

**Harvard Medical School
Curriculum Vitae**

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Name: Matthew R. Moll
Office Address: Channing Division of Network Medicine, Brigham and Women's Hospital, 181 Longwood Avenue, Room 451, Boston, MA 02115
Work Phone: 248-895-2716
Work Email: mmrconsultingllc@gmail.com
Work FAX: 617-732-7421

Education

2007	BS	Physiology	Michigan State University, Lansing, MI
2013	MD	Medicine	Pennsylvania State University College of Medicine, Hershey, PA
2020	MPH	Quantitative Methods	Harvard T.H. Chan School of Public Health (HSPH), Boston, MA

Postdoctoral Training

6/13-6/16	Intern/Resident	Internal Medicine	Boston University Medical Center, Boston, MA
7/16-6/20	Clinical Fellow	Pulmonary and Critical Care Medicine	Brigham and Women's Hospital (BWH), Boston, MA
7/18-6/21	Research Fellow	Channing Division of Network Medicine (Mentor: Michael H. Cho)	BWH

Faculty Academic Appointments

7/21-2/24	Instructor	Medicine	Harvard Medical School (HMS), Boston, MA
3/24-present	Assistant Professor	Medicine	HMS, Boston, MA

Appointments at Hospitals/Affiliated Institutions

1/2017-	Associate Physician	Pulmonary and Critical Care Medicine	Brigham and Women's Faulkner Hospital (BWFH), Jamaica Plain, MA
7/2019-	Associate Physician	Pulmonary and Critical Care Medicine	BWH
1/2019-1/2021	Moonlighter	Pulmonary and Critical Care Medicine	Mount Auburn Hospital, Cambridge, MA

7/2021-	Associate Scientist (Investigator)	Channing Division of Network Medicine	BWH
7/2022-	Associate	Pulmonary Medicine	Brookside Community Health Center, Boston, MA
8/2025	Physician	(Pulmonary Clinic)	
9/2022-	Physician	Pulmonary and Critical Care Medicine	VA Boston Healthcare System (VABHS), West Roxbury, MA

Other Professional Positions

2023-2025	Consultant	TriNetX	30 hours per year
2024-	Consultant	Sanofi	12 hours per year

Major Administrative Leadership Positions:

Local

2024	Organizer of COPDGene Clinical Trials Workshop	BWH, National Jewish Health
2024	Director, CDNM Systems Pharmacology Consortium	BWH
2025-	Local Site Investigator, CSP 595: “Service and Health Among Deployed Veterans (SHADE) study”	Department of Veterans Affairs, West Roxbury, MA
2025-	Local Site Investigator, Million Veteran Program (MVP) 074: “Chronic Lung Disease Phenotyping and Genomics in the Veterans Health Administration: Part 2”.	Department of Veterans Affairs, West Roxbury, MA

National

2024-	Organizer ATS Section on Genetics and Genomics Early Career Workshops on Respiratory Omics	ATS
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Committee and Other Professional Service

Local

2019	COPDGene 10-year Risk Score Committee	BWH, National Jewish Health, University of Alabama Birmingham
2020-2021	COVID-19 Critical Care Guidelines Committee	BWH
2020-2024	COPDGene COVID-19 -Omics Working Sub- Group	Multi-institution collaboration Chair
2020-2024	Collaborative Cohort of Cohorts for COVID- 19 (C4R) Multi-Omics Working Group	Multi-institution collaboration Member
2021-2024	BWH Pulmonary COVID-19 Recovery Center (CRC) Enrichment Working Group	BWH Member

2021-	Channing Division of Network Medicine Enrichment Committee	BWH Member
2021-	Morehouse-Channing Collaboration	BWH and Morehouse School of Medicine, Atlanta, GA Member
2024-	CDNM Systems Pharmacology Consortium	Multi-national collaboration Founder and Chair
2025	VA MVP Drug Discovery Core	Member

National

2025-	COPDGene Clinical Trials Working Group	Multi-institutional Co-Chair
2025	ATS Symposium “FROM CRADLE TO CHRONIC DISEASE: WHEN DEVELOPMENTAL PROGRAMMING PROMOTES DISEASE BEFORE YOU KNOW IT”, San Francisco, CA, May 18, 2025	Moderator
2025-	ATS Allergy, Immunity, and Inflammation Program Committee	Member
2025-2026	ATS Section on Genetics and Genomics Nominating Committee	Member
2026	ATS poster session “Next-Generation COPD Care: Tools, Teams, and Technology”, Orlando, FL, May 17, 2026	Moderator
2026	ATS Symposium “Omics to Action: Redesigning Trials and Care in Respiratory Medicine”, Orlando, FL, May 18, 2026.	Chair
2026	ATS Rapid Poster Session “COPD Omics”, Orlando, FL, May 20, 2026	Moderator

Professional Societies

2013-	American College of Physicians	Member
2015-	American Thoracic Society	Member
2021-		Member, Section on Genetics and Genomics Web Committee
2017-	American College of Chest Physicians	Member
2018-	American Society of Human Genetics	Member

Editorial Activities

Ad hoc Reviewer

American Journal of Human Genetics

American Journal of Respiratory and Critical Care Medicine

Annals of the American Thoracic Society

BMC Pulmonary Medicine

British Medical Journal Open Respiratory Research

Chest
Chronic Obstructive Pulmonary Disease
Clinical Medicine Insights: Circulatory, Respiratory and Pulmonary Medicine
Clinical Respiratory Journal
European Respiratory Journal
Journal of the American Medical Association (JAMA)
Nature Communications
Respiratory Research
Scientific Reports

Other Editorial Roles

2020-21	Hematology Section Editor	BWH COVID-19 Critical Care Guidelines
2023-	Editorial Board	BMC Pulmonary Medicine

Honors and Prizes

2013	Alpha Omega Alpha	Medical Honor Society
2015	Resident Quality Improvement Project Award	Boston University Medical Center
2015	Jr. Resident Teaching Award	Boston University Medical Center
2016	Ariel Weisman Teaching Award	Boston University Medical Center
2016	Sr. Resident Academic Day Best Research Poster Award	Boston University Medical Center
2018-2021	T32 Training Grant (HL007427)	National Institutes of Health
2021	Young Investigators Forum: 1 st Place in Clinical Sciences	National Jewish Health
2022	Department of Medicine Chair's Research Performance Award	BWH
2023	Section on Genetics and Genomics Early Career Investigator Achievement Award	American Thoracic Society
2025	Young Physician-Scientist Award	American Society for Clinical Investigation

Report of Funded and Unfunded Projects

Funding Information

Current

2022-2027	Title: Multi-omic Risk Prediction of Chronic Obstructive Pulmonary Disease in European and African-Ancestry Populations. NIH/National Heart, Lung, and Blood Institute (NHLBI) K08 HL159318 PI: Matthew R Moll (\$842,400 total)
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Early identification of individuals at high risk for chronic obstructive pulmonary disease (COPD) has been partially addressed by genetic risk scores and gene expression prediction models, though these tools are suboptimal in non-Europeans. The goal of the project is to develop multi-ancestry genetic and blood- and lung-based gene expression risk scores. The risk scores will be used to classify individuals and identify drugs for COPD. Supplement: \$75,000 for bioinformatician support.

- 2025-2026 Title: Single Cell Genetic Risk Scores and Target Identification for COPD Exacerbations. Genentech
PI: Matthew R Moll (\$85,000)
Chronic obstructive pulmonary disease (COPD) exacerbations are major drivers of associated morbidity and mortality. The goal of this project is to develop genetic risk scores that predict protein levels and COPD exacerbations, and to place these in a single cell context that will facilitate in vitro testing.
- 2026 Title: COPD Drug Discovery Using the Million Veteran Program and Network-Based Repurposing
Brigham and Women’s Hospital Evergreen Innovation Fund
PI: Matthew R Moll (\$120,000)
Chronic obstructive pulmonary disease (COPD) exacerbations are major drivers of associated morbidity and mortality. The goal of this project is leverage the Million Veteran Program (MVP) and state-of-the-art network analyses to identify genetically-supported drug targets for exacerbations.

Report of Local Teaching and Training

Teaching of Students in Courses

HMS Courses

2018-2021	Introduction to Clinical Medicine IN710M.23 2 nd yr medical students	HMS 2-hr session x 3 sessions/year
2018-2021	Practice of Medicine – pulmonary physical exam	HMS 2-hr sessions x 2 sessions/year
2023-	Global Clinical Scholars Research Program	HMS 2-hr sessions X 3 session/year

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

2020-	Introduction to Pulmonary Function Testing Pulmonary and Critical Care Fellows	BWH 1-hour lecture per year
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Clinical Supervisory and Training Responsibilities

2018-2023	Medical Intensive Care Unit (MICU) Overnight Attending Internal medicine residents	BWH 12 hours x 14 shifts per year
2019-2021	Mount Auburn Hospital ICU Attending Internal medicine residents	Mount Auburn Hospital 15-30 hours per month
2020-	Pulmonary Function Testing (PFT) Attending Supervising PFT reading by pulmonary fellows	BWH 5 hours x 2 weeks per year
2022-	Pulmonary Consult Attending	BWH

Pulmonary fellows and anesthesia residents 50 hours per week x 4 weeks per year

Laboratory and Other Research Supervisory and Training Responsibilities

2020- Research supervision BWH and Mount Auburn Hospital
Postdoctoral research fellows (average of 1- ~40 hours per year per trainee
2 fellows/year)
Residents (average 1-2 per year)

Mentored Trainees and Faculty

2020-2022 Aaron Hakim, MD / Clinical fellow, Division of Gastroenterology, Beth Israel Deaconess Medical Center
Career stage: Resident. *Mentoring role:* Research co-mentor. *Accomplishments:* Two first author publications.

2021-2023 Ann Tukupah, MD, MPH/ Research fellow, Division of Pulmonary and Critical Care Medicine, BWH
Career stage: Fellow. *Mentoring role:* Research co-mentor. *Accomplishments:* First author publication.

2021-present Jingzhou Zhang, MD/ Clinical fellow, Division of Pulmonary and Critical Care Medicine, Boston University Medical Center
Career stage: Resident. *Mentoring role:* Research co-mentor. *Accomplishments:* First author publication in *European Respiratory Journal* and *Journal of the American Medical Association*.

2022-2025 Sean Kalra, MD / Research fellow, Division of Pulmonary and Critical Care Medicine and Channing Division of Network Medicine, BWH
Career stage: Fellow. *Mentoring role:* Research co-mentor. *Accomplishments:* Oral presentation at the 2023 ATS International Conference, first author publication in *Chest*.

2024-present Taylor Baumann, MD / Research fellow, Division of Pulmonary and Critical Care Medicine and Channing Division of Network Medicine, BWH
Career stage: Fellow. *Mentoring role:* Research co-mentor. *Accomplishments:* Developed a database of 1,700 pediatric bronchiectasis cases, multiple first author papers under review.

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

No presentations below were sponsored by outside entities.

2022 TEECH Long COVID Multiple presentations
Center for Primary Care, Harvard Medical Five 1-hour sessions

	School	
2023	Long COVID Center for Primary Care, Harvard Medical School	One presentation and case presentations 1 hour lecture + three 40 minute cases
2025	HRSA TEECH Pulmonary for Primary Care Center for Primary Care, Harvard Medical School	Course co-director

Local Invited Presentations

No presentations below were sponsored by outside entities

2018	Music and Lung Function / Invited Lecture Pulmonary Rehab, BWH, Boston, MA	
2018	Best Cases of the Brigham and Women's MICU: DAH in pregnancy / Invited Lecture 3 rd Annual Advances in Pulmonary and Critical Care Medicine, BWH	
2019	Advances in Clinical Lung Research / Invited Lecture, Boston, MA Division of Pulmonary and Critical Care Medicine, BWH, Boston, MA	
2019	Using -Omics to define endotypes and phenotypes / COPDGene Workshop Leader Boston, MA (COPDGene is based at BWH)	
2019	Polygenic Risk Scores in COPD / Invited Lecture COPDGene, Boston, MA (COPDGene is based at BWH)	
2019	COPDGene Diagnosis and Progression Workshop – Machine Learning Mortality Prediction in COPD / Invited Lecture National Jewish Health, Denver, CO (COPDGene is based at BWH)	
2019	COPDGene Diagnosis and Progression Workshop – Polygenic Risk Scores / Invited Lecture National Jewish Health, Denver, CO (COPDGene is based at BWH)	
2021	-Omics-based Risk Scores in COPD / Grand Rounds Division of Pulmonary and Critical Care Medicine, BWH, Boston, MA	
2021	Now More Than Ever: Enrichment Workshop / Grand Rounds (Co-speaker with Ann- Marcia Tukpah, Bina Choi, Daniela Lamas), Boston, MA Division of Pulmonary and Critical Care Medicine, BWH	
2022	Clinical Work-in-progress: Polygenic and Transcriptional Risk Scores in COPD / Invited Lecture Division of Pulmonary and Critical Care Medicine, BWH, Boston, MA	
2023	Omics-based risk prediction in COPD / Invited Lecture VA Pulmonary Critical Care Section, VABHS, West Roxbury, MA	
2023	Medicine Forum, VA Department of Medicine / invited pulmonary expert West Roxbury, MA (August 29, 2023)	
2023	Brookside Community Health Center Providers' Meeting: Long COVID and Asthma Updates / Invited Lecture Virtual, Boston, MA	
2024	Medicine Forum, VA Department of Medicine / invited pulmonary expert West Roxbury, MA (July 9, 2024)	
2024	COPDGene Workshop: Network proximity-based drug repurposing in COPD / invited lecture	

Denver, CO
 2025 All of Us Workshop for Nurses Health Study
 2025 Drug Discovery Core, Million Veterans Program, West Roxbury, MA (October 28, 2025)
 2025 COPDGene Meeting: Genetics of FEV1 decline / invited lecture
 San Francisco, CA
 2025 Medicine Forum, VA Department of Medicine / invited pulmonary expert
 West Roxbury, MA (July 1, 2025 and December 2, 2025)
 2026 Mass General Hospital Tobacco Research and Treatment Center (February 5, 2026)

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

No presentations below were sponsored by outside entities

Regional

2017 ECMO / Invited Lecture
 Internal Medicine Residency, Boston University Medical Center, Boston, MA
 2019 ECMO / Invited Lecture
 Internal Medicine Residency, Boston University Medical Center, Boston, MA
 2021 COVID-19 Racial/Ethnic Inequities in Acute Care and Critical Illness Survivorship /
 Invited Co-Speaker
 Boston University Social Justice Forum, Boston, MA
 2023 Massachusetts Community Health Centers Asthma Educators' Collaborative: The
 impact of Long COVID and Asthma / Invited lecture
 Virtual, Boston, MA

National

2021 CHARGE meeting – FEV1 decline / Invited Lecture
 Research Triangle Park, NC
 2021 Protein Risk Scores for COPD Mortality / Invited Lecture (Virtual), National Jewish
 Health, Denver, CO
 2021 Updates in Genetic and Epigenetics from the COPDGene Study / Invited Lecture
 American Thoracic Society Annual Conference (Virtual), San Diego, CA
 2023 Omics risk scores and drug repurposing in chronic lung disease / Invited Lecture
 University of Colorado, Department of Epidemiology, Denver, CO (Virtual)
 2023 Omics for risk prediction and systems pharmacology / Invited Lecture
 ATS Section on Genetics and Genomics Meeting, Washington, DC
 2023 Imre Noth's Idiopathic Pulmonary Fibrosis Laboratory: Omics for risk prediction and
 systems pharmacology / invited lecture. July 26, 2023.
 University of Virginia, Charlottesville, VA (Virtual)
 2024 Genomics of COPD / invited lecture April 11, 2024.
 New York State Thoracic Society meeting, Syracuse, NY
 2024 COPD Genetics / invited lecture.
 American Thoracic Society Annual Conference, San Diego, CA
 2024 Cleveland Clinic COPD meeting: Genetics and Omics in COPD Precision Medicine /

- invited lecture. August 15, 2024.
- 2025 Genetics and Omics in COPD Precision Medicine / invited lecture
University of Alabama, Birmingham, AL. February 20, 2025.
- 2025 Polygenic risk scores in chronic lung disease / invited lecture (Virtual)
ATS Clinical Problems Assembly Webinar, New York City, NY. February 28, 2025.
- 2025 Genetics and Omics in COPD Precision Medicine / invited lecture (Virtual)
New York University, New York City, NY. March 11, 2025.
- 2025 The Role of AI, ML, and Genomics in Respiratory Health
ATS invited lecture, San Francisco, CA. May 18, 2025.
- 2025 Landscape of COPD Therapeutics / invited lecture
Upstream Bio, Nashville, TN, July 18, 2025.
- 2025 Genomics for Precision Medicine in Chronic Lung Diseases / invited lecture (Virtual)
University of Washington, Seattle, WA. November 6, 2025.
- 2026 Society of Epidemiological Research Multi-Omics Symposium / invited lecture.
Virtual. February 4, 2026.
- 2026 ATS Section on Genetics and Genomics Journal Club Discussant / invited panelist
and presenter. Virtual. February 9, 2026.
- 2026 NHLBI Workshop “Defining Lung Health Through the Lifespan” Workshop; invited
lecture entitled “How can genetic risk and multi-omic integration improve prediction
of lung health trajectories?”. Virtual. March 4, 2026.
- 2026 Omics for COPD Drug Repurposing, Cleveland Clinic, Cleveland, OH. Virtual.
March 30, 2026.
- 2026 Omics biomarkers for Alpha-1 Antitrypsin Deficiency / invited lecture. Coral Gables,
FL. April 17, 2026.
- 2026 (scheduled) Genetics of COPD / invited lecture (post-graduate course)
American Thoracic Society Annual Conference, Orlando, FL, May 15, 2026.
- 2026 (scheduled) Deep Learning to Identify Druggable Targets for COPD / invited lecture
FASEB Lung Conference, Washington D.C., July 2026. Date TBD.

National Abstract Oral Presentations

- 2021 Development of a blood-based transcriptional risk score for chronic obstructive
pulmonary disease
National Jewish Health Young Investigator’s Forum, Denver, CO

International

- 2022 FEV1 decline / Invited Lecture
CHARGE eGFR Meeting, Freiburg, Germany (Virtual)
- 2023 A polygenic risk score for idiopathic pulmonary fibrosis and interstitial lung
abnormalities / Invited Lecture
7th Idiopathic Pulmonary Fibrosis Summit, Boston, MA
- 2024 Precision Approaches in COPD / invited lecture. March 28, 2024.
COPD-iNET, Munich, Germany (Virtual)
- 2025 Genomics and AI in COPD Precision Medicine / invited lecture
Queen’s University, Kingston, ON, Canada. June 9, 2025
- 2025 Emerging Biologics for Obstructive Lung Diseases / invited lecture

- 2025 University of Ottawa, Ottawa, ON, Canada. June 19, 2025.
Genomics, AI, and Precision Medicine for Chronic Lung Diseases / invited lecture
University of Ottawa, Ottawa, ON, Canada. June 19, 2025.
- 2025 Genetics of susceptibility and prognosis in pulmonary fibrosis / Invited Lecture
9th Idiopathic Pulmonary Fibrosis Summit, Boston, MA

Report of Clinical Activities and Innovations

Current Licensure and Certification

- 2016- Massachusetts Medical License (Full)
2016- American Board of Internal Medicine (ABIM)
2018- ABIM – Pulmonary Disease
2019- ABIM – Critical Care Medicine

Practice Activities

2019-2021	ICU	Mount Auburn Hospital Medical/Surgical ICU	Fourteen 15 hour shifts per year
2021-2023	ICU	BWH Medical ICU	Fourteen 12-hour shifts per year
2021-	Pulmonary function testing (PFT) reading	BWH Division of Pulmonary and Critical Care	1 hour per day for ten days per year
2022-	Pulmonary consult attending	BWH Division of Pulmonary and Critical Care	4 weeks per year
2022-	Ambulatory care	Brookside Community Health Center	2 four-hour sessions per month
2022-	Ambulatory care and Medical ICU attending	VABHS West Roxbury	4 four-hour sessions per month and 4 weeks per year of ICU

Report of Teaching and Education Innovations

Point of Care Ultrasound Curriculum (2015)	Resident course co-developer for a curriculum in point of care ultrasound for internal medicine residents. We developed a novel point-of-care ultrasound curriculum that covered ultrasound physics and "knobology", vascular access, cardiac echo, and lung ultrasound. The course was implemented and continues to run. Resident knowledge improved immediately after the course and persisted at 6 months. We presented these data at CHEST in 2015.
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Report of Education of Patients and Service to the Community

Activities

2011	Medical student volunteer, Lebanon Free Clinic, Lebanon, PA
2015	Resident volunteer, Indian Health Services, Shiprock, NM
2016-2018	JazzBoston / Brigham and Women's Beantown Jazz Festival / Good Music = Good Health, Community Outreach Program
2018-2019	Volunteer, Friends for Boston's Homeless: Life Skills Workshops
2020-2024	Physician advisor for COVID-19 precautions, St Stephens Youth Programs, B-SAFE program

Educational Material for Patients and the Lay Community

No presentations below were sponsored by outside entities.

Books, Monographs, Articles and Presentations in Media

Harvard T. H. Chan School of Public Health Magazine	I wrote a piece in the Harvard T. H. Chan School of Public Health Magazine which was a special issue (Fall 2020) dedicated to stories from the COVID-19 pandemic. I recounted my experiences as a pulmonary critical care physician and public health student/researcher on the front lines.
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Recognition

Michigan State University College of Natural Sciences Profile	Michigan State University interviewed me and wrote a profile about my academic career since obtaining my undergraduate degree (https://natsci.msu.edu/natsci-profiles/matt-moll-looking-back-giving-forward.aspx)
Doximity ATS Exclusive	Doximity wrote an Op-Med regarding my work using machine learning to predict mortality in COPD patients which was presented at the ATS 2019 International Conference (https://opmed.doximity.com/articles/ats-exclusive-interview-how-a-pulmonologist-uses-machine-learning-to-predict-copd-mortality).
Mass General Brigham	Mass General Brigham did a spotlight on precision approaches in coronary artery disease and COPD and featured my work.
Sitka	Sitka did a profile on my work in telehealth and my COPD research (https://www.trustsitka.com/content/specialist-pulmonologist-matthew-moll).
MedPage Today	MedPage asked me to comment on a recent study in the American Journal of Respiratory and Critical Care Medicine (https://www.medpagetoday.com/resource-centers/copd-peer-perspectives/new-look-copd-heterogeneity/5213)
VuMedi	VuMedi reached out to talk about precision approaches in COPD (https://www.vumedi.com/video/precision-approaches-in-copd/)

Report of Scholarship

Peer reviewed publications in print or other media

Research investigations

1. Andre C, Froehlich JE, **Moll MR**, Benning C. A Heteromeric Plastidic Pyruvate Kinase Complex Involved in Seed Oil Biosynthesis in Arabidopsis. *Plant Cell*. 2007;19(6): 006-2022. PMID: 17557808. PMCID: PMC1955724.
2. Slade JM, Carlson JJ, Forbes SC, Stein NJ, **Moll MR**, Wiseman RW, Meyer RA. The post-prandial increase in blood triglycerides has no direct effect on the brain BOLD response. *Hum Brain Mapp*. 2009; 30(3):749-56. PMID: 18266244. PMCID: PMC6871241.
3. Howrylak JA, **Moll MR**, Weiss ST, Raby BA, Wu W, Xing EP. Gene Expression Profiling of Asthma Phenotypes Demonstrates Molecular Signatures of Atopy and Asthma Control. *J Allergy Clin Immunol*. 2016;137(5):1390-1397.e6. PMID: 26792209. PMCID: PMC4860055.
4. Nelson AM, Dispenza MC, Cong Z, **Moll MR**, Gilliland KL, Thiboutot DM. Selective Rho Kinase Inhibitor Allows for Expansion of Human Primary Sebocytes In Vitro. *J Invest Dermatol*. 2016;136(6):1278-80. PMID: 26934599.
5. **Moll, M**, Christmann RB, Zhang Y, Whitfield ML, Wang YM, Rice L, Stratton E, Lafyatis R, Farber HW. Patients with systemic sclerosis-associated pulmonary arterial hypertension express a genomic signature distinct from patients with interstitial lung disease. *J Scleroderma Relat Disord*. 2018;3(3):243-248. PMID: 30498788. PMCID: PMC6258027.
6. Lowe KE, Regan EA, Anzueto A, ... **Moll M** (72nd of 113 authors) ...Crapo, JD. COPDGene[®] 2019: Redefining the Diagnosis of Chronic Obstructive Pulmonary Disease. *Chronic Obstr Pulm Dis*. 2019;6(5):384–399. PMID: 31710793. doi:10.15326/jcopdf.6.5.2019.0149. PMID: 31710793. PMCID: PMC7020846.
7. LaFon DC, Bhatt SP, Labaki WW, Rahaghi FN, **Moll M**, Bowler RP, Regan EA, Make BJ, Crapo JD, San Jose Estepar R, Diaz AA, Silverman EK, Han MK, Hobbs BD, Cho MH, Washko GR, Dransfield MT, Well JMs; COPDGene Investigators. Pulmonary artery enlargement and mortality risk in moderate to severe COPD: results from COPDGene. *Eur Respir J*. 2020;55(2):1901812. doi:10.1183/13993003.01812-2019. PMID: 31772001. PMCID: PMC7179358.
8. Dhanani M, Hou A, **Moll M**, Schembri F. Introduction of an academic medical center's point-of-care ultrasound curriculum to medical residents at a community-based teaching hospital. *J. Community Hosp Intern Med Perspect*. 2020;10(2):93-98. PMID: 32850043. PMCID: PMC7425611.
9. **Moll M**, Regan EA, Hokanson J, Lutz S, Silverman EK, Crapo JD, Make BJ, DeMeo DL. The Association of Multiparity with Lung Function and Chronic Obstructive Pulmonary Disease-related Phenotypes. *Chronic Obstr Pulm Dis* 2020;7(2):86-98. PMID: 32324980. PMCID: PMC7454017.
10. **Moll M**, Qiao D, Regan EA, Hunninghake GM, Make BJ, Tal-Singer R, McGeachie MJ, Castaldi PJ, San Jose Estepar R, Washko GR, Wells JM, LaFon D, Strand M, Bowler RP, Han MK, Vestbo J, Celli B, Calverley P, Crapo J, Silverman EK, Hobbs BD, Cho MH. Machine Learning and Prediction of All-Cause Mortality in COPD. *Chest*. 2020;158(3):952-964. doi: 10.1016/j.chest.2020.02.079. PMID: 32353417. PMCID: PMC7478228.
11. Ghosh, AJ, **Moll M**, Hayden LP, Bon J, Regan EA, Hersh CP; COPDGene Investigators. Vitamin D deficiency is associated with respiratory symptoms and airway wall thickening in smokers with and without COPD: a prospective cohort study. *BMC Pulm Med*. 2020;20(1):123. PMID: 32366316. PMCID: PMC7199369.
12. Abston E, **Moll M**, Hon S, Govender P, Berman J, Farber HW. Long-Term Outcomes of

- Epoprostenol Therapy in Sarcoid Associated Pulmonary Hypertension. *Sarcoidosis Vasc Diffuse Lung Dis.* 2020;37(2): 184-191. PMID: 33093782. PMCID: PMC7569545.
13. **Moll M***, Sakornsakolpat P*, Shrine N, Hobbs BD, DeMeo DL, John C, Guyatt AL, McGeachie MJ, Gharib SA, Obeidat M, Lahousse L, Wijnant SRA, Brusselle G, Meyers DA, Bleecker ER, Li X, Tal-Singer R, Manichaikul A, Rich SS, Won S, Kim WJ, Do AR, Washko GR, Barr RG, Psaty BM, Bartz TM, Hansel NN, Barnes K, Hokanson JE, Crapo JD, Lynch D, Bakke P, Gulsvik A, Hall IP, Wain L, International COPD Genetics Consortium; SpiroMeta Consortium; Weiss ST, Silverman EK, Dudbridge F, Tobin MD*†, Cho MH*†. Chronic Obstructive Pulmonary Disease and Related Phenotypes: polygenic risk scores in Population-based and Case-control Cohorts. *Lancet Respir Med.* 2020;8(7):696-708. PMID: 32649918. PMCID: PMC74229152.
 - Accompanying editorial: Stolz D. Chronic obstructive pulmonary disease risk: does genetics hold the answer? *Lancet Respir Med.* 2020;8(7):653-654. doi: 10.1016/S2213-2600(20)30191-0.
 14. Strand M, Austin E, **Moll M**, Pratte KA, Regan EA, Hayden LP, Bhatt SP, Boriek AM, Casaburi R, Silverman EK, Fortis S, Ruczinski I, Koegler H, Rossiter HB, Occhipinti M, Hanania NA, Gebrekristos HT, Lynch DA, Kunisaki KM, Young KA, Sieren JC, Ragland M, Hokanson JE, Lutz SM, Make BJ, Kinney GL, Cho MH, Pistolesi M, DeMeo DL, Sciruba FC, Comellas AP, Diaz AA, Barjaktarevic I, Bowler RP, Kanner RE, Peters SP, Ortega VE, Dransfield MT, Crapo JD. A Risk Prediction Model for Mortality Among Smokers in the COPDGene® Study. *Chronic Obstr Pulm Dis.* 2020;7(4):346-361. PMID: 32877963. PMCID: PMC7883903.
 15. **Moll M**, Zon R, Sylvester K, Chen E, Cheng V, Connell N, Fredenburgh L, Baron R, Cho MH, Woolley A, Connors J. VTE in ICU Patients with COVID-19. *Chest.* 2020;158(5):2130-2135. PMID: 32710891. PMCID: PMC7674987.
 16. McElvaney OJ, Hobbs BD, Qiao D, McElvaney OF, **Moll M**, McEvoy NL, Clarke J, O'Connor E, Walsh S, Cho MH, Curley GF, McElvaney NG. A linear prognostic score based on the ratio of interleukin-6 to interleukin-10 predicts outcomes in COVID-19. *EBioMedicine* 2020;61:103026. Corrigendum in: *EBioMedicine.* 2020;62:103116. PMID: 33039714. PMCID: PMC7543971.
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Narrative Report

I am an Assistant Professor of Medicine at HMS, an Associate Physician at Brigham and Women's Hospital in the Division of Pulmonary and Critical Care, an Associate Scientist (Investigator) in the Channing Division of Network Medicine, and a Physician in the VA Boston Healthcare System. My area of excellence is Investigation. My long-term career focus is in early identification and therapeutic intervention for individuals at high risk for chronic obstructive pulmonary disease (COPD) and related outcomes.

COPD is a leading cause of death in the U.S., yet the course of COPD is highly variable, and it is challenging to predict which patients are most likely to die. Therefore, my early work as a postdoctoral fellow involved developing a machine learning-based mortality prediction model for COPD. This work led to a first-author publication in *Chest*. In addition, this work was recognized at the American Thoracic Society (ATS) International Conference with an abstract scholarship in 2019.

While COPD primarily develops in the context of cigarette smoking, only a minority of smokers develop COPD. Genetic factors partially explain this variable susceptibility. To address this issue, I created a polygenic risk score (PRS) based on the largest genome-wide association studies of lung function. This PRS was highly predictive of COPD and associated with computed tomography imaging phenotypes and patterns of lung growth and decline thought to be important in COPD pathogenesis. These findings were published in the *Lancet Respiratory Medicine* and were recognized at the ATS 2020 International Conference with an abstract scholarship. I then led a series of studies leveraging the PRS to answer clinically important questions related to COPD genetics; we demonstrated that family history only captures about 12% of the genetic risk captured by the PRS (*BMJ Open Respiratory Research*), genetic-by-smoking interaction is associated with lower lung function (*JAMA Network Open*), and the PRS is associated with earlier age of COPD diagnosis (*European Respiratory Journal*). I then demonstrated that a transcriptional risk score for COPD could predict COPD and COPD progression as defined by FEV₁ decline even after accounting for genetic risk. These findings were published in the *American Journal of Respiratory and Critical Care Medicine* and were recognized at the ATS 2021 International conference with an abstract scholarship. My work in genomics-based risk prediction led to an invited presentation entitled "Updates in Genetics and Epigenetics from the COPD Gene Study" at the ATS 2021 conference. More recently, I have received the ATS Section on Genetics and Genomics Early Career Investigator Achievement Award and have been invited to present an overview of my research program. I additionally used polygenic and transcriptional risk scores to identify subgroups of individuals with accelerated FEV₁ decline, about 5 times more than in the overall cohort, and identified drug repurposing agents to target this subtype. The results were published in *eBioMedicine*. We also demonstrated that the polygenic risk score can be used to identify undiagnosed COPD cases in the community, and this manuscript was published in the *Journal of the American Medical Association*.

I have remained active in clinical medicine and medical education. I have attended in the medical intensive care units at BWH, BWFH, and Mount Auburn Hospital. In these roles, I supervised and taught fellows and residents while caring for critically ill patients; I also had a severe asthma clinic at Brookside community health center from 2022-2025. Currently, I attend on the pulmonary consult service at BWH and in the MICU at Veteran Affairs (VA) hospital in West Roxbury and have a weekly clinic at the VA in Brockton, MA. I served in the COVID-19 intensive care units and provided pulmonary consultations during the pandemic. I taught pulmonary clinical skills to HMS students for 7 years at BWH.

In 2025, I increased my time at the Veterans Affairs (VA) Department of Medicine. I am the local site investigator for two VA studies, one investigating the effects of deployment-related toxic exposures (CSP

#595) and a Million Veteran Program (MVP) study. I also serve as a co-investigator and supervise study visits for two additional VA studies. I have joined the MVP drug discovery core and am working to define pulmonary phenotypes in MVP. I also obtained seed funding (Evergreen Innovation Fund) to jump start CDNM-VA collaborations, using MVP and network analysis to find drug targets for COPD exacerbations.

I view mentorship and leadership as essential aspects of being a physician-scientist. During my postdoctoral fellowship and early faculty appointment period, I have mentored two residents and two fellows in genomics-related projects. One resident published 2 first author manuscripts and the second resident published 1 first author manuscript. One fellow has published a first author manuscript in *Chest* and is preparing to submit another manuscript. Another fellow has published a first author manuscript in *ERJ* and *JAMA* with me. Currently, I am serving as a junior mentor to a third fellow in the Channing Division of Network Medicine who now has multiple first author publications in submission. I have also mentored a bioinformatician who is now applying for a PhD program and has multiple pending first author publications.

In summary, I am committed to improving the lives of pulmonary patients through my work as a physician, researcher, mentor, and teacher.