

Harvard Medical School Curriculum Vitae

Date Prepared: 07/20/2020
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Place of Birth: Attleboro, MA

Education

1998	BA <i>Cum laude</i>	Major in Biochemistry; Minor in Spanish	Hamilton College, Clinton, NY
2003	MD	Medicine	University of Massachusetts Medical School, Worcester, MA

Postdoctoral Training

06/03-06/06	Resident	General Pediatrics	Massachusetts General Hospital (MGH), Boston, MA
07/06-06/09	Research/Clinical Fellow	Medicine/Allergy and Immunology	Brigham and Women's Hospital (BWH), Boston, MA

Faculty Academic Appointments

07/09-06/13	Instructor	Medicine	HMS
06/13-10/19	Assistant Professor	Medicine	HMS
10/19-present	Associate Professor	Medicine	HMS

Appointments at Hospitals/Affiliated Institutions

07/06-10/10	Assistant Physician	Pediatrics	Newton-Wellesley Hospital, Newton, MA
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07/06-10/11	Assistant Physician	Pediatrics	MGH
11/08-10/15	Active Staff	Department of Medical Oncology	Dana-Farber Cancer Institute, Boston, MA
07/09-present	Associate Physician	Department of Medicine Division of Rheumatology, Allergy, and Immunology	BWH

Other Professional Positions

2013-2017	Consultant	Array BioPharma, Boulder, CO	
2013-2017	Consultant	Knopp Biosciences, Pittsburgh, PA	
2013-2017	Consultant	Allakos, San Carlos, CA	
2016-present	Consultant	Chiesi USA, Cary, NC	2 days per year
2017	Scientific Advisory Board	GlaxoSmithKline, Research Triangle Park, NC	
2017-present	Scientific Advisory Board	Sanofi US Services, Bridgewater, NJ	3 days per year
2017-present	Scientific Advisory Board	Regeneron Pharmaceuticals, Tarrytown, NY	3 days per year
2017-present	Consulting	Novartis Pharmaceuticals Corporation, East Hanover, NJ	1 day per year

Major Administrative Leadership Positions

Local

2010-2013	Course Director, Allergy/Immunology Monday Morning Teaching Conference #2070	BWH
2013-2015	Course Co-Director, Allergy/Immunology Monday Morning Teaching Conference #2070	BWH
2014-present	Director, Aspirin-Exacerbated Respiratory Disease (AERD) Center	BWH
2014-present	Director of Translational Research in Allergy	BWH
2019-present	Associate Program Director for Project Development at the Center for Clinical Investigation	BWH

Committee Service

Local

2006-2009	Fellowship Committee	BWH
2006-2009		Member, participant in quarterly meetings

2009-present	Allergy/Immunology Divisional Steering Committee	BWH
	2009-present	Member, participant in quarterly meetings
2009-present	Allergy/Immunology Division Fellowship Candidate Committee	BWH
	2009-present	Voting member and interviewer of all incoming fellowship applicants
2017-2019	Advisory Board Member for the Translational Accelerator program	BWH

International

2016-present	Diagnosis and Management of Hypersensitivity to Non-steroidal Anti-inflammatory Drugs Task Force	European Academy of Allergy and Clinical Immunology
	2016-present	Invited member of task force

Professional Societies

2006-present	American Academy of Allergy Asthma and Immunology (AAAAI)	
	2006-2009	Member, Fellow-In-Training
	2007-2009	Secretary of Cells & Mediators of Allergic Inflammation Committee
	2009-2012	Member
	2012-present	Member, Fellow of the Academy
	2014-2016	Vice-Chair of Cells & Mediators of Allergic Inflammation Committee
	2017-2019	Chair of Cells & Mediators of Allergic Inflammation Committee
2006-2009	American College of Allergy Asthma and Immunology	
	2006-2009	Member, Fellow-In-Training
2016-present	European Academy of Allergy and Clinical Immunology	
	2016-present	Invited member of international AERD Task Force

Editorial Activities

Ad hoc Reviewer

American Journal of Rhinology and Allergy
Annals of Allergy, Asthma, and Immunology
Journal of Allergy and Clinical Immunology, In Practice
Pharmacogenomics
New England Journal of Medicine

Other Editorial Roles

2017-present Editorial Board Member Journal of Allergy and Clinical Immunology

Honors and Prizes

1995	Award for Excellence in Chemistry	Hamilton College	Achievement in Chemistry
1997-1998	Tuition Scholarship	Hamilton College	Awarded for GPA >3.5
1998	Graduated Cum Laude	Hamilton College	Academic Achievement
2005	Pediatric Teaching Award	Cambridge Hospital, Cambridge MA	Teaching
2006	Donald N. Medearis Award for Excellence in Teaching	MGH	Teaching
2010	Partners in Excellence Award	Partners Healthcare	Participation in the BWH Desensitization Program
2017-2018	Brigham Leadership Program	BWH	Invited to participate

Report of Funded and Unfunded Projects

Funding Information

Past

2008-2010 Presence of IL-9 receptor may define a circulating human mast cell progenitor population that is CD34⁺/c-Kit⁺ and CD13⁺
AAAAI/Third and Fourth Year Fellow-In-Training Research Award
PI
The goal of this project was to isolate and characterize the committed progenitor of the human mast cell in human peripheral blood, to then quantify differences in the number of mast cell progenitors in the blood of patients with atopic asthma compared to controls.

2009-2011 Lipidomic and Transcriptome Signatures in Aspirin Exacerbated Respiratory Disease (AERD)
National Institute of Health (NIH)/National Institute of Allergy and Infectious Diseases (NIAID) 5R21 AI 08236902
Investigator (Jonathan Arm, PI)

The goal of this study was to analyze the lipid mediators generated by nasal polyps from individuals with AERD compared to aspirin-tolerant asthmatics, combined with a genome-wide analysis of the transcriptome of nasal polyps from the same individuals.

- 2011-2016 Pathophysiologic and Therapeutic Mechanisms of Aspirin Exacerbated Respiratory Disease (AERD)
NIH/NIAID U19 AI095219-01
Project 3 Investigator (Joshua A. Boyce, PI)
The goal of this project is to determine the molecular basis of AERD and to determine whether blockade of the P2Y₁₂ receptor improves control of symptoms in the disorder. This project includes a clinical trial for which the candidate is largely responsible for the recruitment and characterization of subjects and for data analysis.
- 2012-2013 Defects in the Epigenetic Regulation of EP2 Expression in AERD
NIH/NIAID 5U19AI070412-06 Opportunity Fund Subaward No 153556/153044
PI
The goal of this project was to determine whether diminished EP₂ receptor expression in the fibroblasts of subjects with AERD leads to reduced PGE₂ responsiveness and underlies the recurrence of severe nasal polyposis in these patients.
- 2012-2017 The Inflammatory Role of the Platelet in Aspirin Exacerbated Respiratory Disease (AERD)
NIH/National Heart, Lung, and Blood Institute (NHLBI) K23 111113-01
PI
The goals of this project are to determine the mechanisms responsible for the increased numbers of platelet-leukocyte complexes in the blood and nasal polyps of subjects with AERD, and to determine the consequences of this abnormality.
- 2014-2015 Characterization of a Novel Growth and Survival Factor for Human Mast Cells
AAAAI ARTrust™/Mastocytosis Society
PI
The goal of this project was to identify a novel growth factor that is secreted by LUVA cells, a newly characterized human mast cell line.
- 2015-2017 Safety and Preliminary Efficacy of Dexpramipexole in Patients with Chronic Sinusitis with Nasal Polyps and Eosinophilia
Knopp Biosciences Phase II Clinical Trial
Site-PI
The aim of this open-label clinical trial is to determine the safety and efficacy of dexpramipexole, a novel oral agent, in patients with severe eosinophilic nasal polyps.
- 2016-2018 A Phase 2, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate Multiple Doses of AK001 in Patients with Moderate to Severe Nasal Polyposis.

Industry-initiated clinical trial (Phase II) – Allakos Inc

Site-PI (Claus Bachert, PI) (\$17,616 per completed subject)

The aim of this double-blind placebo-controlled clinical trial is to determine the safety and efficacy of AK001, a novel biologic agent, in patients with severe eosinophilic nasal polyps.

2017-2018 A Randomized, 24-week Treatment, Double-blind, Placebo-controlled Efficacy and Safety Study of Dupilumab 300mg Every Other Week, in Patients with Bilateral Nasal Polyposis on a Background Therapy with Intranasal Corticosteroids

Sanofi Phase III Clinical Trial

Site-PI (\$25,683 per completed subject)

The aim of this double-blind placebo-controlled clinical trial is to determine the safety and efficacy of dupilumab, a novel biologic agent, in patients with severe eosinophilic nasal polyps.

Current

2015-2021 Prostaglandin D2: A Key Mediator of Aspirin-Exacerbated Respiratory Disease

NIH/NHLBI 1R01HL128241-01

PI (total direct costs \$1,250,000)

The major goal of this project is to define the contribution of Prostaglandin D2 to AERD. We aim to determine the biologic and clinical consequences of the release of Prostaglandin D2 during aspirin-induced reactions, and of the suppression of Prostaglandin D2 by high-dose aspirin.

2016-2021 Pathophysiologic and Therapeutic Mechanisms of Aspirin Exacerbated Respiratory Disease (AERD)

NIH/NIAID U19 AI095219-01

Project 3 Investigator (Elliot Israel, Project 3 PI)

The goal of this project is to determine whether blockade of the thromboxane A2 receptor with ifetroban improves control of symptoms in the disorder. Dr. Laidlaw is largely responsible for the clinical trial design and for the recruitment and characterization of subjects and data analysis during this clinical trial.

2017-2021 Novel Pathways of Eicosanoid Metabolism

NIH/NIAID R01GM118412-01A1

Investigator (Claus Schneider, PI)

The major goal of the project is to analyze the metabolism of PGD2 in humans and mice, and specifically to analyze the transformation of PGD2 to 11-dehydro-thromboxane B2 in a Baeyer-Villiger-type oxidation.

2017-2022 Eicosanoid Networks in Aspirin Hypersensitivity

NIH/NIAID R01AI136041-05

Investigator (Joshua A. Boyce, PI)

The major goals of this project are to determine the role of platelet-derived high mobility box 1 in driving type 2 immunity and aspirin sensitivity.

- 2018-2019 Type 2 Immunity Elicited Through an LTE4/GPR99-Dependent Pathway
NIH/NIAID 1R56AI134989-01
Investigator (Nora Barrett, PI)
The major goals of this project are to assess the development and function of airway brush cells in organizing inflammation in the murine lung and human nasal mucosa.
- 2019-2021 Effect of Dupilumab on Sleep Apnea Severity in Patients with Chronic Rhinosinusitis
Sanofi (investigator-initiated study)
Co-PI (total direct costs are \$534,072, Co-PI is Dr. Andrew Wellman)
The aim of this study is to determine whether inhibition of IL-4 and IL-13 signaling may improve the clinical severity of obstructive sleep apnea that is present as a comorbidity in patients with severe chronic rhinosinusitis, with or without nasal polyposis.
- 2019-2021 The Effect of IL-5 and Mepolizumab on Nasal Immunoglobulin Production in Patients with AERD
GlaxoSmithKline (investigator-initiated study)
PI (total direct costs are \$190,176)
The aim of this study is to determine whether IL-5 signaling in the nasal polyps of patients with AERD drive an inflammatory antibody and mast cell response that would be inhibited by the therapeutic use of mepolizumab.
- 2020-2022 Mechanisms and biomarkers of therapeutic benefit of dupilumab in aspirin-exacerbated respiratory disease
Regeneron (investigator-initiated study)
PI (total direct costs are \$221,720)
The aim of this study is to determine whether the therapeutic improvement provided by IL-4R α inhibition with dupilumab in patients with AERD is due to the drug's anti-mast cell effects, and whether an early dupilumab-induced decrease in local nasal mast cell mediators will correlate with later clinically measurable therapeutic improvement to allow for a biomarker of response.

2014-2021 Immune Tolerance Network
NIH/NIAID 5UM1 AI109565-07

5UM1 AI109565-07, NIH/NIAID Nepom (PI) 02/01/14-01/31/21

Immune Tolerance Network

The Immune Tolerance Network (ITN) is a non-profit, government-funded consortium of researchers working to establish new treatments for diseases of the immune system. The ITN conducts clinical trials of specialized immune tolerance therapies in: the prevention of organ transplant rejection; the treatment of autoimmune diseases (such as type 1 diabetes, multiple sclerosis, lupus); and the prevention and treatment of allergies and asthma.

Role: Allergy Assessment Group Co-Chair

Projects Submitted for Funding

Pending (Received written approval of proposal 02/2020, awaiting contract review)	2-Year Follow-up of aspirin-exacerbated respiratory disease (AERD) Registry (2-FAR) Regeneron (investigator-initiated study) PI (total direct costs are \$169,613) The aim of this study is to establish the average healthcare utilization and cost burden of patients with AERD, and to determine the typical disease course and progression over a two-year period for patients with AERD.
Submitted (Proposal submitted 11/2019, expecting response 3/2020)	Map of B cell maturation pathways within inflamed respiratory mucosa Chan Zuckerberg Science Initiative Co-PI (Tanya Laidlaw, PI & Deborah Marks, PI) (total direct costs to Laidlaw are \$175,000) The goals of this study are to create a benchmark dataset to define the differentiation and maturation of B cells into antibody-secreting cells that occurs locally within inflamed respiratory tissue and to develop computational tools for the simultaneous integration of transcriptomic, proteomic and other data

Mentored Trainee Grants

2015-2020	The role of prostaglandin D ₂ in the respiratory symptoms of aspirin exacerbated respiratory disease NIH/NAID K23 AI118804-01 Member of Mentoring Committee for Katherine N. Cahill The goal of this project is to understand the mechanisms responsible for the acute aspirin-induced symptoms in AERD and the mechanism of action of high-dose aspirin therapy to provide new insights into the cause, diagnosis, and treatment of the disorder
2019-2024	The role of IL-5-dependent plasma cells and local immunoglobulin production in aspirin-exacerbated respiratory disease NIH/NIAID K23 AI139352-01 Co-Primary Mentor of Kathleen M. Buchheit The major goals of this study are to determine the role of IL-5 signaling on the plasma cell production of immunoglobulins in the respiratory tissue, and the clinical consequences of these immunoglobulins in patients with AERD.

Report of Local Teaching and Training

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

2008	Heterogeneity of Asthma Update Pediatric Residents	MGH One hour lecture
2010-2013	Understanding AERD Clinical Fellows in Allergy/Immunology	BWH One hour of lecture given annually as part of the Brigham and Women's Hospital Immunology Summer Course
2012	Diagnosis and Management of AERD Clinical Fellows in Allergy/Immunology	BWH One hour video-recorded lecture for HMS Allergy/Immunology Board Review Course
2012	Clinical Clues for Diagnosing AERD Allergy/Immunology Fellows	Children's Hospital, Boston MA One hour lecture
2015	Updates on the Understanding of AERD Allergy/Immunology Fellows	Children's Hospital, Boston MA One hour lecture
2015	How to Give a Talk: Public Speaking Tips Clinical Fellows in Allergy/Immunology	BWH One hour lecture
2015	Clinical Clues for the Diagnosis and Management of AERD Clinical Fellows in Pulmonology	Beth Israel Deaconess Medical Center, Boston MA One hour lecture
2015	What you should know about Allergy & Immunology during medicine residency Internal Medicine Residents	BWH One hour lecture
2015	AERD – Basics and Desensitization Clinical Fellows in Otolaryngology	BWH One hour lecture
2016	AERD: Clinical Clues for Diagnosis and Treatment Internal Medicine Residents	BWH One hour lecture

2016	Case-based Discussion of Multiple Drug Allergy and Immunodeficiency Internal Medicine Residents	BWH Three, One-hour lectures
2016, 2017, 2018, 2019	How to Give a Talk: Public Speaking Tips Clinical Fellows in Allergy/Immunology	BWH One hour lecture
2017, 2018	AERD Update: Diagnosis and Treatment Internal Medicine Residents	BWH One hour lecture
2019	Drug Allergies and Asthma for High-Risk Pregnancies Maternal-Fetal Medicine Fellows	BWH One hour lecture
2019	Drug Allergies and Asthma for Obstetrics Obstetrics/Gynecology Residents	BWH One hour lecture

Clinical Supervisory and Training Responsibilities

2009-present	Supervisory Allergy/Immunology consult attending for Clinical Fellows BWH	Six weeks per year
2010-present	Ambulatory Allergy/Immunology Preceptor for Clinical Fellows BWH	Fifteen half-sessions per year
2014-present	Ambulatory Allergy/Immunology Preceptor for Internal Medicine Residents interested in Allergy/Immunology BWH	Six half-sessions per year
2016-present	Ambulatory Allergy/Immunology Preceptor for HMS students BWH	Five half-sessions per year

Laboratory and Other Research Supervisory and Training Responsibilities

2010-2012	Supervision and training of Laboratory Technician, BWH	Daily mentorship for two years
2012-2014	Supervision and training of Laboratory Technician, BWH	Daily mentorship for two years
2012-2014	Supervision and training of Clinical Research Fellow in Allergy/Immunology, BWH	Daily mentorship of clinical research fellow, including teaching of laboratory techniques and clinical research protocols
2013-2015	Supervision and training of Clinical Research Coordinator at the AERD Center, BWH	Daily mentorship for two years
2013-present	Supervision and training of Clinical Research Fellow and junior faculty in Allergy/Immunology, BWH	Daily mentorship of clinical research fellow and junior faculty, including teaching of laboratory techniques and clinical research protocols
2014-2018	Supervision and training of Laboratory Technician, BWH	Daily mentorship for four years
2014-present	Supervision and training of Clinical Research Fellow in Allergy/Immunology, BWH	Daily mentorship of clinical research fellow, including teaching of laboratory techniques and clinical research protocols
2015-2017	Supervision and training of Clinical Research Coordinator at the AERD Center, BWH	Daily mentorship for two years

Mentored Trainees and Faculty

2010-2012	Molly S. Kidder, MD / Pediatric Resident, University of South Florida, Tampa, FL <i>Career stage:</i> lab technician. <i>Mentoring role:</i> laboratory research supervisor and mentor. <i>Accomplishments:</i> Publication of two authored articles of original mentored research, and successful acceptance into medical degree program.
2012-2014	Anya J. Cutler / Graduate Student in Global Health Program, Emory University, Atlanta, GA <i>Career stage:</i> lab technician. <i>Mentoring role:</i> laboratory research supervisor and mentor. <i>Accomplishments:</i> Publication of an authored article of original mentored research, and successful acceptance into graduate degree program.
2012-2014	Juan Carlos Cardet, MD / Assistant Professor of Medicine, Division of Allergy and Immunology, University of South Florida, Tampa, FL <i>Career stage:</i> fellow. <i>Mentoring role:</i> fellowship mentor. <i>Accomplishments:</i> Publication of a first-authored article of original mentored research.
2013-2015	Christina B. Johns / Medical Student, Yale Medical School, New Haven, CT

Career stage: study coordinator. *Mentoring role:* clinical research supervisor and mentor. *Accomplishments:* Publication of a first- and a second-authored article of original mentored research, and successful acceptance into a medical degree program.

2013-present Katherine N. Cahill, MD / Assistant Professor of Medicine, Department of Medicine, Division of Rheumatology, Immunology, and Allergy, Brigham and Women's Hospital
Career stage: fellow, junior faculty. *Mentoring role:* research mentor. *Accomplishments:* Publication of multiple first-authored scholarship of mentored research, and successful funding of a K23 application in 2015, on which Dr. Laidlaw is on her scientific mentoring committee.

2014-present Kathleen Buchheit, MD / Instructor, Department of Medicine, Division of Rheumatology, Immunology, and Allergy, Brigham and Women's Hospital
Career stage: fellow, junior faculty. *Mentoring role:* research mentor. *Accomplishments:* Publication of multiple articles, including a first-author, of original mentored research, and successful funding of a K23 application in 2019, on which Dr. Laidlaw is listed as her co-primary mentor.

2015-2016 Neelam H. Shah, MD / Allergy/Immunology Fellow, Massachusetts General Hospital
Career stage: resident. *Mentoring role:* research mentor. *Accomplishments:* Publication of a first-authored article of original mentored research, and successful acceptance into an Allergy/Immunology fellowship training program.

2015-2017 Thomas Schneider / Medical Student, School of Medicine at Quinnipiac University, North Haven, CT
Career stage: study coordinator. *Mentoring role:* clinical research supervisor and mentor. *Accomplishments:* Publication of a first- and a second-authored article of original mentored research, and successful acceptance into a medical degree program.

2016-2017 Katherine L. Tuttle, MD / Clinical Research Fellow in Allergy/Immunology, Brigham and Women's Hospital
Career stage: resident. *Mentoring role:* residency and fellowship mentor. *Accomplishments:* Publication of a first-authored article of original mentored research, and successful acceptance into an Allergy/Immunology fellowship training program.

Formal Teaching of Peers

No presentations below were sponsored by outside entities

2010	Clinical Clues for AERD Allergy Weekly Series, MGH	Single presentation Boston, MA
2010, 2011	Clinical Clues for AERD Allergy Weekly Series, BWH	Single presentation Boston, MA
2011	EP ₂ receptor defects and the mystery of AERD	Single presentation

Divisional Rheumatology, Immunology and Allergy
Retreat, BWH Boston, MA

2015 AERD: Basics and Desensitization Single presentation
Division of Otolaryngology Weekly Conference, BWH Boston, MA

Local Invited Presentations

No presentations below were sponsored by outside entities

2008 Cyclooxygenase deficiency and eicosanoid enzyme regulation by aspirin desensitization /
Plenary Talk
Partners AERD Conference at Waltham Woods, Waltham, MA

2010 The Role of Platelets in AERD / Update at Allergy Research Seminar
Department of Medicine, BWH

2010 The Role of Platelets in AERD / Update at Harvard Collaborative Asthma Research Group
HMS

2013 Clinical Clues for Diagnosis and Treatment of AERD / Allergy Grand Rounds
Department of Medicine, MGH

2013 Aspirin Exacerbated Respiratory Disease / Partners Asthma Center Grand Rounds
Department of Medicine, BWH

2015 AERD: From the bench to the bedside and back / Allergy Conference
Division of Allergy, Boston Children's Hospital

2015 AERD: From the bench to the bedside and back / Pulmonary Grand Rounds
Division of Pulmonary, Beth Israel Deaconess Medical Center, Boston, MA

2016 AERD: From the bench to the bedside and back / Allergy Grand Rounds
Department of Medicine, MGH

2016 Invited participant in GRASP Course Networking Session / GRASP Workshop
Harvard Catalyst / Sheraton Commander Hotel in Cambridge, MA

2017 Invited panelist for "Steps to Becoming an Independent Investigator" panel / Clinical
Translational Science Awards (CTSA) Regional Shared Mentoring Symposium
Harvard Catalyst / Harvard Medical School, Boston, MA

2018 What a Pediatric Allergist Should Know about AERD / Allergy and Pulmonary Monthly
Series / Boston Children's Hospital, Boston, MA

2020 AERD: From the bench to the bedside and back / Allergy Grand Rounds
Department of Medicine, MGH

2020 AERD: What a pediatric pulmonologist should know / Pulmonary Grand Rounds
Boston Children's Hospital, Boston, MA

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

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

Regional

- 2012 The Role of Platelets in AERD
Merck Research Institute, Boston, MA
- 2012 Aspirin Exacerbated Respiratory Disease
New England Society of Allergy Annual Meeting, Marlborough, MA
- 2013 Clinical Clues for the Diagnosis and Treatment of AERD
Boston University – Tufts University Otolaryngology Alumni Day, Boston, MA
- 2015 K and R Panel Presentation / Panel Discussion
Boston University School of Medicine – Clinical and Translational Science Awards
Regional Shared Mentoring Symposium, Boston, MA
- 2017 AERD: Updates from the bedside and the bench / Invited Speaker
Boston City Wide Allergy Rounds, Boston, MA
- 2018 Update on AERD / Symposium
New England Society of Allergy, Westford, MA
- 2019 AERD Evaluation and Treatment – the Allergist's perspective / Invited Speaker
New England Otolaryngological Society Annual Meeting, Waltham, MA

National

- 2008 Eicosanoid enzyme regulation in AERD and reversal by aspirin desensitization / Symposium
Clinical Immunology Society Hypersensitivity School, Park City, UT
- 2012 The Inflammatory Role of Platelets in AERD / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, Orlando, FL
- 2013 AERD: The Role of Platelets and Upcoming Clinical Trials / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, San Antonio, TX
- 2013 AERD: From the Bench to the Bedside / Invited Lecture

Northwestern University, Division of Allergy/Immunology, Chicago, IL

- 2014 Pathophysiology of AERD: The role of platelet-leukocyte interactions / Symposium
North American Rhinology & Allergy Conference, Fajardo, Puerto Rico
- 2013 Defects in the epigenetic regulation of EP2 expression in AERD / Symposium
National Institutes of Health – Asthma and Allergic Diseases Cooperative Research
Centers Steering Committee Annual Meeting, Bethesda, MD
- 2014 Career Advice from Junior Investigators: Time Management, Strategies for Work and
Family Life Balance, Data Management, Grant Writing / Panel Discussion
American Academy of Allergy, Asthma & Immunology National Meeting, San Diego, CA
- 2014 PGE₂ Resistance: An Explanation for Dysregulation of Leukotrienes in AERD / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, San Diego, CA
- 2014 Pathogenetic and Therapeutic Mechanisms of AERD / Symposium
National Institutes of Health – Asthma and Allergic Diseases Cooperative Research
Centers Steering Committee Annual Meeting, Bethesda, MD
- 2015 AERD: Basics and Desensitization / Symposium for Fellows-in-Training
American Academy of Allergy, Asthma & Immunology National Meeting, Houston, TX
- 2015 New Approaches to the Treatment of AERD: Does a Dietary Intervention Work? / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, Houston, TX
- 2015 The Central Role of Platelets and Thromboxane in AERD / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, Houston, TX
- 2016 AERD: More Than Asthma / Seminar discussion
American Academy of Allergy, Asthma & Immunology National Meeting, Los Angeles, CA
- 2016 Novel Endotypes of Asthma: Lessons from the AADCRC
American Academy of Allergy, Asthma & Immunology National Meeting, Los Angeles, CA
- 2016 How to Apply for and Obtain an NIH Grant for the New Investigator / Panel Discussion
American Academy of Allergy, Asthma & Immunology National Meeting, Los Angeles, CA
- 2017 Can't smell, can't taste, can't breathe – what is AERD? / Medicine Grand Rounds
Northwestern University Feinberg School of Medicine, Chicago, IL
- 2017 AERD Update: Pathophysiology / Symposium
North American Rhinology & Allergy Conference, Fajardo, Puerto Rico
- 2017 Management of severe CRS: What does the future hold? / Symposium
North American Rhinology & Allergy Conference, Fajardo, Puerto Rico

- 2017 Results of Trial of Prasugrel for the Treatment of AERD / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, Atlanta, GA
- 2017 Immunology of Asthma Phenotypes: AERD / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, Atlanta, GA
- 2017 AERD: Updates from the Bench to the Bedside / Plenary Session
American Academy of Allergy, Asthma & Immunology National Meeting, Atlanta, GA
- 2017 Therapeutic Targets for Chronic Rhinosinusitis with Nasal Polyps / Symposium
American College of Asthma, Allergy & Immunology National Meeting, Boston, MA
- 2018 AERD Update: Pathophysiology / Symposium
Annual Swineford Allergy Conference, Charlottesville, VA
- 2018 AERD Update / Symposium,
Eastern Allergy Conference, Palm Beach, FL
- 2019 Updates on AERD / Symposium at Rhinitis and Rhinosinusitis Interest Section Forum
American Academy of Allergy, Asthma & Immunology National Meeting, San Francisco, CA
- 2019 Appropriate Use of Biologics in Chronic Rhinosinusitis with Nasal Polyps / Panel moderator
Rhinoworld (International Rhinologic Society National Meeting), Chicago, IL
- 2019 Evaluation and Treatment of AERD, an Allergist's Perspective / Symposium
American Rhinology Society National Meeting, New Orleans, LA
- 2019 AERD – from Bench to Bedside and back / Invited Speaker
New York Allergy and Asthma Society Annual Meeting, New York, NY
- 2019** **Something at NIH about the CRSwNP symposium**
- 2020 Updates on the Evaluation and Treatment of AERD / Visiting Professor Invited Speaker
Mayo Clinic Rhinology and Allergy Grand Rounds, Rochester, MN
- 2020 **Developing an NSAID and Aspirin Challenge Program / Workshop Panelist
American Academy of Allergy, Asthma & Immunology National Meeting, Philadelphia, PA
- 2020 **How to Survive as an Academic Translational Scientist Pursuing Asthma, Allergy, and
Immunology Research in the Current Funding Environment / Primary Moderator
American Academy of Allergy, Asthma & Immunology National Meeting, Philadelphia, PA
- 2020 **Nonsteroidal Anti-Inflammatory Drugs Allergy Evaluations to Increase Guideline-
Concordant Care and Decrease Use of Opioid Pain Medications / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, Philadelphia, PA

2020 **Treatment with Biologics for AERD in 2020 / Symposium
American Academy of Allergy, Asthma & Immunology National Meeting, Philadelphia, PA

*** Invitation to speak accepted and materials prepared, but scientific meeting cancelled due to concerns over COVID-19*

National Abstract Oral Presentations

2009 Characterization of a novel human mast cell line / Oral abstract presentation
American Academy of Allergy, Asthma & Immunology National Meeting, Washington, DC

2010 Mechanisms of desensitization in patients with AERD / Oral abstract presentation
American Academy of Allergy, Asthma & Immunology National Meeting, New Orleans, LA

2012 Platelet-Leukocyte Aggregates in AERD / Oral abstract presentation
American Academy of Allergy, Asthma & Immunology National Meeting, Orlando, FL

International

2015 AERD: Understanding the Mechanism and Looking for New Treatments / Symposium
Japanese Society of Allergology National Meeting, Tokyo, Japan

2015 Cysteinyl leukotriene receptors update, implications for asthma / Plenary Talk
Japanese Society of Allergology National Meeting, Tokyo, Japan (Merck)

2016 The role of PGD₂ in nasal polyps and AERD / Symposium
European Academy of Allergy and Clinical Immunology National Meeting, Vienna, Austria

2018 New horizons for management of nasal polyps; new mechanisms of action, new
multidisciplinary approach / Symposium
European Rhinology Society National Meeting, London, UK (Regeneron)

Report of Clinical Activities and Innovations

Current Licensure and Certification

2006 Massachusetts Medical License
2006 Board certified in Pediatrics
2009 Board certified in Allergy/Immunology

Practice Activities

2009-present	Ambulatory Care	Outpatient Allergy/Immunology clinic; BWH	1 session per week
2009-present	Inpatient consult service	Allergy/Immunology Consult Service; BWH	6 weeks per year
2009-2013	Ambulatory Care, Desensitization procedures	Outpatient Chemotherapy Infusion Center; Dana-Farber Cancer Institute	~5 chemotherapy desensitization patients per month

Clinical Innovations

Development and implementation of aspirin desensitization protocol (2009)	This oral aspirin desensitization protocol was developed for use in the outpatient clinic setting and has been instrumental in providing aspirin desensitization to patients with AERD as a novel approach to the treatment of their unique disease. The protocol has now been adopted division-wide by the Divisions of Allergy/Immunology at both BWH and MGH, as well as at the Beth Israel Deaconess Hospital
Establishment of first international clinical registry for patients with AERD (2013)	The international AERD Patient Registry at BWH was established in 2013 and now includes over 1400 patients and is the largest of its kind worldwide. Analyses from the database of this ever-growing registry have led to a number of breakthroughs for the evaluation and treatment of patients with AERD.

Report of Education of Patients and Service to the Community

Education of Patients and Service to the Community

No presentations below were sponsored by outside entities

2011	Asthma and Allergy Foundation of America – New England Chapter/ Invited to speak and offer expertise at a patient roundtable discussion on the causes and treatments of cough and wheeze
2013	Brigham and Women’s Hospital Overseers Event on Children’s Food Allergy – Weston, MA Invited to speak to invited lay public and offer expertise on the rise of food allergy in children and the ongoing research efforts to understand and treat food allergy
2016	Senior Seminar in Biochemistry at Wheaton College – Norton, MA Invited to speak to college students and gave presentation about ethical and scientific consideration in clinical trial design
2017	Biological Engineering Senior Design Course at Massachusetts Institute of Technology – Cambridge, MA Invited to speak to college students and gave presentation about overcoming barriers in the design and execution of clinical drug trials

Educational Material for Patients and the Lay Community

No educational materials below were sponsored by outside entities.

Patent Educational Material

Books, monographs, articles and presentations in other media

2012-present	Patient education website, BWH	Author and designer of website content and layout.	https://aerd.partners.org As of 2018, website draws over 2500 visits/users per month and is kept up-to-date with new research and trials in the field so that patients are continuously updated as to the progress in AERD
2016-present	AERD Patient Newsletter	Author	Annual patient education pamphlet, Brigham and Women's Hospital
2016	Aspirin Both Triggers and Treats an Often-Missed Disease	National Public Radio story heard on Morning Edition, with expert opinion and commentary given by me, along with participation of one of my patients.	https://www.npr.org/sections/health-shots/2016/03/21/470900315/aspirin-both-triggers-and-treats-an-often-missed-disease
2018	Love is in the air – don't let AERD take your breath away	Live webinar I gave for patients and clinicians from the Allergy & Asthma Network.	https://www.youtube.com/watch?v=i8PHXeNuioY

Recognition

2017	Top Doctor in Allergy & Immunology	Boston Magazine
2018	Top Doctor in Allergy & Immunology	Boston Magazine
2019	Top Doctor in Allergy & Immunology	Boston Magazine

Report of Scholarship

Peer-reviewed publications in print or other media

Research investigations

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4. **Laidlaw TM**, Steinke JW, Tiñana AM, Feng C, Xing W, Lam BK, Paruchuri S, Boyce JA, Borish L. Characterization of a novel human mast cell line that responds to stem cell factor and expresses functional FcεRI. *J Allergy Clin Immunol.* 2011; 127:815-22. PMID:21281958
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9. **Laidlaw TM**, Cutler AJ**, Kidder MS**, Liu T, Cardet JC**, Chhay H, Feng C, Boyce JA. Prostaglandin E₂ resistance in granulocytes from patients with aspirin-exacerbated respiratory disease. *J Allergy Clin Immunol.* 2014; 133(6):1692-701. PMID:24486071
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 Payne SC. RE: Alcohol-induced respiratory symptoms are common in patients with aspirin exacerbated respiratory disease. *J Allergy Clin Immunol Pract.* 2014;2(5):644. PMID:25213072
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12. Cahill KN, Bensko JC, Boyce JA, **Laidlaw TM**. Prostaglandin D2: A dominant mediator of aspirin exacerbated respiratory disease. *J Allergy Clin Immunol.* 2015; 135(1):245-252. PMID:25218285
13. Semaan W, Desbiens L, Houde M, Labonté J, Gagnon H, Yamamoto D, Takai S, **Laidlaw T**, Bkaily G, Schwertani A, Pejler G, Levesque C, Desjardins R, Day R, D'Orléans-Juste P. Chymase inhibitor-sensitive synthesis of endothelin-1 (1-31) by recombinant mouse mast cell protease 4 and human chymase. *Biochem Pharmacol.* 2015; 15;94(2):91-100. PMID:25667044
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 33. Eid RC, Palumbo M, **Laidlaw TM**, Buchheit KM**, Cahill KN. A retrospective analysis of esophageal eosinophilia in patients with aspirin-exacerbated respiratory disease. *Allergy Clin Immunol Pract*. 2019 Apr;7(4):1338-1340. PMID: 30261317
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45. Mullur J, **Laidlaw TM**. Aspirin Allergy Labeling after Desensitization: Education, Communication and Patient Safety. J Allergy Clin Immunol Pract. 2020 Jun 22; [Epub ahead of print] PubMed PMID: 32585406; NIHMSID:NIHMS1607573.
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Other peer-reviewed publications

1. **Laidlaw TM**, Boyce JA. Cysteinyl Leukotriene Receptors, Old and New; Implications for Asthma. Clin Exp All 2012; 42(9):1313-20. PMID:22925317
2. **Laidlaw TM**, Boyce JA. Pathogenesis of Aspirin-Exacerbated Respiratory Disease and Reactions. Immunol Allergy Clin North Am 2013; 33(2):195-210. PMID:23639708
3. **Laidlaw TM**, Israel, E. Aspirin-exacerbated respiratory disease. In: UpToDate, Barnes PJ (Ed), UpToDate, Waltham, MA. 2012. Updated 2013, 2015, 2017
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[Non-peer reviewed scientific or medical publications/materials in print or other media](#)

Reviews, chapters, monographs and editorials

1. White AA, **Laidlaw TM**, Woessner K. Aspirin and NSAID Reactions: Diagnosis, Pathophysiology, and Management. In: Castells MC, editor. Anaphylaxis and Hypersensitivity Reactions. New York, NY: Springer Publishing Company; (2011). 107-26.
2. **Laidlaw TM**. Chapter 17 – Aspirin-Exacerbated Respiratory Disease. In: Khan D and Banerji A, editors. Drug Allergy Testing. Elsevier Health Sciences; (2017). 169-75.
3. Boyce JA, **Laidlaw TM**. Chapter 9 – Lipid Mediators of Hypersensitivity and Inflammation. (2018). Middleton's allergy: Principles and practice. ACCEPTED for publication in 2018
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Letters to the Editor

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2. **Laidlaw TM**. How Patient Experiences Should Change Our Approach to Treating Patients with Aspirin-Exacerbated Respiratory Disease. J Allergy Clin Immunol Pract 2015; 3(5):719-20. PMID: 26362552

**Formally Supervised Trainees and Faculty

[Narrative Report](#)

I am an allergist and translational investigator in the Division of Rheumatology, Immunology and Allergy at BWH, and focus on treating patients with aspirin-exacerbated respiratory disease (AERD) and on investigating the underlying pathophysiologic mechanisms of this complicated disease. Since joining the faculty in 2009, I have devoted the majority of my time to research in the area of AERD, with my remaining time dedicated to clinical service and teaching.

During my fellowship, I performed research training in the laboratory of Joshua A. Boyce, MD, where I focused on the pathogenesis of asthma and AERD, and the proinflammatory role of the platelet in this disorder. With the ability to tie in my clinical work with this translational research, we made significant progress; the results of my early research were published in *Blood* (2012). This preliminary data both formed the groundwork for my K23 award from NHLBI, which received a Priority Score of 10, and provided a basis for our U19 Asthma and Allergic Diseases Cooperative Research Center grant application, which was awarded by NIAID to study the pathophysiologic and therapeutic mechanisms of AERD. I was an investigator on the clinical trial funded by this award, which determined that inhibition of a platelet receptor improved symptom control in a subset of patients with AERD, and the results of which I published in *JACI* (2018). Data gathered during the award period of my K23 led to the successful funding of my first R01 in 2015, to investigate the proinflammatory role of prostaglandin D2

in AERD. I also designed and was the PI for a dietary clinical trial that showed therapeutic efficacy of a low-omega-6 and high-omega-3 dietary intervention for patients with AERD (*JACI IP*, 2018). My application for a second R01 has now been submitted, with which I aim to investigate the role of locally produced antibodies in the nasal polyps of patients with AERD.

My clinical practice, with one weekly outpatient session, continues to be focused on the evaluation and treatment of patients with AERD. To better capture this vital clinical data, I developed an AERD Patient Registry that now includes over 1400 patients worldwide.

As my research and findings have become more widely known in the field, I am now considered an international expert on the diagnosis and treatment of patients with AERD, and on the implementation of aspirin desensitization protocols. I've been invited to present my work and findings at academic institutions around the United States and in several foreign countries. In 2017 I was invited to present my research at a plenary session of the annual meeting of the American Academy of Asthma, Allergy and Immunology. To ensure that these new findings and updates about the disease are also available to patients with AERD, I launched an AERD-focused website in 2012 that we update regularly to include new relevant findings in the field, and over 2500 patients visit this site monthly.

Teaching and mentoring trainees in the Allergy/Immunology program is very important to me. I supervise fellows in both my outpatient allergy clinic and as an inpatient consult attending. I am also devoted to research teaching, and currently formally supervise one clinical research fellow in our division and one junior faculty member.

As a physician-scientist in translational investigation, I am active in both laboratory and clinical research, as well as patient care and training of fellows. I have learned from those around me that the combination of clinical practice, mentoring, and translational research is a difficult act of balance. With the tools and experience I gained during my years as a junior faculty member, I hope to continue my work as a dedicated member of the Harvard Medical School faculty.