Effort, \$1,515,000 Annual Direct Costs

**CURRENT - CO-INVESTIGATOR**

National Institutes of Health/National Institute of Environmental Health Sciences (NIEHS), 1P30 ES013508, Center of Excellence in Environmental Toxicology, Core Director, Research Core III: Lung Disease and the Environment (Program Director: Dr. Trevor Penning, University of Pennsylvania), 2006-2020, 2.25 Calendar Effort, \$354,752 Annual Direct Costs

National Institutes of Health, 1U01-HL110942, “Epigenetic Regulation of Lung Progenitor Repair and Regeneration,” Co-Investigator (PI: Dr. Edward Morrissey, University of Pennsylvania), 2012-2016, 0.45 Calendar Effort, \$114,000

National Institutes of Health/NHLBI, 1R01-HL110551-01A1, “Role of Folliculin (FLCN) in Lung Cell Survival,” Co-Investigator (PI: Dr. Vera Krymskaya, University of Pennsylvania), 2012-2016, 0.45 Calendar Effort, \$344,254

National Institutes of Health, 5R01-HL058506, “G Protein-Coupled Receptor Signaling in Airway Smooth Muscle,” PI of Subcontract (PI: Dr. Raymond Penn, Thomas Jefferson University), 2013-2018, 0.18 Calendar Effort, \$22,500 Annual Direct Costs

National Institutes of Health/NIEHS, U19 ES020676, “The Community Health Assessment of Risks Associated with the Macondo Spill,” Project 1 Co-Leader (PI: Dr. Cornelis Elferink, University of Texas Medical Branch), 2013-2016, 0.63 Calendar Effort, \$42,251 Annual Direct Costs

National Institutes of Health/NIEHS, U19 ES020676, “Gulf Coast Health Alliance: Health Risks Related to the Macondo Spill (GC HARMS),” CODC Co-Director (PI: Dr. Cornelis Elferink, University of Texas Medical Branch), 2013-2016, 0.18 Calendar Effort, \$39,851 Annual Direct Costs

National Institutes of Health, 1R01-HL116916, “Prevention and Management of Pulmonary Embolism,” Co-Investigator (PI: Dr. Douglas Cines, University of Pennsylvania), 2013-2017, 0.45 Calendar Effort, \$254,065 Annual Direct Costs

National Institutes of Health, 1R21-AI108585-01A1, "Human Mast Cell-Specific Mas-Related Gene-X2 (MrgX2) in Anaphylaxis and Asthma," Co-Investigator (PI: Dr. Hydar Ali, University of Pennsylvania Dental School), 2014-2016, 0.45 Calendar Effort, \$180,000 Annual Direct Costs

National Institutes of Health/NHLBI, 2P01-HL081064-06A1, "Pathobiology of Asthma," PI of Subcontract (PI: Erzurum, Cleveland Clinic Lerner College of Medicine-CWRU), 2015-2020, \$73,080

**PAST – PRINCIPAL INVESTIGATOR**

National Institutes of Health Trainee Grant, University of Pennsylvania Medical School, 50T35-HD-0721701A1, 1987-89

Parker B. Francis Foundation Award, 1989-91, \$31,000 per year

Schering Research Grant, 1989-90, \$6,000

Clinical Investigator Award, 1-K08-HL02647-01, 1991-96, total costs \$402,000

American Lung Association Research Grant, 1990-92, \$17,500 per year

Merck Pharmaceuticals Research Grant, 1991, \$12,500

University of Pennsylvania Research Foundation, 1992, \$4,000

American Lung Association Research Grant, 1993-94, \$17,500

SmithKline Beecham Research Grant, 1994-95, \$48,500

Abbott Laboratories Research Grant, "Asthma Disease State Management Within an Integrated Health System," 1995-98, \$75,000 (TDC)

SmithKline Beecham Pharmaceuticals, "The Effects of LTD<sub>4</sub> on Expression of Glycosaminoglycans in Human Airway Smooth Muscle," 1996-98, \$32,000 per year

National Aeronautics & Space Administration, NRA-94-OLMSA-02, Principal Investigator, Project 3, "Airway Smooth Muscle and Bone Signal Transduction," 1995-99, \$185,937 per year

American Lung Association Career Investigator Award, "Molecular Mechanisms Regulating Human Airway Smooth Muscle Cell Growth," 1996-99, \$35,000 per year

National Institutes of Health (NHLBI), R01-HL55301, "Cellular and Molecular Mechanisms Regulating Airway Muscle Growth," Principal Investigator, 1996-2000, \$531,216 (TDC)

Merck & Co., "LTD<sub>4</sub> Receptor Expression in Human Airway Smooth Muscle," Principal Investigator, 2001-2002, 2% Effort, \$45,000 Annual Direct Costs

National Institutes of Health, 1R01-HL64063, "Molecular Mechanisms Regulating Synthetic Functions of Human Airway Smooth Muscle," Principal Investigator, 1999-2004, \$225,000 per year

Mind Brain Body & Health Initiative, "Effect of Expectancy on Salmeterol Reversal of Methacholine-Induced Airway Obstruction in Asthma," Principal Investigator, 5/23/2003-12/31/2004, \$62,893

National Institutes of Health (NHLBI), 2R01-HL55301, "Cellular and Molecular Mechanisms Regulating Airway Muscle Growth," Principal Investigator, 2000-2005, \$875,000 (TDC)

National Institutes of Health, P50-HL067663, "Airway Smooth Muscle Modulates Inflammatory Responses in Asthma," Program Director, 2001-2010, 0.12 Calendar Effort, \$1,690,905 Annual Direct Costs

Project 1, "Cellular and Molecular Mechanisms Regulating Synthetic Responses of Human Airway Smooth Muscle," Principal Investigator, \$268,446 Annual Direct Costs

Core A, "Murine Studies," Core Director, \$84,326 Annual Direct Costs  
Core C, "Administration," Core Director, \$86,852 Annual Direct Costs

National Institutes of Health, 2R01-HL064063, "Mechanisms Regulating Functions of Airway Smooth Muscle," Principal Investigator, 2004-2010, 0.06 Calendar Effort, \$225,000 Annual Direct Costs

National Institutes of Health, R01-HL080676-01 (RFA HL-04-029), "Ozone Alters Airway Smooth Muscle Function in Asthma," Principal Investigator, 2005-2011, 0.94 Calendar Effort, \$300,000 Annual Direct Costs

National Institutes of Health, R01-HL081824, "Interferons Modulate Airway Smooth Muscle Growth," Principal Investigator, 2005-2011, 1.34 Calendar Effort, \$325,000 Annual Direct Costs

National Institutes of Health, R01-HL077735, "Mechanisms of VEGF Modulation of Smooth Muscle Function," Principal Investigator, 2006-2011, 0.48 Calendar Effort, \$225,000 Annual Direct Costs

National Institutes of Health/NHLBI, 1R01-HL097796-01, RFA-HL-09-007, "RGS: A Molecular Switch Regulating Irreversible ASM Growth/Contraction in Asthma," PI/Program Director, 2009-2014, 1.70 Calendar Effort, \$380,000 Annual Direct Costs

**PAST CO-INVESTIGATOR:**

Subcontract to Project #5, "Resistance of the Cell to Shape Distortion: Microstructural Basis of Cytoskeletal Mechanics," Program Project P01-HL33009, "Physical Determinants of Lung Parenchymal Function," Harvard University School of Public Health, Physiology Program, Dr. Jeffrey Fredberg, PI, 1995-99, 5% Effort, \$15,000

Agency for Health Care Policy and Research, R01-HS10044, "Costs and Effects of Disease Management for Adult Asthma," Co-Investigator with Dr. Alan Hillman, PI, 1999-2000, \$538,725 (TDC)

National Institutes of Health, R01-AI-HL40203, "The IGF Axis in Asthma," Collaborator with Dr. Pinchas Cohen, PI, 1998-2003, \$223,611 (TC for five years)

National Institutes of Health, R01-HL64042, "Adhesion Molecules in Smooth Muscle Activation and Growth," Co-Investigator (Dr. Aili Lazaar, PI), 2000-2005, 10% Effort, \$200,000 Annual Direct Costs

Subcontract to Project #2, "Cytokines Modulate Airway Smooth Muscle Contraction," Program Project P50-HL56383, Harvard University School of Public Health, 2001-2006, 6% Effort, \$32,431 per year (TDC)

National Institutes of Health, P50 67664, "Cytokines, Asthma and Airway Smooth Muscle," Co-Investigator, Subcontract to Project 3 (Dr. J.P. Kinet, PI, Harvard University), 2001-2006, 6% Effort, \$59,403 Annual Direct Costs

National Institutes of Health, U54-RR023567, Clinical and Translational Science Award, Associate Program Director, General Clinical Research Center (PI: Dr. Garret FitzGerald, University of Pennsylvania), 2006-2011, 0.6 Calendar Effort, \$9,541,367 Direct Costs

National Institutes of Health, 2R01-HL071106, "Role of p70 S6 Kinase in Regulating LAM Cell Growth," Co-Investigator (PI: Dr. Vera Krymskaya, University of Pennsylvania), 2007-2012, 0.54 Calendar Effort, \$175,000 Annual Direct Costs

National Institutes of Health, R01-AI06887, "Leukotrienes and Lung Inflammation," PI of Subcontract (PI: Dr. Roy Soberman, Harvard University), 2007-2012, 0.37 Calendar Effort, \$250,000 Annual Direct Costs

National Institutes of Health Challenge Grant, 1RC1 ES018505, "Effects of Ozone Exposure on Expression and Function of Surfactant Protein D," Co-Investigator (PI: Dr. Angela Haczku, University of Pennsylvania), 2009-2012, 0.29 Calendar Effort, \$350,000 Annual Direct Costs

National Institutes of Health, R01-HL085774, "G Protein-Coupled Receptor Signaling in Mast Cells," Co-Investigator (PI: Dr. Hydar Ali, University of Pennsylvania), 2009-2012, 0.11 Calendar Effort, \$250,000 Annual Direct Costs

National Institutes of Health, 1R21-AI094896, "Human Mast Cell MrgX1 and MrgX2 G-Protein Coupled Receptors in Asthma," Co-Investigator (PI: Dr. Hydar Ali, University of Pennsylvania), 2011-2013, 0.60 Calendar Effort, \$42,113

National Institutes of Health, 1R01 AI072197, "Mechanisms of Social Stress-Enhanced Allergic Airway Response in a Mouse Model," Co-Investigator (PI: Dr. Angela Haczku, University of California, Davis), 2010-2015, 0.37 Calendar Effort, \$253,916 Annual Direct Costs

#### **PENDING**

National Institutes of Health/NHLBI, R01 HL126812, "Redox Pathways Regulating Hemeprotein Maturation in Asthma, PI of Subcontract (PI: Stuehr, Cleveland Clinic Lerner College of Medicine-CWRU), 2015-2020, \$125,000

National Institutes of Health, PAR-13-302, "Antimicrobial Peptides and Human Mast Cells in Anaphylaxis and Asthma," Co-Investigator, 2015-2020, \$250,000

#### **PUBLICATIONS:**

##### **A. Refereed Original Article in Journal**

1. Mozersky, S., **Panettieri, R.A., Jr.**: Is pH drop a valid measure of extent of protein hydrolysis? *Journal of Agriculture and Food Chemistry*, Nov.-Dec., 1313-1316, 1983.
2. Kelley, M.A., **Panettieri, R.A., Jr.**, Krupinski, A.V.: Resting single-breath diffusing capacity as a screening test for exercise-induced hypoxemia. *Am. J. Med.* 80(5):807-812, 1986 (PMID: 3706368).
3. **Panettieri, R.A., Jr.**, Murray, R.K., DePalo, L.R., Yadavish, P.A., Kotlikoff, M.I.: A human airway smooth muscle cell line that retains physiological responsiveness. *Am. J. Physiol. Cell Physiol.* 256:C329-C335, 1989 (PMID: 2645779).
4. **Panettieri, R.A., Jr.**, Yadavish, P.A., Kelly, A.M., Rubinstein, N.A., Kotlikoff, M.I.: Histamine stimulates proliferation of airway smooth muscle and induces c-fos expression. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 259:L365-L371, 1990 (PMID: 2124421).
5. Kelly, A.M., Rosser, B.W.C., Hoffman, R., **Panettieri, R.A., Jr.**, Schiaffino, S., Rubinstein, N.A., Nemeth, P.M.: Metabolic and contractile protein expression in developing rat diaphragm muscle. *J. Neuroscience* 11(5):1231-1242, 1991 (PMID: 2027044).
6. Stedman, H.H., Sweeney, H.L., Shrager, J.B., Maguire, H.C., **Panettieri, R.A., Jr.**, Petrof, B., Narusawa, M., Leferovich, J.M., Sladky, J.T., Kelly, A.M.: The mdx mouse diaphragm reproduces the degenerative changes of Duchene muscular dystrophy. *Nature* 352:536-539, 1991 (PMID: 1865908).
7. Munoz, N.M., Zak, R., **Panettieri, R.A., Jr.**, Wiesner, R., Leff, A.R.: Changes in levels of mRNA encoding myosin heavy chain in porcine trachealis during ontogenesis. *Am. J. Respir. Cell Mol. Biol.* 8:252-257, 1993 (PMID: 8448016).
8. Hershenson, M.B., Kelleher, M.D., Naureckas, E.T., Abe, M.K., Rubinstein, V.J., Zimmermann, A., Bendele, A.M., McNulty, J.A., **Panettieri, R.A., Jr.**, Solway, J.: Hyperoxia increases airway cell S-phase traversal in immature rats in vivo. *Am. J. Respir. Cell Mol. Biol.* 11:296-303, 1994 (PMID: 8086167).
9. Pilewski, J.M., **Panettieri, R.A., Jr.**, Kaiser, L.R., Albelda, S.M.: Expression of endothelial cell adhesion molecules in human bronchial xenographs. *Am. J. Respir. Crit. Care Med.* 150:795-801, 1994 (PMID: 7522102).
10. Lazaar, A.L., Albelda, S.M., Pilewski, J.M., Brennan, B., Puré, E., **Panettieri, R.A., Jr.**: T lymphocytes adhere to airway smooth muscle cells via integrins and CD44 and induce smooth muscle cell DNA synthesis. *J. Exp. Med.* 180:807-816, 1994 (PMID: 7520473).
11. Puré, E., Camp, R.L., Peritt, D., **Panettieri, R.A., Jr.**, Lazaar, A.L., Nayak, S.: Defective phosphorylation and hyaluronate binding of CD44 with point mutations in the cytoplasmic domain. *J. Exp. Med.* 181:55-62, 1995 (PMID: 7528778).
12. **Panettieri, R.A., Jr.**, Murray, R.K., Bilgen, G., Eszterhas, A.J., Martin, J.G.: Repeated allergen inhalations induce DNA synthesis in airway smooth muscle and epithelial cells in vivo. *Chest* 107(3) Supplement: 94S-95S, 1995 (PMID: 7875013).
13. Einarsson, O., Geba, G.P., Zhou, Z., Landry, M.L., **Panettieri, R.A., Jr.**, Tristram, D., Welliver, R., Metinko, A., Elias, J.A.: Interleukin-11 in respiratory inflammation, in Mackiewicz, A., Koj, A., Sehgal, P.B. (Eds.) *Interleukin-6-Type Cytokines*. *Ann. N.Y. Acad. Sci.* 762:89-101, 1995 (PMID: 7668577).

14. **Panettieri, R.A., Jr.**, Hall, I.P., Maki, C.S., Murray, R.K.:  $\alpha$ -Thrombin increases cytosolic calcium and induces human airway smooth muscle cell proliferation. *Am. J. Respir. Cell Mol. Biol.* 13:205-216, 1995 (PMID: 7626288).
15. **Panettieri, R.A., Jr.**, Lazaar, A.L., Puré, E., Albelda, S.M.: Activation of cAMP-dependent pathways in human airway smooth muscle cells inhibits TNF- $\alpha$ -induced ICAM-1 and VCAM-1 expression and T lymphocyte adhesion. *J. Immunol.* 154:2358-2365, 1995 (PMID: 7532667).
16. Amrani, Y., **Panettieri, R.A., Jr.**, Frossard, N., Bronner, C.: Activation of the TNF $\alpha$ -p55 receptor induces myocyte proliferation and modulates agonist-evoked calcium transients in cultured human tracheal smooth muscle cells. *Am. J. Respir. Cell Mol. Biol.* 15:55-63, 1996 (PMID: 8679222).
17. **Panettieri, R.A., Jr.**, Goldie, R.G., Rigby, P., Eszterhas, A.J., Hay, D.W.P.: Endothelin-1-induced potentiation of human airway smooth muscle proliferation: an ET<sub>A</sub> receptor-mediated phenomenon. *Br. J. Pharmacol.* 118:191-197, 1996 (PMID: 8733595).
18. Hubmayr, R.D., Shore, S.A., Fredberg, J.J., Planus, E., **Panettieri, R.A., Jr.**, Moller, W., Heyder, J., Wang, N.: Pharmacological activation changes stiffness of cultured human airway smooth muscle cells. *Am. J. Physiol. Cell Physiol.* 271:C1660-C1668, 1996 (PMID: 8944650).
19. **Panettieri, R.A., Jr.**: Regulation of growth of airway smooth muscle by second messenger systems, in Stewart, A.G. (Ed.) *Airway Wall Remodelling in Asthma*, CRC Press Inc., Boca Raton, Florida, 1996, pp. 269-293.
20. Lazaar, A.L., Reitz, H.E., **Panettieri, R.A., Jr.**, Peters, S.P., Puré, E.: Antigen receptor-stimulated peripheral blood and bronchoalveolar lavage-derived T cells induce MHC class II and ICAM-1 expression on human airway smooth muscle. *Am. J. Respir. Cell Mol. Biol.* 16:38-45, 1997 (PMID: 8998077).
21. Cohen, M.D., Ciocca, V., **Panettieri, R.A., Jr.**: TGF- $\beta$ 1 modulates human airway smooth muscle cell proliferation induced by mitogens. *Am. J. Respir. Cell Mol. Biol.* 16:85-90, 1997 (PMID: 8998083).
22. Shore, S.A., Laporte, J., Hall, I.P., Hardy, E., **Panettieri, R.A., Jr.**: Effect of IL-1 $\beta$  on responses of cultured human airway smooth muscle cells to bronchodilator agonists. *Am. J. Respir. Cell Mol. Biol.* 16:702-712, 1997 (PMID: 9191472).
23. Elias, J.A., Wu, Y., Zheng, T., **Panettieri, R.A., Jr.**: Cytokine- and virus-stimulated airway smooth muscle cells produce IL-11 and other IL-6-type cytokines. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 273:L648-L655, 1997 (PMID: 9316501).
24. Amrani, Y., Krymskaya, V., Maki, C., **Panettieri, R.A., Jr.**: Mechanisms underlying TNF $\alpha$  effects on agonist-mediated calcium homeostasis in human airway smooth muscle cells. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 273:L1020-L1028, 1997 (PMID: 9374730).
25. Krymskaya, V.P., Hoffman, R., Eszterhas, A., Ciocca, V., **Panettieri, R.A., Jr.**: TGF $\beta$ 1 modulates EGF-stimulated phosphatidylinositol 3-kinase activity in human airway smooth muscle cells. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 273:L1220-L1227, 1997 (PMID: 9435577).
26. Gurubhagavatula, I., Amrani, Y., Pratico, D., Ruberg, F.L., Albelda, S.M., **Panettieri, R.A., Jr.**: Engagement of human PECAM-1 (CD31) on human endothelial cells increases intracellular calcium ion concentration and stimulates prostacyclin release. *J. Clin. Invest.* 101:212-222, 1998 (PMID: 9421484).
27. **Panettieri, R.A., Jr.**, Murray, R.K., Eszterhas, A.J., Bilgen, G., Martin, J.G.: Repeated allergen inhalations induce DNA synthesis in airway smooth muscle and epithelial cells in vivo. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 274:L417-L424, 1998 (PMID: 9530178).
28. Penn, R.B., **Panettieri, R.A., Jr.**, Benovic, J.L.: Mechanisms of acute desensitization of the  $\beta_2$ AR-adenylyl cyclase pathway in human airway smooth muscle. *Am. J. Respir. Cell Mol. Biol.* 19:338-348, 1998 (PMID: 9698608).
29. **Panettieri, R.A., Jr.**, Tan, E.M.L., Ciocca, V., Luttmann, M.A., Leonard, T.B., Hay, D.W.P.: Effects of LTD<sub>4</sub> on human airway smooth muscle cell proliferation, matrix expression, and contraction in vitro: Differential sensitivity to cysteinyl leukotriene receptor antagonists. *Am. J. Respir. Cell Mol. Biol.* 19:453-461, 1998 (PMID: 9730873).
30. Amrani, Y., **Panettieri, R.A., Jr.**: Cytokines induce airway smooth muscle cell hyper-responsiveness to contractile agonists. *Thorax* 53:713-716, 1998 (PMID: 9828861).
31. Laporte, J.D., Moore, P.E., **Panettieri, R.A., Jr.**, Moeller, W., Heyder, J., Shore, S.A.: Prostanoids mediate IL-1 $\beta$ -induced  $\beta$ -adrenergic hyporesponsiveness in human airway smooth muscle cells. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 275:L491-L501, 1998 (PMID: 9728043).
32. Lazaar, A.L., Amrani, Y., Hsu, J., **Panettieri, R.A., Jr.**, Fanslow, W.C., Albelda, S.M., Puré, E.: CD40-mediated signal transduction in human airway smooth muscle. *J. Immunol.* 161:3120-3127, 1998 (PMID: 9743379).



33. Krymskaya, V.P., **Panettieri, R.A., Jr.**: Endothelins in pulmonary development. *Basic and Applied Myology* 8:429-440, 1998.
34. Walker, T.R., Moore, S.M., Lawson, M.F., **Panettieri, R.A., Jr.**, Chilvers, E.R.: Platelet-derived growth factor-BB and thrombin activate phosphoinositide 3-kinase and protein kinase B: Role in mediating airway smooth muscle proliferation. *Mol. Pharmacol.* 54:1007-1015, 1998 (PMID: 9855629).
35. Foda, H.D., George, S., Rollo, E., Drews, M., Conner, C., Cao, J., **Panettieri, R.A., Jr.**, Zucker, S.: Regulation of gelatinases in human airway smooth muscle cells: mechanism of progelatinase A activation. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 277:L174-L182, 1999 (PMID: 10409245).
36. Krymskaya, V.P., Penn, R.B., Orsini, M.J., Scott, P.H., Plevin, R.J., Walker, T.R., Eszterhas, A.J., Amrani, Y., Chilvers, E.R., **Panettieri, R.A., Jr.**: Phosphatidylinositol 3-kinase mediates mitogen-induced human airway smooth muscle cell proliferation. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 277:L65-L78, 1999 (PMID: 10409232).
37. Moore, P.E., Laporte, J.D., Gonzalez, S., Moller, W., Heyder, J., **Panettieri, R.A., Jr.**, Shore, S.A.: Glucocorticoids ablate IL-1 $\beta$  induced  $\beta$ -adrenergic hyporesponsiveness in human airway smooth muscle cells. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 277:L932-L942, 1999 (PMID: 10564178).
38. Penn, R.B., Parent, J.-L., Pronin, A.N., **Panettieri, R.A., Jr.**, Benovic, J.L.: Pharmacological inhibition of protein kinases in intact cells: Antagonism of  $\beta_2$ AR ligand binding by H-89 reveals limitations of usefulness. *J. Pharmacol. Exp. Ther.* 288:428-437, 1999 (PMID: 9918542).
39. Hauck, R.W., Schulz, C., Schömig, A., Hoffman, R.K., **Panettieri, R.A., Jr.**:  $\alpha$ -Thrombin stimulates contraction of human bronchial rings by activation of protease-activated receptors. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 277:L22-L29, 1999 (PMID: 10409227).
40. Krymskaya, V.P., Hoffman, R., Eszterhas, A., Kane, S., Ciocca, V., **Panettieri, R.A., Jr.**: EGF activates ErbB2 and stimulates phosphatidylinositol 3-kinase in human airway smooth muscle cells. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 276:L246-L255, 1999. (PMID: 9950886)
41. Orsini, M.J., Krymskaya, V.P., Eszterhas, A.J., Benovic, J.L., **Panettieri, R.A., Jr.**, Penn, R.B.: MAPK superfamily activation in human airway smooth muscle: mitogenesis requires prolonged p42/p44 activation. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 277:L479-L488, 1999 (PMID: 10484455).
42. Laporte, J.D., Moore, P.E., Abraham, J.H., Maskym, G.N., Fabry, B., **Panettieri, R.A., Jr.**, Shore, S.A.: Role of ERK MAP kinases in responses of cultured human airway smooth muscle cells to IL-1 $\beta$ . *Am. J. Physiol. Lung Cell. Mol. Physiol.* 277:L943-L951, 1999 (PMID: 10564179).
43. Ammit, A.J., Kane, S.A., **Panettieri, R.A., Jr.**: Activation of K-p21ras and N-p21ras, but not H-p21ras, is necessary for mitogen-induced human airway smooth muscle proliferation. *Am. J. Respir. Cell Mol. Biol.* 21:719-727, 1999 (PMID: 10572069).
44. Billington, C.K., Hall, I.P., Mundell, S.J., Parent, J.-L., **Panettieri, R.A., Jr.**, Benovic, J.L., Penn, R.B.: Inflammatory and contractile agents sensitize specific adenylyl cyclase isoforms in human airway smooth muscle. *Am. J. Respir. Cell Mol. Biol.* 21:597-606, 1999 (PMID: 10536119).
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### C. Patents Pending

- Antithrombin Agents in the Treatment of Asthma (Penn G1161)
- Surfactant Protein D Is a Biomarker for Steroid Resistance in Asthma and Chronic Obstructive Pulmonary Disease (Docket No. 046483-5121-P1-US, DBR #402201)
- Compositions and Methods for Treating Asthma and Other Lung Diseases, US Patent Office Application No. 13/256,560, International Application No. PCT/US10/27833, Atty. Docket No. P-71417-USP (Prior Application No. 61/161,305)

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298. Koziol-White, C.J., Zhang, J., Miller-Larsson, A., Dainty, I., **Panettieri, R.A., Jr.**: Budesonide augments formoterol-induced bronchodilation of human small airways within minutes. Presented at the European Respiratory Society 2015 International Congress, Amsterdam, The Netherlands, September 2015.



299. Velalopoulou, A., Pietrofesa, R., Verginadis, I., Koziol-White, C., **Panettieri, R.A., Jr.**, Tuttle, S., Berman, A., Koumenis, C., Christofidou-Solomidou, M.: Novel synthetic secosolaricircin diglucoside (SDG) protects precision-cut human lung slices (huPCLS) from proton radiation damage. Radiation Research Annual Meeting, September 2015.
300. **Panettieri, R.A., Jr.**, Corren, J., Gabriel, S., Ruiz, K.M., Sawchyn, B., Colby, J.A., Mendelson, M.: Reduction in corticosteroid use among patients receiving omalizumab in real world settings: a systematic literature review of non-randomized studies. Poster Presentation at AAAAI Annual Meeting, Los Angeles, CA, March 2016.
301. Vegesna, A.V., **Panettieri, R.A., Jr.**, Gabriel, S., Ruiz, K.M., Colby, J.A., Maiese, B., Corren, J.: Patient-reported outcomes (PROs) in patients receiving omalizumab (OMB): a systematic literature review. Poster Presentation, AAAAI Annual Meeting, Los Angeles, CA, March 2016.
302. Vos, W., Van Holsbeke, C., Ferreira, F., Nuytens, L., Chipps, B., **Panettieri, R.A., Jr.**, Lieberman, P., De Backer, J.: Assessment of lung deposition of MEDA Aerospan versus GSK Flovent in a population of asthma patients. Poster Presentation at AAAAI Annual Meeting, Los Angeles, CA, March 2016.
303. Koziol-White, C., Zhang, J., Yoo, E., Charron, C., Stevenson, C., **Panettieri, R.A., Jr.**: A narrow spectrum kinase inhibitor, RV1729, induces bronchodilation of human small airways and rescues agonist-induced desensitization of the  $\beta_2$  adrenoceptor ( $\beta_2$ AR). Poster Presentation at the American Thoracic Society International Conference, San Francisco, CA, May 2016.
304. Ojiaku, C.A., Cao, G., Zhu, W., An, S.S., **Panettieri, R.A., Jr.**: TGF- $\beta$ 1 evokes human airway smooth muscle shortening and hyperresponsiveness: a new job description? Poster presentation at the American Thoracic Society International Conference, San Francisco, CA, May 2016.
305. Yoo, E., Vivieros, J., Sidoli, S., Cao, G., Garcia, B.A., **Panettieri, R.A., Jr.**: Elevated histone H3K27 methylation mediates intrinsic hypercontractility in human airway smooth muscle cells from fatal asthma subjects. Poster Presentation at the American Thoracic Society International Conference, San Francisco, CA, May 2016.
306. Himes, B.E., Koziol-White, C., Johnson, M., Jester, W., **Panettieri, R.A., Jr.**: SOCS1 and SOCS3 modulate immune response in the airway smooth muscle. Poster Presentation at the American Thoracic Society International Conference, San Francisco, CA, May 2016.
307. Gerber, A.N., Kadiyala, V., **Panettieri, R.A., Jr.**, Sasse, S.: Novel mechanisms of steroid function in airway smooth muscle defined through ChIP-seq. Poster Presentation at the American Thoracic Society International Conference, San Francisco, CA, May 2016.

#### PRESENTATIONS:

- 1988 "Myosin Heavy Chain Regulation in Airway Smooth Muscle," Johns Hopkins University, Baltimore, MD
- 1989 "A Novel Airway Smooth Muscle Cell Mitogen Induces Transcription of c-fos mRNA," University of Chicago, Chicago, IL
- 1990 "Treatment of Severe Asthma," Kaiser-Permanente Medical Corporation, Wash. DC
- 1991 "Airway Smooth Muscle Cell Proliferation: Insights in Cellular and Molecular Mechanisms," Meakins-Christie Laboratories, McGill University, Montreal, Canada
- 1991 "Life-Threatening Asthma," American Lung Association of Delaware
- 1991 "Life-Threatening Asthma," Medical Grand Rounds, Christiana Medical Center, Wilmington, Delaware
- 1992 "Chronic Severe Asthma," Delaware Academy of Physicians Assistants, Wilmington, Delaware
- 1992 "Aspirin Challenge and Desensitization for Asthma," ALA/ATS International Conference, Miami Beach, Florida
- 1993 "Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Proliferation," Pierce Foundation, New Haven, Connecticut
- 1994 "Airway Smooth Muscle Proliferation," Harvard School of Public Health, Physiology Program, Boston, MA
- 1994 "Cell Proliferation: Molecular and Cellular Mechanisms," McGill University, Montreal, Canada
- 1994 "COPD Revisited," New York State Society of Internal Medicine, Wilmington, Delaware
- 1994 "Chronic Severe Asthma," Grand Rounds, Geisinger Medical Center, Danville, PA
- 1994 NHLBI/NIH Joint USA-Russia Symposium on Vascular Biology and Cellular Differentiation: Molecular Mechanisms Regulating Airway Smooth Muscle Growth, Dallas, TX
- 1995 "Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Proliferation," Yale University, New Haven, CT
- 1995 "Mechanisms Inducing Airway Smooth Muscle Cell Growth," University of Vermont, Burlington, VT
- 1995 "Update on Asthma Management," Christ Hospital, Jersey City, NJ
- 1995 "Pharmacoeconomic Modeling in Asthma," San Francisco, CA
- 1995 "Effects of Microgravity on Airway Smooth Muscle Cell Proliferation," Houston, TX

- 1995 “Strategies to Enhance Adherence (Compliance),” Symposium on New Horizons in Understanding and Managing Asthma,” Atlanta, GA
- 1995 “Update in Asthma Management,” The MVP Health Plan Medical Symposium, Lake George, NY
- 1996 “Molecular Mechanisms Regulating Airway Smooth Muscle Cell Growth,” New York University, New York
- 1996 “Airway Smooth Muscle Cell Proliferation,” Smooth Muscle Heterogeneity Workshop, University of Manitoba, Canada, August
- 1996 “Cytokine Modulation of Smooth Muscle Function,” NIH/Russian Scientist Exchange, Samara, Russia, June
- 1996 “Asthma Care in a Medicaid Managed Care Environment,” Zitter Group, San Francisco, CA, September
- 1997 “Asthma Update,” Polyclinic, Harrisburg, PA
- 1997 “Leukotrienes and Asthma,” Grand Rounds, New York Hospital, Flushing, NY
- 1997 “Update on Asthma Management,” Grand Rounds, St. Joseph Hosp., Parkersburg, WV
- 1997 “Update on Asthma Management,” Shady Side Hospital, Pittsburgh, PA
- 1997 “Pharmacoeconomics of Asthma,” Lahey Hitchcock Med. Ctr, Waterville, NH
- 1997 “Asthma Outcomes,” Cambridge Health Resources, Seattle, WA
- 1997 “Leukotrienes and Asthma,” Pennsylvania Allergy & Asthma Association, Harrisburg, PA
- 1997 “Asthma Disease Management,” Pennsylvania Allergy & Asthma Association, Harrisburg, PA
- 1997 “Airway Smooth Muscle: Immunomodulatory Role in Asthma,” Research Seminar, Hoffmann-LaRoche Pharmaceuticals, Nutley, NJ
- 1997 “Inflammation and Airway Smooth Muscle,” Research Symposium, Centocor, Malvern, PA
- 1997 “Asthma Disease State Management,” National Congress of Managed Care, Washington, DC
- 1997 “Airway Smooth Muscle Cell Function in Asthma,” 4th Annual Great Lakes Conference, Niagra-on-the-Lake, Ontario, Canada
- 1997 “Pranlukast, but not Montelukast, Inhibits Human Airway Smooth Muscle Cell Proliferation,” European Respiratory Society, Berlin, Germany
- 1998 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Proliferation and Cell Adhesion Molecule Expression,” Transatlantic Airway Conference, Lucerne, Switzerland
- 1998 “Airway Smooth Muscle Function in Health and Disease,” Visiting Professor, Johns Hopkins University, Baltimore, MD
- 1998 “Asthma in the 21st Century,” George Washington University, Washington, DC
- 1998 Participant, Global Workshop on Airway Remodeling, Gothenburg, Sweden
- 1998 “Asthma in the Next Millennium,” Visiting Professor, University of Mississippi
- 1998 Participant, Consensus Meeting on Airway Remodeling, NIH/NHLBI, Washington, DC
- 1998 “Asthma Update,” Grand Rounds, Crozer-Chester Medical Center
- 1998 “Airway Smooth Muscle: Immunomodulatory Role,” Visiting Professor, Louisiana State University, Grand Rounds
- 1998 “Airway Smooth Muscle: Immunomodulatory Role,” Visiting Professor, University of Miami, Grand Rounds
- 1999 “Airway Smooth Muscle: Immunomodulatory Role,” Visiting Professor, Cleveland Clinic
- 1999 “Airway Smooth Muscle: Immunomodulatory Role,” Robert E. Cooke Memorial Lecture, AAAAI 55<sup>th</sup> Annual Meeting, Orlando, FL
- 1999 “Airway Remodeling,” Visiting Professor, Tufts University, Boston, MA
- 1999 “Airway Smooth Muscle Proliferation: The Signals,” Visiting Professor, University of Michigan
- 1999 “Asthma and Airway Remodeling,” Visiting Professor, Grand Rounds, University of Tennessee, Memphis, TN
- 1999 “Airway Remodeling: Irreversible?” Visiting Professor, Grand Rounds, University of Arkansas, Little Rock, AR
- 1999 “Immunobiology of Airway Smooth Muscle,” Physiology Conference, University of Arkansas, Little Rock, AR
- 1999 “Asthma in the New Millennium,” Visiting Professor, Grand Rounds, State University of New York, Stony Brook
- 1999 “Airway Smooth Muscle Growth: The Cellular and Molecular Mechanisms,” Visiting Professor, Case Western Reserve University
- 1999 “New Approaches to Asthma Therapy,” Visiting Professor, Grand Rounds, Chang Gung Hospital, Taipei, Taiwan
- 1999 Invited Speaker, International Genetics of Asthma Workshop, American Lung Association, Boston, MA
- 1999 Participant, International Conference on Lymphangiomyomatosis, New York, NY

- 1999 “Airway Remodeling: The Therapeutic Approach,” Plenary Speaker, American College of Allergy, Asthma and Immunology International Meeting, Chicago, IL
- 2000 “Airway Remodeling,” Visiting Professor, Emory University, Atlanta, GA, Visiting Professor, Medical College of Georgia, Augusta, GA
- 2000 “Asthma and Airway Remodeling,” Grand Rounds, Visiting Professor, University of Pittsburgh
- 2000 “Asthma Today,” Grand Rounds, Ohio State University
- 2000 “Asthma,” Visiting Professor, Ellis Hospital, Syracuse, NY
- 2000 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Function,” ALA/ATS International Conference Symposium, Toronto, Ontario, Canada (May)
- 2000 “Contribution of Airway Smooth Muscle: Proliferative Mechanisms,” World Congress on Lung Health and 10<sup>th</sup> European Respiratory Society Annual Congress, Florence, Italy (August-September)
- 2000 “Airway Remodeling – Therapeutic Approaches,” Update in Allergy and Immunology, Nassau County Medical Center, East Meadow, Long Island, NY (October)
- 2000 Visiting Professor, University of Virginia, Charlottesville (October)
- 2000 “Airway Remodeling,” Inova Institute 6<sup>th</sup> Annual Pulmonary Review Conference, Falls Church, VA (October)
- 2000 “Airway Smooth Muscle Function in Asthma,” Annual Pittsburgh Allergy Meeting, Pittsburgh, PA (October)
- 2000 “Smooth Muscle Function in Asthma,” Visiting Professor, Johns Hopkins University, Baltimore, MD, Division of Clinical Immunology (November)
- 2000 “Asthma,” Grand Rounds, Franklin Square Hospital, Baltimore, MD (November)
- 2000 “Asthma,” Grand Rounds, Delaware County Memorial Hospital, Drexel Hill, PA (November)
- 2000 “Airway Remodeling in Asthma,” Asthma Summit 2000, American Lung Association of Mississippi, Jackson, MS (November)
- 2000 “Lung Inflammation and Remodeling,” Northeast Pulmonary Teaching Conference, American Lung Association of Central New York, Cornell University, Ithaca, NY (November)
- 2000 “Asthma Update,” Grand Rounds, Greater Baltimore Medical Associates Hospital, Baltimore, MD (December)
- 2000 “Asthma Today,” St. Joseph’s Hospital, Towson, MD (February)
- 2001 “New Therapies in Asthma,” Visiting Professor, Seoul National University, Seoul, Korea (February)
- 2001 “Smooth Muscle Function in Asthma,” Visiting Professor, Kyungpook National University, Daegu, Korea (February)
- 2001 “Airway Remodeling in Asthma, Visiting Professor, Pusan National University, Pusan, Korea (February)
- 2001 “Smooth Muscle Cells and Airway Remodeling in Asthma,” American Academy of Allergy, Asthma and Immunology (AAAAI) 57<sup>th</sup> Annual Meeting, New Orleans, LA (March)
- 2001 “Airway Remodeling: What It Is and What It Isn’t,” 25<sup>th</sup> Annual Internal Medicine Conference, Orlando Regional Healthcare, Orlando, FL (March)
- 2001 “Airway Smooth Muscle Biology,” Visiting Professor, University of Jordan, Amman, Jordan (April)
- 2001 “Asthma in the New Millennium,” Visiting Professor, Northwestern University, Chicago, IL (April)
- 2001 “Airway Smooth Muscle: An Immunomodulatory Cell,” Visiting Professor, Cook County Hospital, Chicago, IL (April)
- 2001 “Airway Smooth Muscle Function and Airway Remodeling,” Conference on Chronic Lung Diseases, Institut Pasteur Euroconference, Paris, France (June)
- 2001 “Airway Smooth Muscle: Affect or Effect?” Third Triennial World Asthma Meeting, Chicago, IL (July)
- 2001 “Pathophysiology of Asthma: Inflammation and Smooth Muscle Dysfunction,” Third Triennial World Asthma Meeting, Chicago, IL (July)
- 2001 “Airway Smooth Muscle Function in Asthma,” Visiting Professor, Grand Rounds, University of Chicago (July)
- 2001 “Asthma Therapy in the New Millennium,” Visiting Professor, Grand Rounds, Community Medical Center, Scranton, PA (July)
- 2001 “Asthma in the New Millennium,” Medical Grand Rounds, Milton S. Hershey Medical Center, Pennsylvania State University (October)
- 2001 “Airway Smooth Muscle Cell Function in Asthma,” Pulmonary Grand Rounds, University of Kansas, Kansas City, MO (October)
- 2001 “Airway Smooth Muscle: An Immunomodulatory Cell,” Regional Conference, Washington University, St. Louis, MO (October)
- 2001 “Asthma in the New Millennium,” Grand Rounds, Washington University, St. Louis, MO (October)
- 2001 “Airway Smooth Muscle: An Immunomodulatory Cell,” Plenary Session, National Allergy Meeting, Fukuoka, Japan (October)

- 2001 “Inflammatory Mediators in Asthma,” American College of Chest Physicians National Meeting, Philadelphia, PA (November)
- 2001 “Steroid Resistant Asthma,” American College of Chest Physicians National Meeting, Philadelphia, PA (November)
- 2001 Visiting Professor, “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function,” University of Nevada, Reno, Department of Pharmacology (November)
- 2001 Visiting Professor, University of Kentucky (November)
- 2001 Visiting Professor, “Airway Smooth Muscle Function,” Department of Pharmacology, University of Minnesota (December)
- 2001 Visiting Professor, “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Function,” North Carolina State University, Raleigh, NC (January)
- 2002 Visiting Professor, “Airway Remodeling,” National Institute of Environmental Health Sciences, Research Triangle Park, NC (January)
- 2002 “Airway Smooth Muscle as an Immunomodulatory Cell: A New Target for Pharmacotherapy?,” Symposium, AAAAI 58<sup>th</sup> Annual Meeting, New York, NY (March)
- 2002 “Airway Remodeling: Fact or Fiction?” Tri-State Chest Physicians Conference, Pittsburgh, PA (March)
- 2002 “Airway Smooth Muscle: More Than a Contractile Unit,” Pulmonary Grand Rounds, University of Pittsburgh (March)
- 2002 “Asthma in the New Millennium,” Grand Rounds, Lehigh Valley Hospital, Allentown, PA (April)
- 2002 “Airway Smooth Muscle Function in Asthma,” Visiting Professor, University of Rochester, Strong Memorial Hospital, Rochester, NY (May)
- 2002 “Airway Smooth Muscle: An Immunomodulatory Cell?” Postgraduate Course, ALA/ATS International Conference, Atlanta, GA (May)
- 2002 “Human Airway Smooth Muscle: Regulation of Synthetic Function,” Symposium, ALA/ATS International Conference, Atlanta, GA (May)
- 2002 “The Role of Smooth Muscle in Inflammation,” Postgraduate Seminar, ALA/ATS International Conference, Atlanta, GA (May)
- 2002 “Molecular and Cellular Mechanisms Leading to Airway Smooth Muscle Remodeling,” Postgraduate Seminar, ALA/ATS International Conference, Atlanta, GA (May)
- 2002 “Cell Proliferation in Lymphangiomyomatosis,” Mini-Symposium, ALA/ATS International Conference, Atlanta, GA (May)
- 2002 “Airway Smooth Muscle Function in Asthma,” Symposium, American College of Allergy, Asthma & Immunology, San Antonio, TX (November)
- 2002 “Asthma in the New Millennium,” Grand Rounds, Good Samaritan Hospital, Plano, TX (November)
- 2002 “Asthma in the New Millennium,” Grand Rounds, Baylor University, Houston, TX (November)
- 2002 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function,” Visiting Pulmonary Scholar, Duke University, Durham, NC (December)
- 2002 “Asthma,” Grand Rounds, State University of New York, Stony Brook (December)
- 2003 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle in Health and Disease,” Visiting Professor, Pulmonary Research Conference, University of Iowa, Iowa City, IA (January)
- 2003 “Asthma in the New Millennium,” Grand Rounds, Welmat Hospital, Bristol, TN (Feb)
- 2003 “Asthma in the New Millennium,” Grand Rounds, Graduate Hospital, Philadelphia, PA (March)
- 2003 “Cellular and Molecular Signaling Processes Regulating Smooth Muscle Cell Function,” The LAM Foundation/NHLBI Research Conference, Cincinnati, OH (April)
- 2003 “Basic Science Overview,” The LAM Foundation/NHLBI Research Conference, Cincinnati, OH (April)
- 2003 “Airway Smooth Muscle Function in Health and Disease,” Sixth Annual Dr. and Mrs. Michael A. Gerber Memorial Lecture, Tulane University, New Orleans, LA (April)
- 2003 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Function,” Center for Comparative Respiratory Biology and Medicine, University of California at Davis (May)
- 2003 “Asthma: An Acute, Chronic Disease?,” Visiting Professor, University of Manitoba, Canada (June)
- 2003 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Function in Health and Disease,” Visiting Professor, University of Manitoba, Canada (June)
- 2003 “Asthma in the New Millennium,” Grand Rounds and Visiting Professor, University of Cincinnati, Cincinnati, OH (October)
- 2003 “Asthma on the Cutting Edge: Novel Concepts Regarding Immunopathogenesis and Implications for Therapy,” Symposium Speaker, American College of Chest Physicians, 69<sup>th</sup> Annual International Scientific Assembly, Orlando, FL (October)

- 2003 “Asthma in the New Millennium,” Grand Rounds, Doylestown Hospital, Doylestown, PA (October)
- 2003 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Cell Function,” Distinguished Visiting Professor, Center for Cardiovascular Sciences, Albany Medical College, Albany, NY (November)
- 2003 “Asthma in the New Millennium,” Pulmonary Medicine Symposium, Butler Memorial Hospital, Butler, PA (November)
- 2003 “Cellular and Molecular Mechanisms Regulating Human Airway Smooth Muscle Cell Function,” Visiting Professor, Grand Rounds, McMaster University, Hamilton, Ontario, Canada (November)
- 2004 “Effects of Uncontrolled Asthma,” Symposium on Redefining Asthma Control and Treatment, AAAAI 60<sup>th</sup> Annual Meeting, San Francisco, CA (March)
- 2004 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function in Health and Disease,” Pulmonary & Critical Care Grand Rounds, Columbia University, New York, NY (March)
- 2004 “Airway Remodeling: Fact or Fiction?,” Pulmonary Grand Rounds, North Shore University Hospital, New Hyde Park, NY (March)
- 2004 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function,” Research Seminar, North Shore University Hospital, New Hyde Park, NY (March)
- 2004 Workshop Director, “Office-Based Procedures: Spirometry,” American College of Physicians Annual Session, New Orleans, LA (April)
- 2004 Debate, “Does Smooth Muscle Play a Role in Airway Remodeling in Asthma?” Annual Scientific Meeting, Merck Frosst Medical Advisory Council, Respiratory Section, Toronto, Ontario, Canada (April)
- 2004 “Airway Smooth Muscle: Immunomodulatory Cells,” Eastern Allergy Conference, Key Biscayne, FL (May)
- 2004 Invited Speaker, “PDE Function in Airway Smooth Muscle,” International Gordon Conference, Pisa, Italy (June)
- 2004 “Asthma and Airway Remodeling: Fact or Fiction?” Grand Rounds, Albert Einstein Healthcare Network, Philadelphia, PA (June)
- 2004 “Airway Smooth Muscle Cell Hyperplasia in Disease,” European Respiratory Society Seminar on the Bronchial Smooth Muscle in Airway Responsiveness, Goteborg, Sweden (June)
- 2004 “Airway Smooth Muscle: An Immunomodulatory Cell,” Allergy Grand Rounds, University of Texas, Southwest, Dallas, TX (August)
- 2004 “Pathogenesis and Treatment of Irreversible Airflow Obstruction,” Colorado Allergy Society (September)
- 2004 “Mechanisms Regulating Irreversible Airflow Obstruction,” Allergy Grand Rounds, National Jewish Medical and Research Center, Denver, CO (September)
- 2004 “Asthma in the New Millennium,” Central Maine Medical Center, Portland, Maine (October)
- 2004 “Airway Remodeling: Is It Physiologically Relevant?” Pulmonary Grand Rounds, Lahey Clinic, Burlington, MA (October)
- 2004 “Cytokine and Chemokine Regulation of MAPKinase Pathways,” Pulmonary Research Group Fall Symposium, Spring House, PA (November)
- 2004 “Phosphodiesterase Inhibition Modulates Airway Smooth Muscle Cell Function in Asthma and Chronic Obstructive Lung Disease,” 2<sup>nd</sup> Annual Phosphodiesterases in Drug Discovery & Development Conference, Philadelphia, PA (November)
- 2004 “Cellular and Molecular Mechanisms Regulating Smooth Muscle Function,” Pulmonary Grand Rounds, Wake Forest University, Winston-Salem, NC (November)
- 2004 “Airway Smooth Muscle: More Than Just Contraction in Asthma and COPD,” Visiting Pulmonary Scholar Lecture, Duke University Medical Center, Durham, NC (December)
- 2005 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function in Health and Disease,” Pulmonary Grand Rounds, New England Medical Center, Boston, MA (January)
- 2005 “Smooth Muscle: A New Therapeutic Target?” International Asthma Meeting, Brussels, Belgium (February)
- 2005 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function,” Pulmonary Research Conference, Brown University, Providence RI (February)
- 2005 “Asthma: A Disease of Irreversible Airway Obstruction,” Medical Grand Rounds, Rhode Island Hospital, Providence, RI (March)
- 2005 “Airway Remodeling,” The John E. Salvaggio Memorial Lectureship, AAAAI 61<sup>st</sup> Annual Meeting, San Antonio, TX (March)
- 2005 “Airway Remodeling in Asthma,” State-of-the-Art Seminar Session, AAAAI 61<sup>st</sup> Annual Meeting, San Antonio, TX (March)

- 2005 “Pathological Control,” Interest Section Forum, AAAAI 61<sup>st</sup> Annual Meeting, San Antonio, TX (March)
- 2005 “The Role of Airway Smooth Muscle in Airway Inflammation and Remodeling,” Workshop Q&A, AAAAI 61<sup>st</sup> Annual Meeting, San Antonio, TX (March)
- 2005 Co-Director, Clinical Skills Workshop on Office-Based Procedures: Spirometry, American College of Physicians Annual Session, San Francisco, CA (April)
- 2005 “Beyond a Structural Role: Contribution of Smooth Muscle to Airway Remodeling,” Symposium Speaker: “Extracellular Matrix Regulators During Pathophysiological Lung Remodeling: Implications for Therapy,” American Thoracic Society International Conference, San Diego, CA (May)
- 2005 “The Therapeutic Targets in Cell Signaling: Where to Start and End?” Symposium Speaker: “Intracellular Signaling Molecules: New Therapeutic Targets in Treatment of Asthma and COPD,” American Thoracic Society International Conference, San Diego, CA (May)
- 2005 “Airway Smooth Muscle – More Than Just a Contraction,” University of Vermont Lung Center, Burlington, VT (July)
- 2005 “Airway Remodeling in Asthma,” Johns Hopkins University, Baltimore, MD (July)
- 2005 “Airway Remodeling: What’s New,” Pulmonary Grand Rounds, University of Washington, Harborview Hospital, Seattle, WA (September)
- 2005 “The Cellular and Molecular Mechanisms That Regulate Airway Smooth Muscle Function,” Allergy/Immunology Grand Rounds, University of Washington, Harborview Hospital, Seattle, WA (September)
- 2005 “Airway Remodeling: Fact or Fiction?” Pulmonary Grand Rounds, Boston University, Boston, MA (November)
- 2006 “Asthma Update,” Pri-Med Institute, Cleveland, OH (March)
- 2006 “Asthma, Airway Remodeling and Smooth Muscle,” Department of Medicine Grand Rounds, Maine Medical Center, Portland, ME (April)
- 2006 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function,” Housestaff Lecture, Maine Medical Center, Portland, ME (April)
- 2006 “Airway Remodeling: Fact or Fiction?” Dokkyo Medical University, Japan (July)
- 2006 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function in Asthma and COPD,” 8<sup>th</sup> Annual Asthma Remodeling Research Meeting, Tokyo, Japan (July)
- 2006 “Airway Remodeling: Fact or Fiction?” Pulmonary Grand Rounds, University of Alabama, Birmingham (July)
- 2006 “Airway Smooth Muscle Cellular and Molecular Signaling Pathways That Modulate Function,” Birmingham, Alabama (July)
- 2006 “Give Me the Patient’s Smooth Muscle Cells and I Will Tell You How to Develop Effective Anti-Asthma Therapy – Pro,” Symposium on Pro/Con: Asthma Is (Not) an Inflammatory Disease, European Respiratory Society Annual Congress, Munich, Germany (September)
- 2006 “Overview of the Salmeterol Multicenter Asthma Research Trial (SMART) and the Management of Inflammation and Bronchoconstriction in Adults with Asthma,” Pulmonary Grand Rounds, Johns Hopkins University, Baltimore, MD (September)
- 2006 “Molecular Mechanisms Regulating Airway Smooth Muscle Function,” Molecular Medicine Seminar, University of Chicago, Chicago, IL (September)
- 2006 “State of the Science: Emerging Issues in Basic Asthma,” Nebraska Academy of Allergy Dinner, Omaha, NE (October)
- 2006 “Airway Remodeling: Fact or Fiction?” Grand Rounds, Creighton University, Omaha, NE (October)
- 2006 “Airway Smooth Muscle: An Immunomodulatory Cell?” Invited Speaker, Third International Symposium on Respiratory Diseases, Shanghai, China (November)
- 2006 “Airway Remodeling: Fact or Fiction?” Pulmonary Grand Rounds, Vanderbilt University, Nashville, TN (December)
- 2007 Clinical Roundtable on Airway Remodeling in Asthma, Robert Wood Johnson University Hospital, New Brunswick, NJ (January)
- 2007 “New Approaches to the Management of COPD,” St. Joseph’s Regional Medical Center, Clifton, NJ (January)
- 2007 “Cellular and Molecular Mechanisms Regulating Airway Smooth Muscle Function,” Departments of Physiology and Medicine Research Symposium, University of Vermont College of Medicine, Burlington, VT (March)
- 2007 “Asthma and Airway Remodeling,” Medical Grand Rounds, University of Medicine and Dentistry of New Jersey Hospital, Newark, NJ (March)
- 2007 “New Approaches to the Management of COPD,” Medical Grand Rounds, Chester County Hospital, West Chester, PA (March)

- 2007 “New Approaches to the Management of COPD,” Medical Grand Rounds, MetroWest Medical Center, Framingham, MA (April)
- 2007 “An Update on COPD,” Grand Rounds, St. Joseph’s Hospital, Paterson, NJ (April)
- 2007 “Understanding Airway Remodeling and Asthma Disease Progression,” Peer Discussion Group, San Francisco, CA (May)
- 2007 “Assessment and Management of COPD and Asthma in the Perioperative Period,” American Thoracic Society International Conference, San Francisco, CA (May)
- 2007 “Immunomodulatory Role of Mesenchymally Derived Cells in Asthma,” American Thoracic Society International Conference, San Francisco, CA (May)
- 2007 “Understanding Airway Remodeling and Asthma Disease Progression,” Pediatric Pulmonary Grand Rounds, Johns Hopkins University, Baltimore, MD (June)
- 2007 “Understanding Airway Remodeling and Asthma Disease Progression,” Medical Grand Rounds, Howard University, Washington, DC (June)
- 2007 “Molecular Regulation of the Smooth Muscle,” Symposium Speaker, XXVI Congress of the European Academy of Allergology and Clinical Immunology (EAACI), Göteborg, Sweden (June)
- 2007 “Asthma,” Grand Rounds, Providence St. Vincent’s Hospital, Portland, OR (September)
- 2007 “Airway Remodeling: Fact or Fiction?” Pulmonary Grand Rounds, Oregon Health Sciences University, Portland, OR (September)
- 2007 Panel Expert, Center Directors Meeting, National Institute of Environmental Health Sciences, Corvallis, OR (October)
- 2007 “Asthma in the New Millennium,” Grand Rounds, Georgetown University Hospital, Washington, DC (October)
- 2007 “LTRA’s Role in Asthma-Related Cough,” Local Symposium Speaker, Shanghai, China (November)
- 2007 “Airway Remodeling: What Is Physiologically Relevant?” Invited Speaker, Fourth International Symposium on Respiratory Diseases, Shanghai, China (November)
- 2007 “Airway Smooth Muscle As An Immunomodulatory Cell,” Keynote Speaker, Sixth International Young Investigators’ Symposium on Smooth Muscle, Sydney, Australia (November)
- 2007 “Antileukotrienes: Can They Affect Remodeling?” Symposium Speaker, American College of Allergy, Asthma & Immunology Annual Meeting, Dallas, TX (November)
- 2008 “Airway Remodeling and Irreversible Airway Obstruction: Fact or Fiction?” Medical Grand Rounds, Oklahoma University Health Sciences Center, Oklahoma City, OK (January)
- 2008 “Assessing Asthma Control: New Tools and Strategies,” Philippine Medical Society, Toms River, NJ (January)
- 2008 “Airway Remodeling and Asthma Disease Progression: Implications for Treatment,” Pediatric Grand Rounds, Wilmington Hospital, Wilmington, DE (March)
- 2008 “Role of Transcription Factors NF- $\kappa$ B and AP-1 in TNF $\alpha$ -Induced Airway Hyperreactivity,” Workshop Q&A Speaker, AAAAI Annual Meeting, Philadelphia, PA (March)
- 2008 “The Human Airways: Structure-Function Relationships in Asthma,” Discussion Leader, AAAAI Annual Meeting, Philadelphia, PA (March)
- 2008 “Role of Smooth Muscle in Severe Asthma,” Workshop Speaker, AAAAI Annual Meeting, Philadelphia, PA (March)
- 2008 “Airway Remodeling: Fact or Fiction?” Pulmonary & Critical Care Grand Rounds, Cleveland Clinic, Cleveland, OH (March)
- 2008 “Ozone, Asthma and Beyond,” Environmental Health Sciences Seminar, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD (April)
- 2008 “Difficult Asthma – the Latest Updates,” Allergic Disease Forum, Tokyo, Japan (April)
- 2008 “Increase Inhaled Corticosteroids,” Symposium on Managing Rhinitis: Strategies to Fill the Unmet Need, Eastern Allergy Conference, Naples, FL (May)
- 2008 “Severe Asthma Phenotypes,” Symposium on Evolving Understanding and Treatment of Severe Allergic Asthma, Eastern Allergy Conference, Naples, FL (May)
- 2008 “Asthma,” Pulmonary Grand Rounds, Cooper University Hospital, Camden, NJ (May)
- 2008 “Airway Smooth Muscle Function in Asthma,” Research Seminar, National Institute of Allergy and Infectious Diseases, Bethesda, MD (July)
- 2008 “Understanding Airway Remodeling and Asthma Disease Progression,” VA Medical Center, San Francisco, CA (September)
- 2008 “Cysteinyl Leukotrienes: Important Mediators in the Pathogenesis of Allergic Rhinitis,” Beth Israel Hospital, Newark, NJ (September)
- 2008 “Airway Remodeling: Fact or Fiction?” Primary Care Grand Rounds, Bayfront Medical Center, St. Petersburg, FL (November)

- 2008 “Airway Smooth Muscle: More Than a Contraction?” Visiting Professor, Department of Physiology, University of Massachusetts Medical School, Worcester, MA (December)
- 2009 “Airway Smooth Muscle: More Than Shortening,” Invited Speaker, iCAPTURE Center for Cardiovascular and Pulmonary Research, University of British Columbia, Vancouver, BC (February)
- 2009 “Airway Smooth Muscle: More Than Contraction?” Pulmonary Grand Rounds, University of Miami Miller School of Medicine, Miami, FL (March)
- 2009 “Is Airway Smooth Muscle the ‘Missing Link’ Modulating Airway Inflammation in Asthma?” Symposium Speaker, AAAAI Annual Meeting, Washington, DC (March)
- 2009 “How Corticosteroids Prevent Beta Receptor Tolerance in Small Airways,” Symposium Speaker, AAAAI Annual Meeting, Washington, DC (March)
- 2009 “Airway Smooth Muscle: New Insight Into Irreversible Airway Obstruction,” Visiting Professor Seminar, University of North Carolina, Chapel Hill, NC (August)
- 2009 “Airway Smooth Muscle Function in Asthma: New Insights in Irreversible Airway Obstruction,” Visiting Professor, Harvard University, Brigham & Women’s Hospital, Boston, MA (September)
- 2009 “State of the Science: Emerging Issues in Basic Asthma Research,” Grand Rounds, Buffalo General Hospital, Buffalo, NY (September)
- 2009 “Airway Remodeling and Asthma Disease Progression: Implications for Treatment,” Buffalo Allergy Society, Williamsville, NY (September)
- 2009 “Advances in COPD: Diagnosis, Management, and Patient Communication,” Grand Rounds, Monmouth Medical Center, Long Branch, NJ (October)
- 2009 “Practical Approaches to Translating Asthma Guidelines into Everyday Clinical Practice,” PriMed Access Meeting, Philadelphia, PA (October)
- 2009 “Assessing and Managing Asthma Control,” JFK Medical Center, Philadelphia, PA (October)
- 2009 “Understanding the Scope and Burden of COPD,” Potomac Center for Medical Education Symposium on Improving COPD Patient Outcomes, Philadelphia, PA (October)
- 2009 “Updates in COPD Management: From Guidelines to Clinical Practice,” Potomac Center for Medical Education Symposium on Improving COPD Patient Outcomes, New York, NY (October)
- 2009 “Airway Smooth Muscle in Asthma: New Targets,” Carter Immunology Center, University of Virginia, Charlottesville, VA (November)
- 2010 “Asthma: Challenges in Treating a Heterogeneous Disease,” Coventry Family Care, Pottstown, PA (January)
- 2010 “Understanding Airway Remodeling and Asthma Disease Progression,” San Diego Allergy Society, San Diego, CA (February)
- 2010 “Understanding Airway Remodeling and Asthma Disease Progression,” Phoenix Allergy Society, Scottsdale, AZ (February)
- 2010 “Can We Alter the Course of Remodeling and How Can We Do It?” AAAAI Dinner Symposium, New Orleans, LA (February)
- 2010 “Asthma: Challenges in Treating a Heterogeneous Disease,” Hilton City Line Avenue, Philadelphia College of Osteopathic Medicine, Internal Medicine Ground Rounds, Philadelphia, PA (March)
- 2010 “Understanding Asthma vs. COPD: A Focus on COPD Treatment,” St. Mary Medical Center, Langhorne, PA (March)
- 2010 “State of the Science: Emerging Issues in Basic Asthma Research,” UMDNJ, Allergy & Immunology Grand Rounds, Newark, NJ (April)
- 2010 “Differential Diagnosis and the Treatment of COPD,” Owosso Medical Group, Owosso, MI (May)
- 2010 “Steroid Insensitive Airways Disease: New Frontiers,” University Hospitals Case Medical Center, Cleveland, OH (June)
- 2010 “Asthma: Challenges in Treating a Heterogeneous Disease,” Pennsylvania Convention Center, Philadelphia, PA (June)
- 2010 “Smooth Muscle as an Inflammatory Organ,” 9<sup>th</sup> International Congress on Pediatric Pulmonology, Vienna, Austria (June)
- 2010 “Asthma and Reversible Airway Obstruction: New Insights,” Pulmonary Grand Rounds, University of Louisville HealthCare Outpatient Center, Louisville, KY (July)
- 2010 “Update on Airway Remodeling,” Update in Allergy and Immunology Symposium, Nassau University Medical Center, East Meadow, NY (October)
- 2010 “Airway Smooth Muscle Function in Steroid-Insensitive Asthma,” Fifth Annual Nemaacolin Asthma Conference, Farmington, PA (October)
- 2010 “Molecular Immunology of Asthma,” Allergy Grand Rounds, Creighton University, Omaha, NE (December)



- 2011 “Airway Smooth Muscle and Steroid Insensitivity: New Insights,” Visiting Professor, Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, Little Rock, AR (January)
- 2011 “Asthma: Challenges in Treating a Heterogeneous Disease,” Grand Rounds, Oklahoma State University Hospital, Tulsa, OK (January)
- 2011 “New Insights in Irreversible Airway Obstruction in Severe Asthma,” Asthma Center Seminar, Cleveland Clinic, Cleveland, OH (February)
- 2011 “Environmental Health Concerns of Nanoparticles and Human Precision Cut Lung Slices: A Novel Model for Drug Discovery and Target Validation,” Wyss Institute at Harvard University, Boston, MA (February)
- 2011 “Irreversible Airway Obstruction in Asthma: New Approaches,” Allegheny General Hospital CME: Update on Allergy, Asthma and Immunology, Pittsburgh, PA (June)
- 2011 “Natural Progression of Asthma,” Invited Speaker, Pennsylvania Allergy & Asthma Association Annual Meeting, Hershey, PA (June)
- 2011 “Irreversible Airway Disease,” Invited Speaker, Pennsylvania Allergy & Asthma Association Annual Meeting, Hershey, PA (June)
- 2011 “Airway Remodeling and Physiological Relevance,” Invited Speaker, California Society of Allergy, Asthma and Immunology Annual Educational Meeting, Huntington Beach, CA (July)
- 2011 “Glucocorticoid-Insensitive Asthma: Diagnosis and Treatment: Can Vitamin D Play a Role in Treatment?” Invited Speaker, California Society of Allergy, Asthma and Immunology Annual Educational Meeting, Huntington Beach, CA (July)
- 2011 “Steroid Insensitivity in Asthma,” Invited Speaker, Long Island Allergy and Asthma Society 18<sup>th</sup> Annual Scientific Conference, Montauk, Long Island, NY (September)
- 2011 “Challenges in COPD Management: What are the Novel Therapeutics?” Invited Speaker, Long Island Allergy and Asthma Society 18<sup>th</sup> Annual Scientific Conference, Montauk, Long Island, NY (September)
- 2011 “Novel Therapies Targeting Airway Smooth Muscle in Asthma,” Medicine Grand Rounds, Cleveland Clinic, Cleveland, OH (September)
- 2011 “New Asthma Therapeutics: Target Airway Smooth Muscle,” Pulmonary Research Lecture Series, Children’s Hospital of Philadelphia, PA (October)
- 2011 “Remodeling in Pediatric and Adult Asthma: What Does It Mean to the Patient and Physician?” Invited Faculty Member, Future Directions in Respiratory Disease Symposium, Ponte Vedra Beach, FL (October)
- 2011 “Glucocorticoid-Insensitive Asthma: Diagnosis and Treatment: Can Vitamin D Play a Role in Treatment?” Invited Speaker, New Jersey Allergy, Asthma and Immunology Society Teaching Day, Clark, NJ (October)
- 2011 “Glucocorticoid-Insensitive Asthma: Diagnosis and Treatment: Can Vitamin D Play a Role in Treatment?” Medical Grand Rounds, Allegheny General Hospital, Pittsburgh, PA (October)
- 2011 “Allergen Environmental Control Benefits Asthma,” Pro-Con Debate Speaker and Invited Discussant, Sixth Annual Nemaclin Asthma Conference, Farmington, PA (October)
- 2011 “Airway Smooth Muscle: A New Target in the Treatment of Irreversible Airflow Obstruction in Asthma?” Visiting Professor, Center for Lung Biology Research Seminar Series, University of Southern California Keck School of Medicine, Los Angeles, CA (November)
- 2011 “Steroid Insensitivity: How Does Airway Smooth Muscle Contribute,” Invited Speaker, 21<sup>st</sup> Annual Johns Hopkins Asthma and Allergy Center Symposium: Airway Remodeling: From Nose to Lung, Baltimore, MD (November)
- 2011 “The Clinical Profile of Roflumilast,” Pulmonary Grand Rounds, Deborah Heart and Lung Center, Browns Mills, NJ (December)
- 2012 “Clinical Considerations in the Assessment and Management of Asthma,” Pulmonary Grand Rounds, Hospital Municipal de San Juan, Rio Piedras, Puerto Rico (February)
- 2012 “Vitamin D: An Anti-Inflammatory Therapy in Asthma,” Asthma and Airway Diseases Conference, Washington University School of Medicine, St. Louis, MO (March)
- 2012 “Airway Remodeling in Asthma: Irreversible Airway Obstruction?” Pulmonary Grand Rounds, Washington University School of Medicine, St. Louis, MO (March)
- 2012 “Glucocorticoid-Insensitive Asthma-Diagnosis and Treatment: Can Vitamin D Play a Role in Treatment?” Allergy-Immunology Teach Series, University of Washington, Seattle, WA (April)
- 2012 “Improving Asthma Outcomes: Factors to Consider,” Pediatric Grand Rounds, Wilmington Hospital, Wilmington, DE (April)
- 2012 “Irreversible Airflow Obstruction in Severe Asthma: What Can We Do?” Medical Grand Rounds, Harbor-UCLA Medical Center, Torrance, CA (May)
- 2012 “Airway Remodeling and Irreversible Obstruction: Master Switches?” Pulmonary Special Lecture Series, David Geffen School of Medicine at UCLA, Los Angeles, CA (May)
- 2012 “Irreversible Asthma: What Is the Phenotype?” Pediatric Grand Rounds, West Virginia University Health Sciences Center, Morgantown, WV (June)

- 2012 “Steroid Insensitivity in Asthma: The Role of Airway Smooth Muscle,” Pediatric Research Forum, West Virginia University Health Sciences Center, Morgantown, WV (June)
- 2012 “The Evolving Science of Asthma,” Allergy and Rheumatology Grand Rounds, University of Kansas Medical Center, Kansas City, KS (June)
- 2012 “State of the Science: Emerging Issues in Basic Asthma Research,” Medical Forum/Peer Discussion Group, University of California, Davis, Sacramento, CA (July)
- 2012 “Vitamin D: An Anti-Inflammatory Therapy in Asthma,” Center for Comparative Respiratory Biology Medicine, University of California, Davis, Sacramento, CA (July)
- 2012 “The Evolving Science of Asthma,” Pulmonary Grand Rounds, Lahey Clinic, Burlington, MA (August)
- 2012 “Is It Severe Asthma or COPD? Is Either Disease Steroid Responsive?” Guest Speaker, Innovations in Allergy, Asthma & Immunology Management Conference, Penn State Hershey College of Medicine, Hershey, PA (September)
- 2012 “The Asthas: Airway Biology and the Management of Difficult Asthma,” Guest Faculty for Conference on Pulmonary Medicine: Emphasis on Airway Diseases, Geisinger Health System, Danville, PA (September)
- 2012 “Novel Therapeutic Approaches to Treat Airways Diseases: Focus on Severe Asthma and COPD,” Guest Speaker, Faculty of Medicine and Surgery, Catania, Italy (October)
- 2012 “Severe Asthma: What to Do?” Medical Grand Rounds, Nazareth Hospital, Philadelphia, PA (October)
- 2012 “Airway Smooth Muscle: A New Target in the Treatment of Irreversible Airflow Obstruction in Asthma?” Pulmonary Research Conference, University of Nebraska Medical Center, Omaha, NE (October)
- 2012 “Novel Therapies Targeting Airway Smooth Muscle in Asthma,” Medicine Grand Rounds, University of Nebraska Medical Center, Omaha, NE (October)
- 2012 “*In Vitro* and *Ex Vivo* Models for Steroid-Resistant Asthma,” Charles River Fall 2012 Pulmonary Research Group Symposium, “Defining and Modeling Complex Asthma Phenotypes,” Radnor, PA (November)
- 2013 “The Evolving Science of Asthma,” Medical Grand Rounds, Beth Israel Hospital, Newark, NJ (January)
- 2013 “Irreversible Airway Obstruction in Asthma: Is It Really Remodeling?” Western Society of Allergy, Asthma and Immunology 51<sup>st</sup> Annual Scientific Session, Kohala Coast, Hawaii (January)
- 2013 “Steroid-Insensitive Asthma,” Western Society of Allergy, Asthma and Immunology 51<sup>st</sup> Annual Scientific Session, Kohala Coast, Hawaii (January)
- 2013 “Ozone and Airway Hyperresponsiveness: New Insights?” Visiting Professor, Environmental and Occupational Health Sciences Institute (EOHSI)/NIEHS, UMDNJ-Robert Wood Johnson Medical School and Rutgers University, Piscataway, NJ (March)
- 2013 “Airway Smooth Muscle: Cell Signaling to New Therapeutics in Asthma and COPD,” Visiting Professor, Department of Pharmacology & Chemical Biology, University of Pittsburgh School of Medicine, Pittsburgh, PA (April)
- 2013 “Irreversible Airway Obstruction in Asthma: Can It Be Prevented?” Invited Speaker, Eastern Allergy Conference, Palm Beach, FL (June)
- 2013 “Severe Asthma: What to Do?” Grand Rounds, Roxborough Memorial Hospital, Philadelphia, PA (June)
- 2013 “Airway Smooth Muscle: New Therapeutic Targets,” Visiting Scientist, Amgen Inc., Thousand Oaks, CA (June)
- 2013 “Airway Smooth Muscle: Cell Signaling to New Therapeutics in Asthma and COPD,” Visiting Professor, Department of Pharmacology, Creighton University School of Medicine, Omaha, NE (June)
- 2013 “Severe Asthma: What to Do?” Guest Speaker, Nebraska Academy of Allergy Meeting, Omaha, NE (June)
- 2013 “The Difficult Asthma Patient: What’s Next When All Else Fails?” Invited Speaker, California Society of Allergy, Asthma and Immunology Annual Educational Meeting, Huntington Beach, CA (June)
- 2013 “Optimal Utilization of Bronchial Thermoplasty in the Complex Asthma Patient, Invited Speaker, California Society of Allergy, Asthma and Immunology Annual Educational Meeting, Huntington Beach, CA (June)
- 2013 “Severe Asthma: What to Do?” Grand Rounds, Barnabas Health Community Medical Center, Toms River, NJ (August)
- 2013 “Bronchial Thermoplasty – A Revolutionary Treatment in Asthma,” Association of Asthma Educators Annual Conference, Charleston, SC (August)
- 2013 “Managing Workers with Asthma: New Insights into an Acute and Chronic Disease,” Pennsylvania Occupational and Environmental Medical Society, Fall Occupational Medicine Conference, Philadelphia, PA (September)
- 2013 “Airway Smooth Muscle in Asthma: Just a Target for Bronchodilation?” Invited Speaker, Eighth Annual Nemaacolin Asthma Conference, Farmington, PA (November)
- 2013 “Previewing Future Health Research,” Pennsylvania League of Women Voters Conference on Shale Drilling and Public Health: A Day of Discovery, Pittsburgh, PA (November)

- 2013 “Bronchial Thermoplasty in Severe Asthma: A New Treatment Option?” Invited Speaker, Teva Respiratory Forum, Barcelona, Spain (December)
- 2013 “Severe Asthma: What to Do?” Grand Rounds, Mercy Fitzgerald Hospital, Darby, PA (December)
- 2014 “Airway Smooth Muscle: A Target for Severe Asthma,” Invited Speaker, Genentech, South San Francisco, CA (February)
- 2014 “Groundwater Quality and Health Outcomes in Adjacent Areas With and Without Hydro-Fracturing Activities,” and “Where Do We Go from Here?” Speaker, Symposium on Impact of Unconventional Natural Gas Drilling Operations on the Environment and Public Health, Center of Excellence in Environmental Toxicology and Center for Public Health Initiatives, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA (February)
- 2014 “The Role of Anti-Cholinergics, Vitamin D Replacement and Fine Particle ICS,” Speaker, Symposium on Treatment Alternatives for Refractory Severe Asthma, AAAAI Annual Meeting, San Diego, CA (March)
- 2014 “Severe Asthma: What to Do?” Medicine Grand Rounds, Cooper University Hospital, Camden, NJ (March)
- 2014 “Glucocorticoid Insensitivity in Airways Disease,” Panel Speaker, COPD Istanbul 2014, Istanbul, Turkey (March)
- 2014 “Airway Smooth Muscle: Novel Therapeutic Targets in COPD,” Plenary Session Speaker, COPD Istanbul 2014, Istanbul, Turkey (March)
- 2014 “Different Technologies for Collection and Analysis of Data on Biomarkers,” Panel Speaker, COPD Istanbul 2014, Istanbul, Turkey (March)
- 2014 “Management of Severe Asthma,” CME Program: Advances in Pulmonary Care: An Update, Philadelphia County Medical Society, Philadelphia, PA (March)
- 2014 “Airway Smooth Muscle: Novel Therapeutic Approaches in Severe Asthma,” Asthma Grand Rounds, Montefiore Medical Center, Bronx, NY (March)
- 2014 “Bronchial Thermoplasty in Severe Asthma: A New Treatment Option?” Invited Speaker, Teva Respiratory Forum, Lisbon, Portugal (June)
- 2014 “Bronchial Thermoplasty: A (R)evolutionary Treatment in Asthma,” Aspen Allergy Conference, Aspen, CO (July)
- 2014 “The Physician Scientist: Evolution, Revolution and Revelation,” Tenth Annual Respiratory Disease Young Investigators Forum, Washington, DC (October)
- 2014 “Unconventional Gas and Oil Drilling: Insights into Health Consequences,” Pennsylvania League of Women Voters Conference on Shale Drilling and Public Health: Days of Discovery, Pittsburgh, PA (October)
- 2014 “Severe Asthma: What to Do?” Grand Rounds, Delaware County Memorial Hospital, Drexel Hill, PA (December)
- 2015 Symposium Speaker, “Th2 Cytokine Antagonists in COPD,” Presidential Symposium on Th2 Immune Response Modifiers for Severe Airway Disease, AAAAI Annual Meeting, Houston, TX (February)
- 2015 Invited Speaker, “Summary of Newer Approved Therapies (LAMA and Once Daily LABA) for COPD and Potential Use in Asthma,” Session on ADT: Frontiers in Obstructive Airway Therapies, AAAAI Annual Meeting, Houston, TX (February)
- 2015 Invited Speaker, “Asthma-COPD Overlap Syndrome,” Airway Vista Chronic Obstructive Pulmonary Disease Symposium, Asan Medical Center, Seoul, South Korea (March)
- 2015 Invited Speaker, “Airway Smooth Muscle: A Target for Novel Therapies in Asthma and COPD,” Airway Vista Chronic Obstructive Pulmonary Disease Symposium, Asan Medical Center, Seoul, South Korea (March)
- 2015 Moderator, Poster Discussion Session on Asthma, Airway Vista Chronic Obstructive Pulmonary Disease Symposium, Asan Medical Center, Seoul, South Korea (March)
- 2015 Visiting Professor, “Novel Models in Translation: Asthma and Airway Smooth Muscle,” Rutgers New Jersey Medical School, Newark, NJ (April)
- 2015 “Airway Smooth Muscle: A Novel Therapeutic Target in Severe Asthma,” Recognition Award for Scientific Accomplishments, American Thoracic Society International Conference, Denver, CO (May)
- 2015 Invited Speaker, “Biomarkers Predicting Therapeutic Response in Asthma and COPD,” Eastern Allergy Conference, Palm Beach, FL (May)
- 2015 Invited Speaker, “Improving COPD Outcomes,” Eastern Allergy Conference, Palm Beach, FL (May)
- 2015 Oral Presentation, What Is the Role of Lung Inflammation in Mediating Particulate Matter and Ozone Exposure Effects on Health and Disease? Session on Health Impacts of Atmospheric Particles, Goldschmidt Conference, Prague, CZ (August)
- 2015 “The Future of Targeted Therapy: Asthma and COPD,” and “Airway Smooth Muscle: Novel Targets for Managing Asthma and COPD,” Invited Speaker, Eastern Pulmonary Conference, Palm Beach, FL (September)

- 2015 “Budesonide Augments Formoterol-Induced Bronchodilation of Human Small Airways Within Minutes,” Thematic Poster Presentation, European Respiratory Society International Congress, Amsterdam, The Netherlands (September)
- 2015 “The Physician Scientist: Evolution, Revolution and Revelation,” 11<sup>th</sup> Annual Respiratory Disease Young Investigators Forum, Atlanta, GA (October)
- 2015 “Bronchial Thermoplasty – The Science and Identification of Responders,” Mini-Symposium on Asthma and COPD – COPD Overlap Syndrome (ACOS), Invited Speaker, Tenth Annual NemaColin Asthma Conference, Farmington, PA (October-November)
- 2015 “Chronic Airway Obstruction: What Does That Mean? Defining and Categorizing ACOS,” Symposium on Asthma, COPD and Asthma-COPD Overlap Syndrome, American College of Allergy, Asthma & Immunology Annual Scientific Meeting, San Antonio, TX (November)
- 2015 “Diagnostic Workup for Difficult to Control Asthma,” Workshop Presenter, American College of Allergy, Asthma & Immunology Annual Scientific Meeting, San Antonio, TX (November)
- 2015 “Airway Smooth Muscle: A Target for Novel Therapies in Asthma and COPD,” Cold Spring Harbor Asia Conference on Development and Pathophysiology of the Respiratory System, Suzhou, China (November)
- 2016 “Asthma Update: Precision Approaches”, 2016 Advances in Pulmonary and Critical Care Medicine Conference, Inova Fairfax Medical Campus, Falls Church, VA. (March)
- 2016 “Evidence of Asthma Severity: Identifying At-Risk Patients”, Chair, Teva Respiratory program, Los Angeles, CA (March)
- 2016 “How Bronchial Smooth Muscle Cells Make Airways Hyperresponsive”, Moderator, Workshop 2807, American Academy of Allergy, Asthma and Immunology Annual Meeting, Los Angeles, CA. (March)
- 2016 “Asthma Update: Precision Approaches”, Invited Speaker, New Jersey Thoracic Society Annual Scientific Session, New Brunswick, NJ (April)
- 2016 “The Future of Targeted Therapy: Asthma and COPD” and “Airway Smooth Muscle: Novel Targets for Managing Asthma and COPD”, Invited Speaker, Kentucky Allergy Society Spring Meeting, Lexington, KY (April).
- 2016 “Airway Smooth Muscle: A Therapeutic Target in Severe Persistent Asthma”, Medical Grand Rounds, Princeton Healthcare System, Princeton, NJ (April).
- 2016 “Unconventional Gas and Oil Drilling is Associated with Increased Hospital Utilization Rates”, National Center for Environmental Assessment (webinar), New Brunswick, NJ (April).
- 2016 “Bronchial Thermoplast: The Science and Identification of Responders”, Invited Speaker, Boston Scientific Practical Workshop, San Francisco, CA (May).
- 2016 “Understanding Disease Heterogeneity and the Importance of Biomarkers”, AZ Symposium Speaker: Unmet Need in Uncontrolled Asthma, San Francisco, CA (May).
- 2016 “Mechanism of Disease in Severe Asthma: A Focus on Eosinophils”, AZ Symposium Speaker: Florida Allergy, Immunology and Asthma Society annual meeting, Orlando, FL (July).
- 2016 “Airway Structural Alterations that Contribute to Severe Asthma”, American Academy of Allergy, Asthma and Immunology Life Spectrum of Asthma, Chicago, IL (July).
- 2016 Case Discussion Moderator, Symposium on Preventing and Treating Severe Asthma, American Academy of Allergy, Asthma and Immunology Life Spectrum of Asthma, Chicago, IL (July).

### Alternative Media

- Panettieri, R.A., Jr.:** Age and asthma (interview with Barbara Floria, editor). *Vitality/Prime Time Supplement*, Vol. 49, September 2006.
- Panettieri, R.A., Jr.:** Break free from asthma attacks (interview with Barbara Floria, editor). *Vitality* 20 (10):10-11, 2006.
- Panettieri, R.A., Jr.:** Health Quest Live Radio Program on Asthma, WURD 900 AM Talk Radio, October 24, 2006
- Panettieri, R.A., Jr.:** 33 10- to 15-Minute Radio and Satellite TV Interviews on Asthma and Allergy, April 28, 2008 (Market Locations Included: Columbia, SC; Monroe, MI; Rochester-Mason City, IA; Montgomery, AL; Columbus, OH; Lubbock, TX; Atlanta, GA; Charleston-Huntington, SC; Miami, FL; Philadelphia-Allentown, PA; Palm Springs, CA; Roanoke-Lynchburg, VA; Los Angeles, CA; Bakersfield, CA; Yuma, AZ; New York-Hudson Valley, NY; Tampa, FL; Boston, MA; Omaha, NE; Cleveland, OH; Wichita, KS; Quincy, MA; Minot-Bismarck, ND; Grand Rapids, MI)
- Panettieri, R.A., Jr.:** Radio Interview on Allergies and Asthma, Majic 102.3, Washington, DC, May 6, 2008
- Panettieri, R.A., Jr.:** Radio Interview, Your Health Matters (Lung Health Issues, Asthma, EPA Stats, Pollution), WGLS-FM, Greensboro, NJ, May 9, 2008
- Panettieri, R.A., Jr.:** Live TV Interview, Fox TV Morning Show in Philadelphia, May 26, 2008

Tashkin, D., **Panettieri, R.A., Jr.**: Addressing the unmet needs in COPD. ReachMD XM Satellite Radio Broadcast, June 2009 (<http://reachmd.com>)

Edgar, J. (Contributors: Rachelefsky, G., Johnson, D.K., **Panettieri, R.A., Jr.**): Outgrowing asthma: is remission possible? Web MD, [www.webmd.com/asthma/features](http://www.webmd.com/asthma/features).

**Panettieri, R.A., Jr.**: MSNBC Interview Re: Dangers of Third-Hand Smoke: Toxic Chemicals Linger Long After a Smoker Moves Out, <http://www.msnbc.msn.com/id/40704560/ns/health-addictions/>, December 2010

**Panettieri, R.A., Jr.**: National Media Interviews for Build Smart, Breathe Easier Program, New York City, May 2011

**Panettieri, R.A., Jr.**: Trouble Breathing? Grab Your Vacuum. Doctors on Call Blog, Men's Health, June 23, 2011 (<http://blogs.menshealth.com/doctors-on-call/trouble-breathing-grab-your-vacuum/2011/06/23/>)

**Panettieri, R.A., Jr.**: Interviewed by KYW/CBS3 I-Team Regarding Health Issues Associated with Mold Found in Hotel in Atlantic City, February 21, 2012 (<http://philadelphia.cbslocal.com/2012/02/27/i-team-hotel-mold-investigation/>)

**Panettieri, R.A., Jr.**: Reducing exacerbations in COPD. Physician's Weekly, Vol. 29, Issue No. 12, March 19, 2012 ([www.physweekly.com](http://www.physweekly.com)) .

**Panettieri, R.A., Jr.**: Taking sensible precautions with spray tans, Letter for Spa Business Magazine, 2013 1, page 14 (Managing Editor Katie Barnes, [www.spabusiness.com](http://www.spabusiness.com))

**Panettieri, R.A., Jr.**: 6ABC Interview Regarding Conrail Tanker Car Derailment in Mantua, NJ, 6ABC Investigative Reporter Wendy Saltzman, February 2013, ([http://abclocal.go.com/wpvi/story?section=news/special\\_reports&id=8999309](http://abclocal.go.com/wpvi/story?section=news/special_reports&id=8999309))

**Panettieri, R.A., Jr.**: Commentator in News Article, "Estimating Wastewater from Fracking in the Marcellus Shale," by Charles W. Schmidt, Environmental Health Perspectives, Tillett, T., Editor (February 2013)

**Panettieri, R.A., Jr.**: Interviewed for Discussant Video Appearing in Cardiac Risk May Increase with COPD Drugs by Charles Bankhead, MedPage Today, 5/21/13 (<http://www.medpagetoday.com/MeetingCoverage/ATS/39313>)

**Panettieri, R.A., Jr.**: A look at recidivism in COPD management. Physician's Weekly, Vol. 30, Issue No. 33, September 2, 2013, <http://www.physweekly.com/copd-recidivism>.

**Panettieri, R.A., Jr.**: Reducing readmissions in COPD. Physician's Weekly, Vol. 30, Issue No. 38, October 14, 2013, <http://www.physweekly.com/copd-reducing-readmissions>.

**Panettieri, R.A., Jr.**: Interviewed by Markham Heid of TIME Magazine for article entitled "You Asked: Are Self-Tanners Safe?," May 2015, <http://time.com/3896827/self-tanner-tanning-lotion/>

**Panettieri, R.A., Jr.**: Interviewed by Melanie Cole on RadioMD, "Are Spray Tans a Safe Alternative to Tanning Beds?" July 15, 2015, <http://radiomd.com/player/item/28464-are-spray-tans-a-safe-alternative-to-tanning-beds#.VazyEPISVAM>

**Panettieri, R.A., Jr.**: MedicalResearch.com Interview, "Study Finds Increased Hospitalizations Near Marcellus Shale Fracking Wells," July 17, 2015, <http://medicalresearch.com/author-interviews/study-finds-increased-hospitalizations-near-marcellus-shale-fracking-wells/15836/>

**Panettieri, R.A., Jr.**: The Conversation, "People Near Fracking Wells Show Higher Hospitalization Rates," July 20, 2015, <https://theconversation.com/people-near-fracking-wells-show-higher-hospitalization-rates-44755>

**Panettieri, R.A., Jr.**: Radio Interview Re: Study on Fracking and Hospital Visits, Vancouver Cooperative Radio, CFRO 100.5 FM, July 25, 2015

**Panettieri, R.A., Jr.**: Links to Articles Related to Publication of "Unconventional Gas and Oil Drilling Is Associated with Increased Hospital Utilization Rates," PLoS One, July 15, 2015:

**Penn Medicine News Release**  
[http://www.uphs.upenn.edu/news/News\\_Releases/2015/07/panetteri/](http://www.uphs.upenn.edu/news/News_Releases/2015/07/panetteri/)

**Philadelphia Inquirer Article**  
[http://www.philly.com/philly/health/20150116\\_Pa\\_studies\\_link\\_fracking\\_with\\_health\\_problems.html](http://www.philly.com/philly/health/20150116_Pa_studies_link_fracking_with_health_problems.html)

**Pittsburgh Post-Gazette Article**  
<http://powersource.post-gazette.com/powersource/policy-powersource/2015/07/15/Study-finds-those-living-near-Marcellus-shale-wells-more-likely-to-be-hospitalized-Pennsylvania/stories/201507150215>

**WHYY/StateImpact Article**  
<https://stateimpact.npr.org/pennsylvania/2015/07/15/study-shows-increased-hospitalizations-in-pennsylvania-shale-gas-region/>

**HealthDay Article**  
<http://consumer.healthday.com/environmental-health-information-12/environment-health-news-233/hospitalization-rates-jump-near-fracking-sites-study-701340.html>

**Newsweek.com Article**  
<http://www.newsweek.com/living-near-fracking-wells-linked-increased-hospitalization-rates-354093>

**Summit County Citizen's Voice**

<http://summitcountyvoice.com/2015/07/16/study-tracks-spike-in-fracking-zone-health-problems/>

**The Independent (UK)**

<http://www.independent.co.uk/environment/people-who-live-near-fracking-sites-suffer-higher-rates-of-heart-conditions-and-neurological-illnesses-says-research-10391339.html>

**The Morning Call Article**

<http://www.mcall.com/news/nationworld/pennsylvania/mc-pa-fracking-hospital-visits-20150719-story.html>

**Public News Service Article**

<http://www.publicnewsservice.org/2015-07-20/environment/new-report-links-fracking-to-increased-hospitalizations/a47235-1>

**From Quarks to Quasars Article**

<http://www.fromquarkstoquasars.com/researchers-seemingly-link-fracking-increase-hospitalizations/>

**Panettieri, R.A., Jr.:** Radio Interview Re: Cardiovascular Hospitalizations in Hydrofracking Areas, WPEL Radio, Montrose, PA, September 26, 2015

**Panettieri, RA, Jr.:** World Allergy Organization online learning module for CME: Bronchial Thermoplasty As an Option for Difficult-to-treat Severe Asthma.