

CURRICULUM VITAE

Michael E. Wechsler, MD, MMSc

I Personal History

Born: Montreal, Quebec, Canada

Present Position Rank: Director, Asthma Program
Professor of Medicine
Division of Pulmonary and Critical Care Medicine
Department of Medicine
National Jewish Health

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Citizenship: United States of America

II Educational History

Aug 1985-Jun 1989 A.B. *magna cum laude*, Biochemical Science
Harvard University, Cambridge, MA

Aug 1989-Jun 1993 M.D., Medicine
McGill University School of Medicine, Montreal, Quebec

Jun 1993-Jun 1994 Intern, Internal Medicine
Beth Israel Hospital, Boston, MA

Jun 1994-Jun 1996 Resident, Internal Medicine
Beth Israel Hospital, Boston, MA

Sept 1995-Jan 1996 Chief Medical Resident, Internal Medicine
West Roxbury VA Medical Center, W. Roxbury, MA

Jul 1996-Jun 1998 Clinical Fellow
Harvard Pulmonary and Critical Care Medicine Fellowship
Beth Israel Medical Center
Brigham and Women's Hospital
Massachusetts General Hospital, Boston, MA

Jul 1998-Jun 1999	Research Fellow Harvard Pulmonary and Critical Care Medicine Fellowship Brigham and Women's Hospital, Boston, MA
Jul 2000-Jun 2003	MMSc, Medical Science Harvard Medical School, Boston, MA
Jul 2000-Jun 2003	Scholars in Clinical Science Program Harvard Medical School, Boston, MA
Apr 2009	Leadership Development Program for Physicians and Scientists Harvard Medical School, Boston, MA

III Licensure and Certification

1995-present	Medical Licensure, Commonwealth of Massachusetts
1996	Diplomate, American Board of Internal Medicine
1998 (Recertified 2009)	Diplomate, Subspecialty of Pulmonary Disease, American Board of Internal Medicine
1999 (Recertified 2009)	Diplomate, Subspecialty of Critical Care Medicine, American Board of Internal Medicine
2000	Certificate, Clinical Effectiveness, Harvard Medical School and Harvard School of Public Health
2010	Basic Cardiac Life Support, certification by American Heart Association
2012	Advanced Cardiac Life Support, certification by American Heart Association
2012	Medical Licensure, State of Colorado

IV Professional Positions

Jul 1999-Sept 2006	Instructor, Medicine Harvard Medical School, Boston, MA
Jul 1999-Aug 2012	Associate Physician Pulmonary and Critical Care Medicine Beth Israel Deaconess Medical Center, Boston, MA
Jul 1999-Jun 2001	Staff Physician Pulmonary and Critical Care Medicine West Roxbury Veteran's Administration Medical Center, West Roxbury, MA

Jul 2000-Aug 2006	Assistant Director Asthma Research Center Brigham and Women's Hospital, Boston, MA
Jul 2000-Aug 2012	Associate Physician Pulmonary and Critical Care Medicine Brigham and Women's Hospital, Cambridge, MA
Jul 2000-Aug 2012	Consultant, Pulmonary Medicine MIT Medical Center, Cambridge, MA
Jul 2004-Aug 2012	Staff Physician Pulmonary Service Spaulding Hospital, Cambridge MA
Aug 2006-Aug 2012	Associate Director Asthma Research Center Brigham and Women's Hospital
Oct 2006-Aug 2012	Assistant Professor, Medicine Harvard Medical School, Boston, MA
Aug 2007-Aug 2012	Course Director Current Topics in Clinical Airway Biology Research Brigham and Women's Hospital, Boston, MA
2009-2011	Member, Data Safety Monitoring Board MAP Pharmaceuticals
2010-2012	Member, Data Safety Monitoring Board Genzyme Corporation
Jul 2010-Aug 2012	Faculty Member Division of Medical Communications Brigham and Women's Hospital, Boston, MA
Oct 2011- present	Faculty Member Program in Placebo Studies Harvard Medical School, Boston, MA
Aug 2012-present	Director, Asthma Program Pulmonary and Critical Care Medicine National Jewish Health, Denver, CO

Aug 2012-June 2013 Visiting Professor of Medicine
Pulmonary and Critical Care Medicine
National Jewish Health, Denver, CO

July 2013-present Professor of Medicine
Pulmonary and Critical Care Medicine
National Jewish Health, Denver, CO

V Honors and Awards

1986-1989 Harvard College Scholarship
Harvard College

1986-1989 Dean's List
Harvard College

1987 Summer Research Fellowship
Juvenile Diabetes Foundation
National Institutes of Health

1990 James Q Bliss Prize, Medical Physiology
McGill University

1993 Dr. A Macdonald Award, Medicine
McGill University

1993 Campbell Howard Prize, Clinical Medicine
McGill University

1998 Investigator Award, Clinical Research
American College of Chest Physicians
CHEST Foundation

1999 Young Investigators Meeting (participant), Respiratory
Merck

2001 Young Investigator Special Project Award, Respiratory
Merck

2002 Research Award
American Lung Association

2003 Research Award, Clinical
Merck

- 2005 Abstract 2nd Prize
Massachusetts Thoracic Society
- 2012 American Society for Clinical Investigation
- 2013 Colorado alliance for CME award
“Most outstanding CME activity”
Improving the quality of care for patients with asthma
(Chair)

VI Professional Affiliations

- 1993-present Member, Massachusetts Medical Society
1993-1999 Member, American Medical Association
1996-2000 Member, American College of Chest Physicians
2002-2005 Member, American Academy of Asthma, Allergy and Immunology
2012-present Member, American Society for Clinical Investigation
2012-present Member, International Eosinophil Society

VII Professional Service and Committees

- 2000-present Steering Committee
NIH/NHLBI Asthma Clinical Research Network (ACRN)/Asthmanet
- 2003-2004 Chairman, Ethics Sub-Committee
NIH/NHLBI Asthma Clinical Research Network (ACRN)/Asthmanet
- 2003-2012 Steering Committee,
NIH/NHLBI Severe Asthma Research Program
- 2010-present Steering Committee
European Respiratory Society
Taskforce on the Diagnosis and Management of Churg-Strauss Syndrome
- 2011-2012 Member, NIH Taskforce Investigating Research in Eosinophilic Disorders (TREAD)
- 2013-present Member, NIH sponsored Data and Safety Monitoring Board (DSMB) for the Therapeutic Strategy for LAM study group (1UH2TR000961-01). “Saracatinib in LAM (SLAM)”

VIII Review and Referee Activities

A. Grant Review

2005-present	Grant Review Committee International Eosinophil Society
2008	Grant Review Committee Thrasher Research Fund
2012	Grant Review Committee American Partnership for Eosinophilic Disorders (APFED) HOPE
2013	National Institute of Aging Special Emphasis Panel: Asthma in older adults. Chair of Review Panel.

B. Editorial Activities

Ah hoc reviewer:

New England Journal of Medicine
American Journal of Respiratory and Critical Care Medicine
American Journal of Respiratory Cellular Molecular Biology
American Journal of Medicine
Journal of Allergy and Clinical Immunology
Chest
Thorax
Drug Safety
The Pharmacogenomics Journal
Nature Clinical Practice
JAMA
Respiratory Care Journal
Cleveland Clinic Journal of Medicine
European Respiratory Journal
Revista Portuguesa de Pneumologia, Portuguese Journal of Pulmonology
The Medical Letter
Recent Patents on Anti-Infective Drug Discovery
Mount Sinai Journal of Medicine
The Lancet
The Lancet Respiratory Medicine
Arthritis and Rheumatism
European Respiratory Review
Journal of Heart and Lung Transplantation

C. Other Editorial Roles

2010-present	Associate Editor, Allergy
2010-present	Editorial Board, European Journal of Clinical Investigation
2010	Content Contributor, Medical Letter
2011-present	Faculty Member, Asthma & Allergic Rhinitis Section Faculty of 1000 (www.F1000.com)

IX Teaching Activities

A. Local Teaching and Training

Teaching of Students in Courses

1996 Patient-Doctor II Physical Diagnosis
Harvard Medical School
1st and 2nd yr medical students, 12 hrs/yr

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

1995 Prepared formal lectures on several topics in Internal Medicine
West Roxbury VA Medical Center, W. Roxbury, MA (Chief Resident)
Medical Students (daily/yr)

1996 Thorndike Lecture: The role of Nitric Oxide in Asthma
Beth Israel Deaconess Medical Center
Medical Students and House Officers (1 hr lecture)

1999 Combined Conference: Critical Care Issues of Pregnancy
Brigham and Women's Hospital
Clinical Fellows, House Officers (1 hr lecture)

1999 Update in Asthma
Beth Israel Medical Center
Medical Students, House Officers, Fellows (1 hr lecture)

2000 Update in Asthma
Brigham and Women's Hospital
Medical Students, House Officers, Fellows (1 hr session)

2003 Combined Conference: Anti Ige Therapy: Novel Treatment for Difficult
Asthma
Brigham and Women's Hospital
Clinical Fellows, House Officers (1 hr lecture)

- 2007 Pulmonary Fellows Research Seminar Series. Asthma Clinical Research: An Update on ACRN Trials
Brigham and Women's Hospital
Clinical/Research Fellows (1 hr lecture)
- 2007 Pulmonary Fellows Core Curriculum Eosinophilic Lung Diseases
Brigham and Women's Hospital
Clinical/Research Fellows (1 hr lecture)
- 2008-2009 Harvard Pulmonary Fellow Core curriculum Course.
Eosinophilic Lung Diseases
Brigham and Women's Hospital
Clinical Fellows (1 hr lecture)

Formally Supervised Trainees

- 2002-2004 Jonathan Sadeh, MD/Associate Director of Clinical Research, Global Director, Pulmonary Research & Development, AstraZeneca Pharmaceuticals, Södertälje, Sweden
Co-Mentor during Research Fellowship
- 2004-2012 Shamsah Kazani, MD, MMSc./Associate Medical Director, Novartis Pharmaceuticals, Cambridge, MA
Co-Mentor during Research Fellowship
- 2007-2009 Sophia Kim, MD/Assistant Professor, Division of Pulmonary, Allergy/Immunology, Cystic Fibrosis and Sleep, Department of Pediatrics, Emory University, Atlanta, GA
Co-Mentor during Research Fellowship; co-authored mepolizumab clinical trial in Churg-Strauss Syndrome
- 2007-2009 Amy Markezich, MD/Research Fellow, Pulmonary and Critical Care Medicine, Overlake Medical Clinics Pulmonary Medicine, Bellevue, WA.
Co-Mentor during Research Fellowship
- 2007-2009 Perdita Permaul, MD/Instructor in Medicine, Division of Allergy, Department of Pediatrics, Massachusetts General Hospital, Boston, MA, Harvard Medical School
Co-Mentor during Research Fellowship

- 2005-2010 Gautham Marigowda, MBBS/Associate Medical Director, Vertex Pharmaceuticals, Cambridge, MA
Co-Mentor during Research Fellowship
- 2007-2012 Zahid Muhammed, MD/Research Fellow, Pulmonary and Critical Care Medicine, Harvard Medical School, Brigham and Women's Hospital, Boston, MA
Co-Mentor during Research Fellowship

Other informally Supervised Trainees

- 2008-2013 Stefanie Dutile, RN, BWH Asthma Research Center.
Mentored from clinical research coordinator, through RN degree in 2012 and coauthored several manuscripts.
- 2005-2013 Praveen Akuthota, MD, Beth Israel Deaconess Medical Center, Boston, MA. Mentored informally from time of fellowship through development to junior faculty and now collaborating with me on my U01 examining eosinophil trafficking in Churg-Strauss syndrome.
- 2006-2009 Eyal Oren, MD Allergist, North Shore Medical Center, MA.
Mentored through allergy research fellowship at Massachusetts General Hospital and worked with him to develop a pilot study examining anti iL5 in Churg-Strauss syndrome which we coauthored in JACI 2010.

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

- 2009 The 2007 NHLBI Guidelines – Changes in the Approach to Asthma Disease Control (1 talk)
Advances in Asthma and Allergic Disease
Harvard Medical School, Boston, MA
- 2009 Advances in Asthma and Allergic Disease. “The 2007 NHLBI Guidelines – Changes in the Approach to Asthma Disease Control” (1 talk)
100 visiting allergists and pulmonologists from Spain
Harvard Medical School, Boston, MA

Local Invited Presentations

- 1999 NOS1 Polymorphisms and Asthma/invited lecture
Pulmonary and Critical Care Medicine, Brigham and Women's Hospital
- 2000 New Advances in Asthma Therapy/invited lecture
Pulmonary and Critical Care Medicine, Brigham and Women's Hospital

- 2001 The SLIMSIT Trial/invited lecture
Science Over Lunch Conference, Pulmonary and Critical Care Medicine,
Brigham and Women's Hospital
- 2001 The Most Significant Advances in Asthma in The Past 24 Months/invited
lecture
Pulmonary and Critical Care Medicine, Brigham and Women's Hospital
- 2002 Exhaled NO as a Diagnostic Tool in Asthma/invited lecture
Science Over Lunch Conference, Pulmonary and Critical Care Medicine,
Brigham and Women's Hospital
- 2002 Clinical Research Issues and Genetics/invited lecture
Pulmonary and Critical Care Medicine, Brigham and Women's Hospital
- 2002 Leukotriene Modifiers and the Churg-Strauss Syndrome/Pulmonary Grand
Rounds
Children's Hospital – Boston, MA
- 2003 Churg-Strauss Syndrome: A Clinical Update/Pulmonary Grand Rounds.
Children's Hospital – Boston, MA
- 2003 Beta-Agonist Receptor Genotype and Response to Salmeterol in the
ACRN SOCS Trial/ invited lecture
Science Over Lunch Conference, Pulmonary and Critical Care Medicine,
Brigham and Women's Hospital
- 2004 Anti-Ige Therapy: Novel Therapy for Difficult to Treat
Asthma/Pulmonary Grand Rounds
Children's Hospital – Boston, MA
- 2004 Churg-Strauss Syndrome: A Genetic Approach/invited lecture
Pulmonary and Critical Care Medicine, Brigham and Women's Hospital
- 2005 Churg-Strauss Syndrome: An Update/Partners Asthma Center Asthma
Grand Rounds
Pulmonary and Critical Care Medicine, Brigham and Women's Hospital
- 2006 Bronchial Thermoplasty as Treatment for Asthma/invited lecture
Pulmonary and Critical Care Medicine, Brigham and Women's Hospital
- 2006 Asthma Update: What's Up With Beta-Agonists?/Medical Grand Rounds
Faulkner Hospital, Jamaica Plain, MA
- 2006 Clinicopathologic Conference: Fatal Asthma/invited lecture

- Massachusetts General Hospital, Boston, MA
- 2006 Bronchial Thermoplasty for the Treatment of Asthma/Pulmonary Research Seminar
Massachusetts General Hospital, Boston, MA
- 2006 Churg-Strauss Syndrome: A Clinical Update/Pulmonary Grand Rounds
Massachusetts General Hospital, Boston, MA
- 2008 Beta Agonists, Pharmacogenomics and the GABLE Study/Pulmonary Grand Rounds
Massachusetts General Hospital, Boston, MA
- 2008 Bronchial Thermoplasty for Asthma/Pulmonary Grand Rounds
Children's Hospital – Boston, MA
- 2009 Asthma 2009: Current and Future Treatment Paradigms/Medical Grand Rounds
Faulkner Hospital, Jamaica Plain, MA
- 2009 Hypereosinophilic Syndromes and the Churg-Strauss Syndrome/Rheumatology Grand Rounds
Massachusetts General Hospital, Boston, MA
- 2009 Churg-Strauss Syndrome and Eosinophilic Lung Diseases/ invited lecture
Allergy and Immunology Conference, Department of Medicine, Brigham and Women's Hospital
- 2009 Churg-Strauss Syndrome and Other Eosinophilic Lung Diseases/Longwood Medical Area Pulmonary Grand Rounds.
Brigham and Women's Hospital, Boston, MA
- 2011 Churg-Strauss Syndrome and Eosinophilic Lung Diseases/Allergy Grand Rounds
Massachusetts General Hospital, Boston, MA
- 2011 Asthma 2011: Current and Future Treatment Paradigms/Allergy Grand Rounds
Children's Hospital, Boston, MA
- 2011 Asthma 2011: Current and Future Treatment Paradigms/Pulmonary Grand Rounds
Children's Hospital, Boston, MA
- 2011 The Placebo Effect in Asthma/ invited lecture

- Harvard Program in Placebo Studies, Beth Israel Deaconess Medical Center, Boston, MA
- 2011 Advances in Asthma Therapeutics/Longwood Pulmonary Grand Rounds Brigham and Women's Hospital, Boston, MA
- 2012 Asthma, the placebo effect, and predicting therapeutic responses/Invited Speaker
Massachusetts General Hospital Pulmonary Research Conference, Boston, MA
- 2012 Churg-Strauss Syndrome: A clinical update/Rheumatology Grand Rounds
Massachusetts General Hospital, Boston, MA
- 2012 Leukotriene Antagonists as First-Line or Add-on Asthma-Controller Therapy. BIDMC Resident Journal Club. Beth Israel Deaconess Medical Center, Boston, MA
- 2012 Clinical and Translational Asthma Research at National Jewish Health. National Jewish Clinical and Translational Research Section Seminar. National Jewish Health, Denver, CO
- 2013 Eosinophilia for the Rheumatologist and the Churg-Strauss syndrome. Rheumatology Grand Rounds. University of Colorado Medical Center. Aurora, CO
- 2013 Improving the Care of Patients with Asthma. CME Course Director and Lecturer: The future of Asthma: Pharmacogenetics, Biomarkers and Novel Therapies. National Jewish Health. Denver, CO

B. Regional, National and International Invited Teaching and Presentations

Regional

- 2002 Current Therapies, Future Therapies/Asthma Grand Rounds
Leonard Morse Hospital, Natick, MA
- 2002 Asthma: Choosing the Best Therapies for your Patient/Medical Grand Rounds
Massachusetts Institute of Technology, Cambridge, MA
- 2003 Anti-IgE Therapy: Novel therapy for Difficult to Treat Asthma/Pulmonary Rounds/ invited Speaker
Danbury Hospital, Danbury, CT

- 2004 Asthma Management: From Mild to Moderate to Severe/Visiting Professor, Medical Grand Rounds
Bridgeport Hospital, Bridgeport, CT
- 2004 Anti-IgE Therapy: Novel Therapy For Difficult to Treat Asthma/Medical Grand Rounds
Roger Williams Hospital, Providence, RI
- 2004 New Approaches to the Management of Obstructive Lung Diseases
Course: Novel Therapies/invited lecture
Mass Med Society, Waltham, MA
- 2006 Asthma: An Update on Current Research/Pulmonary Rounds
Carney Hospital, Boston, MA
- 2006 Asthma Update: The Beta-Agonist Controversy/Medical Grand Rounds
Catholic Medical Center, Manchester, NH
- 2006 New Approaches to the Management of Obstructive Lung Diseases
Course: Novel Therapies in Asthma/invited lecture
Partners Asthma Center and Massachusetts Medical Society, Boston, MA
- 2007 Asthma Pharmacogenetics In Perspective/Pulmonary Research Rounds
Rhode Island Hospital, Providence, RI
- 2007 Bronchial Thermoplasty in Asthma.” Update on BT to 12
Physicians/Pulmonary Rounds
Maine Medical Center, Portland, ME
- 2008 New Approaches to the Management of Obstructive Lung Diseases
Course: Anti IgE, Bronchial Thermoplasty and Novel Therapies in Asthma/ invited lecture
Mass Med Society, Waltham, MA
- 2008 Asthma Management 2008 and Beyond: Pharmacogenomics, Biomarkers and New Treatment Paradigms/Medical Grand Rounds
Baystate Medical Center, Springfield, MA
- 2010 Asthma 2010: Current and Future Treatment Paradigms/Medical Grand Rounds
St. Elizabeth’s Medical Center, Brighton, MA
- 2010 Asthma 2010: Current and Future Treatment Paradigms/Medical Grand Rounds.
Union Hospital, Lynn, MA

2012 Asthma, the Placebo Effect and Predicting Therapeutic Responses/Grand Rounds
MetroWest Medical Center/Leonard Morse Hospital, Natick, MA

2012 Asthma and the Placebo Effect. Nemaocolin Asthma Conference.
Farmington, PA

National

1998 “Zafirlukast and the Churg-Strauss Syndrome/invited lecture
American Thoracic Society Meeting, Chicago, IL

1999 “NOS1 and Asthma: A Genotype-Phenotype Association/invited lecture
Merck. Respiratory Young Investigators’ Meeting, NY, NY

2000 National Institutes of Health/FDA Joint Symposium on the Epidemiology
and Pathogenesis of Churg-Strauss Syndrome/invited lecture
Bethesda, MD

2002 Leukotriene Modifiers vs. Inhaled Corticosteroids: Where Do They Fit?
/invited lecture
American Academy of Allergy, Asthma and Immunology.
Dinner Symposium, NY, NY

2003 Integrating Biologic Agents into Clinical Practice: Emerging Biologic
Asthma Therapy/invited lecture
National Managed Health Care Congress.
Medical Director Summit, Washington, DC

2003 Anti-IgE Therapy: Novel Therapy for Difficult to Treat
Asthma/Pulmonary Grand
Albany Medical Center, Albany, NY

2003 Polymorphisms of the Beta-Adrenergic Receptor Gene: Implications for
the Pharmacotherapy of Asthma/invited lecture
National Heart, Lung and Blood Institute, Washington, DC

2004 Beta-Adrenergic Polymorphisms and Response to Salmeterol/invited
lecture
American Academy of Asthma, Allergy and Immunology, San Francisco,
CA

2004 Pharmacogenetics of Asthma: Beta-agonists and beyond/invited lecture
American Thoracic Society, Orlando, FL

- 2004 Pharmacogenetics and Asthma Therapy: Whom Should You Treat With What? /invited lecture
American Academy of Asthma, Allergy and Immunology. San Francisco, CA
- 2004 Emerging concepts for understanding asthma: Pharmacogenetics in the Management of Asthma/invited lecture
American College of Chest Physicians, Seattle, WA
- 2004 Anti-IgE Therapy: Novel therapy for difficult to Treat Asthma/Grand Rounds
Maimonides Medical Center, Brooklyn, NY
- 2004 The Role of Pharmacogenomics in the Treatment of Respiratory Diseases/invited lecture
Madison Clinical Conference: Advances in Pharmacotherapy for Respiratory Diseases University of Wisconsin-Madison, Madison, WI
- 2004 Novel Therapy for Severe Asthma/Medical Grand Rounds
Staten Island University Hospital, Staten Island, NY
- 2004 Churg-Strauss Syndrome: A Clinical Update/Medical Grand Rounds
University of Connecticut Medical Center, Farmington, CT
- 2004 Novel therapy for Moderate-Severe Asthma/Medical Grand Rounds
St. Elizabeth Hospital, Covington, KY
- 2004 Novel Therapy for Severe Asthma/Medical Grand Rounds, invited speaker
Jersey Medical Center, Jersey City, NJ
- 2004 Genetic Fingerprints and the Potential for Pharmacogenetics in the Treatment of Asthma: Pharmacogenetics of Beta-agonist Therapy in Asthma/invited lecture
American Academy of Asthma, Allergy and Immunology, San Antonio, TX
- 2005 Pharmacogenetics and Asthma/Pulmonary Grand Rounds
Tampa General Hospital, Tampa, FL
- 2005 Asthma Pharmacogenetics: The Beta-agonist Paradigm/Asthma and Allergy Rounds
Johns Hopkins Asthma and Allergy, Baltimore, MD
- 2005 Pharmacogenetics and the future of asthma/Pulmonary Rounds
Norfolk Hospital, Norfolk, CT

- 2005 Pharmacogenetics and Asthma/Pulmonary Grand Rounds
University of Southern Florida, Tampa, FL
- 2005 Pharmacogenetics and the Future of Asthma/Pulmonary Grand Rounds
University of Connecticut, Farmington, CT
- 2006 New Insights into Asthma Drugs: What is Pharmacogenetics?/invited
lecture
American Academy of Asthma, Allergy and Immunology, Miami, FL
- 2006 Understanding Factors that can Impair Outcomes Despite Optimal
Care/invited lecture
American Academy of Asthma, Allergy and Immunology, Miami, FL
- 2006 Update on Vasculitis: Churg-Strauss Syndrome/invited lecture
American Academy of Asthma, Allergy and Immunology, Miami, FL
- 2006 Role of Pharmacogenomics in Asthma Management/invited lecture
Pediatric Academic Society, San Francisco, CA
- 2006 Pulmonary Rounds. "The Pharmacogenetics of Asthma/invited lecture
University of California, San Francisco, CA
- 2006 The Pharmacogenetics of Asthma/Pulmonary Grand Rounds
University of California, Los Angeles, CA
- 2006 Churg-Strauss Syndrome/invited lecture
Vasculitis Foundation Patient Symposium, Baltimore, MD
- 2006 Pharmacogenetics of Asthma/invited lecture
American College of Chest Physicians, Salt Lake City, UT
- 2006 Difficult Asthma Cases/invited lecture
American College of Chest Physicians, Salt Lake City, UT
- 2006 Update in Asthma/invited lecture
Utah Allergy Society, Annual Meeting, Salt Lake City, UT
- 2006 The Beta-agonist Controversy in Asthma/invited lecture
University of Texas Southwestern Medical Center, Dallas, TX
- 2006 Leukotriene Modifiers: The Genetics of Treatment Response/invited
lecture
American Thoracic Society, San Diego, CA

- 2006 Anti-immunoglobulin E (Omalizumab) Therapy/invited lecture
Moderated session at American Thoracic Society, San Diego, CA
- 2007 The Beta-agonist Controversy: 2007/Pulmonary Rounds
University of California Los Angeles-Harborside, Torrance, CA
- 2007 Asthma Management 2007 and Beyond: Pharmacogenomics, Biomarkers
and New Treatment Paradigms/Pulmonary Grand Rounds.
Albany Medical Center, Albany, NY
- 2007 Primum Non Nocere: Risk Benefit for Anti-Asthma- Beta Receptor
Polymorphisms/Workshop lecture
American Academy of Asthma, and Immunology, San Diego, CA
- 2007 Controversies and Opportunities in Management of Moderate to Severe
Asthma. Pro-Con Debate/invited lecture
Allergy and Immunology, Symposium. American Academy of Asthma,
San Diego, CA
- 2007 Asthma 2007: A Clinical Update/Pulmonary Rounds
Georgetown Medical Center, Washington, DC
- 2007 Asthma 2007: A Clinical Update/Pulmonary Rounds
Walter Reed Medical Center, Washington, DC
- 2007 Bronchial Thermoplasty: A Critical Evaluation of a Novel Asthma
Therapy/invited lecture
Eastern Allergy Conference, West Palm Beach, FL
- 2007 Eosinophilic Lung Diseases/invited lecture
Chaired session, Churg-Strauss Syndrome, American Thoracic Society,
San Francisco, CA
- 2007 The Beta Agonist Controversy in Perspective 2007/invited lecture
Long Island Jewish, Manhasset, NY
- 2007 Churg-Strauss Syndrome in Adults and Children/Visiting
Professor/Pediatric Grand Rounds
Jackson Hospital, University of Miami, Miami, FL
- 2007 Asthma 2007: Pharmacogenetics, Biomarkers and New Treatment
Paradigms/Grand Rounds
Children's Hospital, Miami, FL
- 2007 Pharmacogenomics and Asthma and Difficult Asthma Cases/invited
lecture

- Asthma Fellows Conference: Developing the Asthma Expert. American College of Chest Physicians, Chicago, IL
- 2007 Is One Size Fits All the Ideal for Asthma Therapy?: Asthma Therapy Off-the-Rack or Custom-tailored: The Importance of Genetic Variation in Designing a Treatment Plan/invited lecture
American College of Asthma, Allergy and Immunology, Dallas, TX
- 2007 Asthma Management 2007 and Beyond: Pharmacogenomics, Biomarkers and New Treatment Paradigms/Pulmonary Grand Rounds
Albany Medical Center, Albany, NY
- 2008 The Beta Agonist Controversy in Perspective/invited lecture
Long Island Allergy Society, Mineola, NY
- 2009 Advances in Chronic Infections and Inflammatory Diseases: Advances in Asthma Research 2009/invited lecture
University of South Florida Signature Interdisciplinary Program in Allergy, Immunology and Infectious Disease, Tampa, FL
- 2009 Benefits of ICS/LABA Combination in Asthma vs. COPD/invited lecture
Eastern Allergy Conference, West Palm Beach, FL
- 2009 Pharmacogenomics and the Future of Asthma/invited lecture
Meet-the-Professors, American College of Chest Physicians, San Diego, CA
- 2011 What's hot in asthma: bronchial thermoplasty/invited lecture
Asthma and Immunology Society of Georgia, Lake Lanier, GA
- 2011 Emerging Issues in Basic Asthma Research/invited lecture
Our Lady of the Lake Regional Medical Center, Baton Rouge, LA
- 2011 Asthma 2011 and beyond- from biomarkers to bronchial thermoplasty/invited lecture
Louisiana State University Health Science Center, New Orleans, LA
- 2011 How to Predict Therapeutic Responses in Asthma. American College of Asthma Allergy and Immunology/invited lecture
Boston, MA
- 2011 The placebo effect and how to predict therapeutic responses in asthma/Medical Grand Rounds and Visiting Professorship.
National Jewish Medical Center, Denver CO

- 2012 What's new in asthma research 2012/Allergy Department Rounds
Scripps Clinic, San Diego, CA
- 2012 What's new in asthma research 2012/invited lecture
San Diego Allergy Society, San Diego, CA
- 2012 Asthma and Immunology: Bronchial Thermoplasty: A Novel Treatment
Approach to Severe Asthma / Invited talk
Allegheny General Hospital, Pittsburgh, PA
- 2012 Defining Eosinophilic Lung Disease Challenges and Unmet Needs
Taskforce on Research in Eosinophilic Associated Diseases Workshop.
Bethesda, MD
- 2012 Understanding the Placebo Effect in Asthma. Nemaclin Asthma
Conference, invited speaker. Farmington, PA.
- 2012 Advances in Rheumatology (3 talks)
"Eosinophilia for the Rheumatologist"
"Churg-Strauss Syndrome"
"Vasculitis Panel"
Harvard Medical School, Boston, MA
- 2013 Eosinophilia for the Rheumatologist. Rheumatology Grand Rounds.
UMass Medical Center. Worcester, MA
- 2013 Asthma and Race. Partners Asthma Center Grand Rounds. Harvard
Medical School. Boston, MA
- 2013 Asthma and the Placebo Effect. Pulmonary Biology Research Seminar.
Pulmonary Division, Duke University Medical Center, Durham, NC
- 2013 5 Years of safety and efficacy data with Bronchial thermoplasty. Dallas
Allergy Society. Dallas, TX

International

- 2000 Churg-Strauss Syndrome and Asthma Therapy – Leukotriene Modifiers
and the Churg-Strauss Syndrome/Closed expert roundtable discussion
invited lecture
Toronto, Ontario, Canada
- 2000 Churg-Strauss Syndrome and Anti-allergic Therapy/invited lecture
European Asthma Allergy and Clinical Immunology Congress, Lisbon,
Portugal

- 2004 Clinical Research Networks- the Asthma Model/invited lecture
International Eosinophil Society. Hypereosinophilic Syndromes
Symposium, sponsored by NIH Office of Rare Diseases, Snowmass, CO
- 2005 Hypereosinophilic Syndromes: Treatment of Churg-Strauss
Syndrome/Chair of NIH-sponsored symposium and invited lecture
International Eosinophil Society, Bern, Switzerland
- 2005 Churg-Strauss Syndrome: Which Therapies Work/invited lecture
International Eosinophil Society, Bern Switzerland
- 2006 Leukotriene Modifiers: The Genetics of Treatment Response/invited
lecture
American Thoracic Society Annual Meeting, San Diego, CA
- 2006 Anti-Immunoglobulin E (Omalizumab) Therapy/Session Moderator
American Thoracic Society Annual Meeting, San Diego, CA
- 2007 Eosinophilic Lung Diseases/Session Chair and invited lecture (500
clinicians)
American Thoracic Society Annual Meeting, San Francisco, CA
- 2007 Establishing a Network for the Study of Eosinophilic Syndromes/invited
lecture
International Eosinophil Society, Snowbird, UT
- 2008 The Long Acting Beta Agonist Response by Genotype (LARGE)
Trial/invited lecture
American Thoracic Society Annual Meeting, Toronto, ON, Canada
- 2009 Novelties in Churg-Strauss Diagnosis and Management: 2009/invited
lecture
International Eosinophil Society, Brugges, Belgium
- 2009 Reslizumab for Hypereosinophilic Syndromes/invited lecture
International Eosinophil Society, Brugges, Belgium
- 2010 Pulmonary Eosinophilic Syndromes/invited lecture
Misurina European Asthma Winter Symposium. Misurina, Italy
- 2010 Pharmacogenetics in Asthma/invited lecture
Misurina European Asthma Winter Symposium. Misurina, Italy
- 2010 Churg-Strauss Syndrome/invited lecture
European Respiratory Society Respiratory Task Force, Lyon, France

- 2010 Management of Asthma/Course Co-Director
Livemed Symposium on Asthma and COPD Mexico City, Mexico
- 2010 Management of Asthma/Course Co-Director
Livemed Symposium on Asthma and COPD, Monterrey, Mexico
- 2010 Management of Asthma/Course Co-Director
Livemed Symposium on Asthma and COPD, Guadalajara, Mexico
- 2011 Hot topics in clinical allergy: new medications for asthma/invited lecture
European Academy of Asthma, Allergy, and Clinical Immunology,
Istanbul, Turkey
- 2011 Challenges in clinical trial development for hypereosinophilic
syndromes/invited lecture
International Eosinophil Society, Quebec City, Canada
- 2011 Vasculitis: Key Issues for the Clinician in Three Unique Diseases: Churg-
Strauss Syndrome/invited lecture
American College of Rheumatology. Chicago, IL
- 2012 Novel Asthma therapies: Poster Session Lead Facilitator, American
Thoracic Society, San Francisco, CA
- 2012 Bronchial Thermoplasty – A Procedure to Improve Asthma Control for
Severe Asthma Patients/Invited Speaker, American Thoracic Society, San
Francisco, CA
- 2012 Asthma Therapies – Focusing on your patient / Invited lecture
European Academy of Allergy and Clinical Immunology, Geneva,
Switzerland
- 2012 Bronchial Thermoplasty – A Procedure to Improve Asthma Control for
Severe Asthma Patients/Invited Speaker, American College of Chest
Physicians, Atlanta, GA
- 2012 Individualized Therapy for Patients with Asthma/invited lecture
Airway Vista Conference, Seoul, S. Korea
- 2012 Asthma and the Placebo Effect/invited lecture
Airway Vista Conference, Seoul, S. Korea
- 2013 Triggers of Churg-Strauss Syndrome
European Respiratory Society Task Force on Eosinophilic Granulomatosis
with Polyangiitis. Invited Speaker. Paris, France.

- 2013 Bronchial Thermoplasty – Long term data out to 5 years/Invited Speaker, American Thoracic Society, Philadelphia, PA
- 2013 Role of IL-5 in moderate-to-severe asthma, biomarkers and the evidence for anti-IL-5 therapy. Invited Speaker, International Eosinophil Society. Oxford, United Kingdom.
- 2013 Hypereosinophilic Disease State of the Art: Diagnostic Issues in HES; the example of CSS. Invited Speaker, International Eosinophil Society. Oxford, United Kingdom.
- 2013 Severe Asthma: the role of IL-5. Invited Speaker, European Respiratory Society, Barcelona Spain.

X Clinical Activities and Innovations

A. Practice Activities

- 1996-2012 Inpatient Care
Kindred Hospital Boston (4 nights/month)
- 2000-2012 Ambulatory Care
Center for Chest Diseases, Brigham and Women’s Hospital, Boston, MA
(1/2 session/wk)
- 2000-2012 Ambulatory Care
MIT Medical, Cambridge, MA (2 sessions/month)
- 2000-2012 Inpatient Care
Medical Intensive Care Unit, Brigham and Women’s Hospital, Boston, MA (8 wks/yr)
- 2008-2010 Ambulatory Care
Pulmonary Service, Spaulding Hospital, Cambridge, MA (1 mo/yr)
- 2012-present Inpatient Care
Medical Intensive Care Unit, Rose Medical Center, Denver, CO (4 weeks/year)
- 2012-present Ambulatory Care
Pulmonary Clinic, National Jewish Health, Denver, CO (4 sessions/month)
- 2013- present Inpatient Care

Medical Intensive Care Unit, Swedish Medical Center, Centennial, CO (2 weeks/ year)

B. Clinical Innovations

Developed bronchial thermoplasty, presented to FDA, and implemented at Brigham and Women's Hospital

C. Patient Educational Activities and Materials

2004-present Churg-Strauss Syndrome Association, Medical Advisory Board
Serves as medical adviser for this nonprofit organization dedicated to supporting and educating patients and their families who are afflicted with Churg Strauss Syndrome.

2005-present American Partnership for Eosinophilic Diseases (APFED), Medical Advisory Board
Serves as medical adviser for this non-profit advocacy organization for those living with eosinophilic esophagitis, eosinophilic gastroenteritis, eosinophilic colitis, hypereosinophilic syndrome, and other eosinophilic disorders. This group is a resource for patients, their families, physicians and the medical community.

2005-present Vasculitis Foundation, Medical Advisory Board
Serves as medical adviser for this non-profit advocacy organization for those living with vasculitis including Wegener's disease and Churg-Strauss syndrome.

2009 "Where were the Doctors?" Co-author Op-ed. Boston Globe, Oct. 8, 2009

XI Research Grants, Contracts and Special Grants

A. Past Funded Projects

2001-2007 **Polymorphisms of Neural NOS and the Asthma Phenotype**
NIH/NHLBI 1K23HL04285
PI
This study examined the roles of different polymorphisms of nitric oxide synthase genes in determining exhaled NO and other asthma phenotypes. The results were published in AJRCCM

2001-2006 **Counter Regulatory Lipid Signals in Severe Asthma**
NIH/NHLBI R01 HL69349
CoI

The major goal of this project was to explore the role of counter-regulatory molecules in severe asthma by identifying and characterizing patients with severe asthma and a matched cohort with mild-to-moderate asthma, to characterize LX and 15-epi-LX biosynthesis and receptor expression in severe asthma.

- 2002-2004 **Genes of Eosinophil Function and Regulation in Churg-Strauss Syndrome**
American Lung Association
PI
The aim of this study was to examine the genetics of Churg-Strauss Syndrome, a rare eosinophilic vasculitis associated with asthma by collecting genetic material and identifying sequence variants in eosinophil candidate genes.
- 2003-2005 **Identification of Sequence Variants in Genes of Eosinophil Function and Regulation in CSS Patients**
Merck SING-UN-34-2
PI
The aim of this study was to recruit Churg Strauss Syndrome patients and collect genetic material in order to identify novel sequence variants in eosinophil candidate genes to try to understand the genetic predisposition of this syndrome.
- 2005-2010 **The Pharmacogenetics of Asthma Treatment**
NIH/NIGMS/NHLBI U01 HL065899
CoI, PI Scott Weiss (\$458,931, for entire project)
The major goal of this project was to determine the genetic basis for differences observed in patient responses to various asthma treatments. This trial is investigating the consistency and reliability of the placebo effect in asthma.
- 2007-2009 **Mepolizumab as a Steroid Sparing Therapy in Churg-Strauss Syndrome**
GlaxoSmithKline
PI (\$76,000, for entire project)
The goal of this project was to do an open label assessment of the safety and efficacy of mepolizumab in patients with Churg-Strauss syndrome. The results were published in JACI.
- 2008-2010 **Genotype-Stratified Treatment with Anticholinergic vs. Beta-Agonist (Long acting) and Exacerbations (GABLE)**
Partners HealthCare
Genetics Enters Medicine Initiative
Co-PI, Michael Wechsler (\$854,833)

The purpose of this project was to conduct a randomized investigation of the effect of polymorphisms of the beta adrenergic receptor on treatment outcomes in patients randomized to inhaled corticosteroids and long acting beta-agonists vs. inhaled corticosteroids and anticholinergics.

- 2003-2012 **Asthma Clinical Research Network: Informative Clinical Studies in Asthma**
NIH/NHLBI U10 HL74227
CoI, PI Elliot Israel (\$1,117,530)
One of the major goals of this project is to perform clinical trials to help inform guidelines for individuals with mild-moderate persistent asthma symptoms, who comprise about 50% patients requiring chronic asthma therapy.
- 2005-2012 **Bronchial Thermoplasty in Moderate to Severe Asthma: The AIR2 Trial**
Asthmatx, Inc.
PI Michael Wechsler (\$350,000)
This trial investigated the safety and efficacy of bronchial thermoplasty as administered via the Alair system in patients with moderate to severe asthma.
- 2006-2009 **The Reliability of the Placebo Effect in Asthma**
NIH/NCCAM R21 AT002793
PI: Michael Wechsler
This trial investigated the consistency and reliability of the placebo effect in asthma. The results were published in 2011 in NEJM.
- 2009-2012 **AsthmaNet; Brigham and Women's Hospital & Children's Hospital Boston**
NIH/NHLBI 1U10HL098102-01 or RFA-HL-08-010
PI Elliot Israel and Wanda Phipatanakul (\$340,950)
The major goal of this project is to perform studies to determine the best evidence-based asthma treatment.
- 2010-2012 **Kit Inhibition in Asthma**
NIH/NHLBI RFA-HL-10-003
CoI, CoPI Elliot Israel and Joshua Boyce (\$800,000)
This grant involves utilizing cKit inhibition with imatinib to investigate the contribution of mast cells to the pathogenesis of severe asthma.
- 2011-2012 **AMSA: ALXR/FPR Mediated Signaling in Severe Asthma**
NIH/NHLBI RFA-HL-11-018
CoI, PI Elliot Israel and Bruce Levy (\$688, 920)
The proposed experiments are testing the hypothesis that ALX axis dysregulation underlies persistent asthma and airway inflammation despite

corticosteroid therapy in a cohort of patients with severe asthma. Lipoxin A4 (LXA4) is an anti-inflammatory and pro-resolving mediator that can interact with specific receptors (i.e., ALX/FPR2) to inhibit allergic airway inflammation and hyper-responsiveness in model systems. Severe asthma is characterized by decreased LXA4, suggesting that this condition may stem from a defect in counter-regulation. In this study we plan to determine the effect of corticosteroids on the ALX axis in severe and non-severe asthma, and define the relationship between the ALX aberrant phenotype and airway inflammation and progressive disease.

- 2011-2012 **Lipoxins in Severe Asthma (LIPSA)**
NIH/NHLBI RFA-HL-11-015
CoI, PI Elliot Israel and Bruce Levy (\$534,749)
Some patients with severe asthma do not respond to anti-inflammatory controller therapy, thus experience excess morbidity and a greater need for healthcare support. In this proposal, we will utilize samples collected in a funded, multicenter clinical trial of ninety subjects with severe asthma to (1) validate soluble epoxide hydrolase inhibition as a potential novel therapeutic target and (2) develop a non-invasive method to identify individuals with severe asthma that are most likely to benefit from this therapy.
- 2010-2012 **Anti-IL5 Therapy for Churg-Strauss Syndrome – A Double-blind Randomized, Placebo-controlled Trial.**
NIAID R34 A1091439-01
PI Michael Wechsler (\$288,561 for entire project)
This is a planning grant for a trial investigating the use of anti IL5, mepolizumab, in patients with Churg-Strauss syndrome.

B. Current Funded Projects

- 2010-2013 **BELT: Blacks and Exacerbations on LABA vs. Tiotropium**
AHRQ RFA-HS-10-003
Clinical Coordinating Center PI Michael Wechsler (\$3,781,232) and local site investigator PI.
Blacks may be at increased risk for adverse effects from long-acting beta-agonists (LABA). Data also suggest that they may derive decreased benefit from the addition of LABA to inhaled corticosteroids ((ICS). This is a practice-based comparative effectiveness trial of LABA/ICS vs. anticholinergic/ICS in Blacks.
- 2012-2016 **AsthmaNet; National Jewish Health, Denver**
NIH/NHLBI Asthma Network U10 HL098075
PI E. Rand Sutherland and Stanley Szeffler (\$2,243,800)
The major goal of this project is to perform studies to determine the best evidence-based asthma treatment.

2013-2017 **Anti-IL5 for the treatment of Churg-Strauss Syndrome: a double blind placebo controlled trial.**
NIAID-U-01
Overall PI Wechsler (\$6,158,149)
This is an NIAID funded multi-center trial investigating the use of anti IL5, mepolizumab, in patients with Churg-Strauss syndrome

C. Current Unfunded Projects

2012 **Genetic Studies of Vasculitis (In Progress)**
NIH- NIAID R-01
PI Peter Merkel and Lindsay Farrer (\$4,000,000)
The “Genetics of Vasculitis” grant involves a genome-wide association study (GWAS) of various forms of vasculitis and subsequent analyses of the data generated by this work.

XII Bibliography

A. Peer reviewed publications

Research Investigations

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Michael E. Wechsler, MD, MMSc
Narrative Report

Introduction

I am a pulmonary and critical care specialist with clinical and research expertise in asthma, eosinophilia and related diseases. As of 2012, I currently serve as Director of Asthma at National Jewish Health where I am charged with developing research, clinical and educational programs in asthma. Prior to this, I was Associate Director of the Brigham & Women's Hospital Asthma Research Center, where I designed and led clinical trials in asthma and eosinophilic lung diseases. In addition to current outpatient responsibilities at National Jewish, I previously had clinical responsibilities in the BWH Center for Chest Disease and in the BWH Medical Intensive Care Unit, and administrative and educational activities aimed at educating physicians and translational researchers in various aspects of Pulmonary & Critical Care, especially asthma.

Area of Excellence: Investigation

My primary research focuses on clinical and translational asthma research, with three main foci of investigation: (i) asthma genetics and personalized medicine; (ii) clinical trials in asthma; and (iii) Churg-Strauss Syndrome. Regarding the genetics of asthma, I have investigated the role of numerous candidate genetic polymorphisms in the pathogenesis and management of asthma (*Research Investigation # 6, 8-9, 11-12, 16*). I was the Principal Investigator of the Lancet-published, NHLBI-funded Asthma Clinical Research Network's LARGE trial, which prospectively investigated the effect of beta-adrenergic receptor polymorphisms on the asthmatic response to salmeterol (*Research Investigation # 28*). I also led a recently completed Partners Genetics Enters Medicine Initiative funded trial examining genotype-stratified treatment with anticholinergics vs. beta-agonists (long acting) and exacerbations (GABLE) in asthma (currently undergoing analysis).

As the Associate Director of the BWH Asthma Research Center, I conducted more than 30 clinical asthma research trials. I was the BWH site Principal Investigator examining the effects of a novel therapy for asthma (bronchial thermoplasty) that utilizes thermal energy to disrupt airway smooth muscle (*Research Investigation # 29*). I presented study data to the FDA Medical Advisory panel in 2009, leading to its 2010 FDA approval. I was also awarded an NIH sponsored R21 award to examine the effects of placebo on lung function in asthma, and completed this clinical trial work in over 40 subjects. Having reported on the importance of using placebos in clinical trials and on the relevance of patient reported outcomes in clinical trials, my NEJM manuscript (*Research Investigation # 39*) has reset the standard for clinical trial design in this condition. I am a member of the Steering Committee of the NIH-sponsored Asthma Clinical Research Network (ACRN, now called Asthmanet), a multi-center asthma clinical trials consortium that has conducted numerous trials that have clarified our understanding of asthma phenotyping and asthma management, laying the foundation for current asthma guidelines (*Research Investigation # 11, 13, 15, 19-20, 22, 24-25, 27, 32-34*). As a member of this consortium,

I was the lead investigator who described an association between asthma treatment failures and beta agonist use in African Americans (*Research Investigation # 38*), and am the PI of the Clinical Coordinating Center for a large 1500 patient study of asthma therapies in African Americans, as well as the PI of a novel Asthmanet study examining race-specific differences in response to asthma therapy.

A major focus of my research efforts is elucidating the pathophysiology of the Churg-Strauss syndrome, a rare form of eosinophilic vasculitis. I was the first to describe the relationship between CSS and leukotriene modifiers, and between CSS and anti-IgE therapy for asthma (*Research Investigation # 1, 3, 4, 7, 10, 14, 21, 26*). I clinically follow one of the largest cohorts of CSS patients in the country and I serve as a referral base for patients with severe asthma from all over the USA. This expertise, and two research awards, have enabled me to recruit the largest cohort of CSS patients, which are serving as the primary test population in a genome-wide association study of CSS. I have examined the role of anti-IL5 in the treatment of CSS patients (*Research Investigation #30*) and have received NIAID R34 funding to plan a double blind placebo controlled trial in this patient population, and recently have been notified that my U01 grant proposing such a trial will be funded.

Significant Supporting Activities:
Administrative and Institutional Service

In my previous role as the Associate Director of the BWH Asthma Research Center, I provided administrative leadership and clinical support to the center by overseeing personnel and safety issues, while supervising the day-to-day operations of the laboratory and assuring quality and efficiency. As Director of Asthma at National Jewish, I am collaborating with other National Jewish investigators to lead an Asthma Clinical and Research program, with a focus on integrating all of the programs that are investigating asthma, including adult and pediatric, pulmonary, allergy and immunology programs. I have also served on Data Safety Monitoring Boards for different industry funded studies. I am Associate Editor of the journal *Allergy* and am on the editorial board of the *European Journal of Clinical Investigation*. I also serve on international task forces affiliated with the European Respiratory Society and the International Eosinophil Society that explore issues related to Churg-Strauss syndrome and other eosinophilic diseases.

Clinical Activities

I attend in the Medical Intensive Care Unit at Rose Hospital and previously attended in the ICU at Brigham & Women's Hospital. Having practiced outpatient pulmonary medicine at the BWH Center for Chest Disease and the Partners Asthma Center, I continue to practice outpatient pulmonary medicine at National Jewish. Consistent with my research interests, my main focus is on patients with severe asthma and Churg-Strauss syndrome. In each of these capacities, I have supervised fellows and housestaff, consulted on pulmonary inpatients, and performed bronchoscopies.

Clinical Innovation

I was responsible for introducing bronchial thermoplasty for the treatment of severe asthma at BWH and will continue to perform this procedure at National Jewish. I was the site investigator for several bronchial thermoplasty clinical trials, and participated as an expert at the FDA hearings leading to the approval of bronchial thermoplasty for asthma. I worked closely with the BWH Department of Medicine and its Pulmonary Division to procure the equipment to perform this procedure, and served as the lead clinician performing this procedure at BWH.

Teaching and Education

My teaching activities are diverse. I have served as course tutor in the HMS Patient-Doctor course, lectured as part of the BWH MICU daily teaching curriculum, and served as course leader of “Topics in Airway Biology” (a twice-monthly asthma journal club). I routinely lecture to clinicians and students around the country about the pathogenesis, genetics and approaches to asthma management, and have been course director for asthma CME courses nationally and internationally.

Summary

In sum, I am a clinician-scientist committed to gaining a better understanding of asthma and eosinophilic diseases, and translating these insights towards clinical application. The NIH has continued to fund my research, and I have published numerous original manuscripts in top peer-reviewed journals. I have assumed several administrative and clinical responsibilities at National Jewish, and previously at BWH, and internationally to promote clinical investigation in translational research, and have gained an international reputation as a clinician, researcher and educator in asthma and related disorders.