

Megan N. Ballinger, Ph.D.

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Current Position

Associate Professor, Department of Internal Medicine
Division of Pulmonary, Critical Care and Sleep Medicine
The Ohio State University Wexner College of Medicine
Columbus, OH 2022-present

Associate Professor (Courtesy Appointment),
Department of Microbial Infection and Immunity
The Ohio State University Wexner College of Medicine
Columbus, OH 2022- present

Education

Post-doctoral Research Fellowship
University of Michigan
Ann Arbor, MI 2007-2011

PhD in Immunology
Program in Biomedical Sciences
University of Michigan
Ann Arbor, MI 2002-2007

Bachelors in Science (Honors)-Magna Cum Laude
Major: Biological Sciences; Minor: Biochemistry
University of Toledo
Toledo, OH 1998-2002

Previous Academic Appointments

Assistant Professor (Courtesy Appointment),
Department of Microbial Infection and Immunity
The Ohio State University Wexner College of Medicine
Columbus, OH 2021-2022

Assistant Professor, Department of Internal Medicine
Division of Pulmonary, Critical Care and Sleep Medicine
The Ohio State University Wexner College of Medicine
Columbus, OH 2017- 2022

Research Assistant Professor
Department of Internal Medicine
Division of Pulmonary, Critical Care and Sleep Medicine
The Ohio State University Wexner College of Medicine
Columbus, OH 2014-2017

Lecturer
Department of Internal Medicine
Division of Pulmonary, Critical Care and Sleep Medicine
University of Michigan College of Medicine
Ann Arbor, MI 2012-2014

Professional Development

AHA Leaders Academy American Heart Association	9/2017
Faculty Leadership Institute Ohio State University: FAME	9/2023-present

Professional Memberships and Activities

Society for Toxicology	2023-present
American Association of Immunologist	2018-present
American Thoracic Society	2007-present
• All PhD working group chair	11/2023-present
• Publication Policy Committee	5/2022-present
• ATS nominating Committee	7/2021-5/2022
• Respiratory Cell and Molecular Biology Program Committee Member	5/2021-present
• Designing Future ATS Conference Task Force Group Leader	1/2021-5/2022
• Program and Evaluation Committee Member	5/2019-5/2022
• Chair of Science and Innovation Planning Committee	5/2017-5/2018
• Allergy, Immunology and Inflammation Assembly Nominating Committee Member	5/2017-5/2020
• Member in Training and Transition Committee Member	5/2016-5/2021
• Co-Chair of Allergy, Immunology and Inflammation Assembly Early Career Professionals	12/2014-12/2017
• Allergy, Immunology and Inflammation Assembly Planning Committee Member	5/2010-5/2016
• Allergy, Immunology and Inflammation Assembly Membership Committee Member	6/2009-5/2017
American Association for the Advancement of Science	2008-2011

Editorial Board Appointments

Associate editor:

American Journal of Respiratory Cell and Molecular Biology	2023-present
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Editorial board member

American Journal of Physiology-Lung Cellular and Molecular Physiology	2021-present
American Journal of Respiratory Cell and Molecular Biology	2019-present

Ad hoc reviewer

American Journal of Reparatory Cell and Molecular Biology, American Journal of Respiratory and Critical Care Medicine, American Journal of Physiology-Lung Cellular and Molecular Physiology, Bioengineering, BMC Pulmonary Medicine, Biomolecules, Cell Biology and Toxicology, Cell Death & Disease, Clinical Experimental Pharmacology and Physiology, Epigenetics, European Respiratory Journal, Experimental Gerontology, FASEB, Frontiers in Medicine, Infection and Immunity, Journal of Biological Chemistry, Journal of Clinical Investigation, JCI-Insight, Journal of Leukocyte Biology, Journal of Immunology, Mucosal Immunology, Nature Communications, PLOS ONE, Science, Scientific Reports, Toxicology and Applied Pharmacology, Toxicology Sciences

Committee Assignments and Administrative Services

University service:

Internal Medicine Promotion and Tenure Committee Department of Internal Medicine	12/2023-present
Ad Hoc Grant Reviewer OSU Physician Scientist Retention in Research Support	5/2023
Ad Hoc Grant Reviewer IDI Seed Grant	5/2023

University Senate and Faculty Council Alternative Member	9/2023-present
Co-chair WIMS CommUNITY Big10 Associates External Task Force The Ohio State University Wexner College of Medicine	3/2023-present
DHLRI Director Search Committee Member The Ohio State University Wexner College of Medicine	3/2022-4/2022
Ad Hoc Grant Reviewer DHLRI Synergy Awards	3/2022
Department of MI&I: Diversity, Equity, and Inclusion Executive Committee Member The Ohio State University Wexner College of Medicine	1/2022-present
Biomedical Sciences Undergraduate Major Admission Committee Member The Ohio State University Wexner College of Medicine	1/2022-present
Women in Medicine and Science Executive Committee Member The Ohio State University Wexner College of Medicine	4/2020-present
Chair of OSU Pulmonary Research Recruitment Committee The Ohio State University Wexner College of Medicine	12/2019-5/2021
Biomedical Sciences Graduate Students Admission Committee Member The Ohio State University Wexner College of Medicine	10/2019-present
Medical Scientist Training Program Admission Committee Member The Ohio State University Wexner College of Medicine	9/2019-present
Women in Medicine and Science Media Subcommittee (Co-Chair 4/2020-2/2023) The Ohio State University Wexner College of Medicine	4/2019-2/2023
Ad Hoc Grant Reviewer OSU Davis Bremer/KL2 study section	2/2019
Cardiology Division Director Search Committee Member The Ohio State University Wexner College of Medicine	1/2019-6/2019
College of Medicine Elections and Appointment Committee Member The Ohio State University Wexner College of Medicine	5/2018-8/2020
Co-Chair of Comprehensive Transplant Center Biorepository Scientific Advisory The Ohio State University Wexner College of Medicine	7/2017-present
Co-chair of Pulmonary Research Conference Committee The Ohio State University Wexner College of Medicine	5/2017-present
Davis Heart and Lung Research Institute Education Committee Member The Ohio State University Wexner College of Medicine	5/2015-12/2020
Pulmonary and Critical Care Program and Evaluation Committee Member The Ohio State University Wexner College of Medicine	8/2014-present
Ohio State Medical School College of Medicine Admission Committee The Ohio State University Wexner College of Medicine	7/2014-5/2020
President's Advisory Committee on Women's Issue Committee Member University of Michigan College of Medicine	9/2013-1/2014

President of the University of Michigan Post-doctoral Association University of Michigan College of Medicine	6/2010-1/2012
University of Michigan Post-doctoral Association Board Member University of Michigan College of Medicine	1/2009-1/2012
Graduate Student Affairs Committee Member for Program in Immunology University of Michigan College of Medicine	9/2008-10/2013
Chair of Immunology Post-doctoral Association University of Michigan College of Medicine	6/2008-10/2013
Chair of Immunology Student Association University of Michigan College of Medicine	4/2005-7/2006
<u>Non-University service:</u>	
Ad Hoc Reviewer NIH ZRG1 Fellowship Review panel F05-Q(20)L	11/2023
Ad Hoc Reviewer Science Foundation of Ireland	10/2023
Ad Hoc Reviewer UK Wellcome Trust	9/2023
Ad Hoc Member PRMRP Programmatic Review Committee Department of Defense	8/2023
Ad Hoc Reviewer NIH-NHLBI ZRG1 RCCS-Q(03) M	3/2023
Ad Hoc Reviewer University of California-Tobacco-Related Disease Research Program	2/2023
Ad Hoc Reviewer Medical Research Council (United Kingdom Research and Innovation)	9/2022
Ad Hoc Reviewer NIH-ONES-NIEHS ZES LWJ-S	7/2022
Ad Hoc Reviewer NIH-LIRR study section	2/2022
Ad Hoc Reviewer Canada Foundation for Innovation	11/2021
Ad Hoc American Heart Association Grant Reviewer Virology & Disease #1 (Immunology) Peer Review Committee	11/2021
Ad Hoc NIH Grant Reviewer NIH-NHLBI Special Emphasis Panel ZRG1-CVRS-R(3)	3/2021
Ad Hoc NIH Grant Reviewer NIH-NHLBI SBIR/STTR CVRS-J(11)	11/2020
Ad Hoc NIH Grant Reviewer NIH-NHLBI Special Emphasis Pane CVRS-N 03	7/2020

Ad Hoc NIH Grant Reviewer NIH-NHLBI SBIR/STTR CVRS-J(11)B	7/2020
Ad Hoc Grant Reviewer French National Agency	6/2020
Ad Hoc Grant Reviewer NIH-NHLBI Special Emphasis Panel ZRG1 CVRS-N (03)M	3/2020
Ad Hoc NIH Grant Reviewer NIH-NHLBI Special Emphasis Panel ZRG1-CVRS	12/2019
Ad Hoc American Heart Association Grant Reviewer Lung and Cardiac Arrest Fellowship Committee	10/2019, 9/2018
Early Career NIH Grant Reviewer NIH-LCMI study section	2/2017

Educational Activities

Undergraduate, graduate and professional courses taught

BSGP 8050 Lecturer, OSU	Summer 2023
Pathology 7847 Lecturer, OSU	Spring 2022
Mastering the Biomedical Science Literature II (BIOMSCI 2892H) Lecturer, OSU	Autumn 2021
Honors Research Experience I Course (BIOMSCI1 3891H) Co-course director, OSU	Autumn 2021, Autumn 2023
Integrated Biomedical Science Senior Seminar (BSGP 7972) Co-course director, OSU	Spring 2021, Autumn 2020, Spring 2020, Autumn 2019
Signature Program in Translation Science Curriculum (BSGP 8800.01) Lecturer for Pulmonary Immunology and Inflammation, OSU	Autumn 2018, 2017, 2016, 2015

Curriculum and Workshop Development

Co-Chair for New Faculty Bootcamp American Thoracic Society (online due to COVID)	4/2021-5/2021
Co-Chair for Fellows-to-Faculty Bootcamp American Thoracic Society (Dallas, TX)	5/2019

Continuing Education and Instructional Lectures:

Building collaborations across institutions Faculty member for New Faculty Bootcamp (American Thoracic Society, Washington DC)	5/2023
Career Exploration Speed Networking Session Panelist for Society of Toxicology (Nashville, TN)	3/2023
Inhalation and Respiratory Specialty Section Mentoring Event Panelist for Society of Toxicology (Nashville, TN)	3/2023

Student Scholars Bench to Bedside: Asthma Case study Facilitator for American Thoracic Society (San Francisco, CA)	5/2022
Parenting in Medicine and Science Panelist for American Thoracic Society (San Francisco, CA)	5/2022
Goal setting, Building collaborations, Mentoring Do's and Don'ts The Challenging Mentor, Negotiating for Success Faculty member for New Faculty Bootcamp (American Thoracic Society, San Francisco, CA)	5/2022
Redefining Failure in Academic Careers Panelist for American Thoracic Society Core Training Session (Online due to COVID)	1/2022
RCMB online symposium: Potpourri of pulmonary fibrosis Organizer and Moderator, American Thoracic Society (Online due to COVID)	12/2021
Faculty Perspective on Postdoctoral Research Fellowship at OSU Panelists for Office of Postdoctoral Studies, OSU	4/2021
Immunology Program Alumni Career Development Panel Panelists for Graduate Program in Immunology, University of Michigan	3/2021
Importance of Professional Societies in Career Development Panelist for Pulmonary and Critical Care Fellowship program, OSU	1/2021, 1/2022 1/2023
Pulmonary Fibrosis Support Group Meeting: Research Update Panelists for Pulmonary Fibrosis Society, OSU	12/2020
Gender and Diversity Barriers in Science Organizer and Facilitator for Davis Heart and Lung Institute Research Day, OSU	10/2020
Forming relationships: Patients, Advocates and Scientists Working Together as a Team Organizer and Panelists for American Thoracic Society (online due to COVID)	7/2020
Finding a Good Mentor Panelist for Pulmonary and Critical Care Fellowship program, OSU	1/2020, 1/2021, 1/2022, 1/2023
Introduction to Laboratory Research Part 1 & 2 Lecturer for Pulmonary and Critical Care Fellowship Program, OSU	1/2020, 1/2021, 1/2022, 1/2023
DHLRI Connector Series: Updates from the Fibrosis Working Group Davis Heart and Lung Research Institute Work in Progress, OSU	11/2019
Postdoctoral Research Recruitment: Faculty perspective Panelists for Office of Postdoctoral Studies, OSU	10/2019
Tips and Tricks for getting the most out of ATS2019 Organizer and panelist for American Thoracic Society (Dallas, TX)	5/2019
Bridging the Gap: PhD Scientists in the Science and Innovative Center Organizer and panelist for American Thoracic Society (Dallas, TX)	5/2019
Postdoctoral Research Recruitment: Faculty perspective Panelists for Office of Postdoctoral Studies, OSU	5/2019
How I got here: keys to picking a good mentor Panelist for Pulmonary and Critical Care Fellowship program, OSU	1/2019
DHLRI Connector Series: Fibrosis across Multiple Organs	11/2018

Davis Heart and Lung Research Institute Work in Progress, OSU	
Updates with the Comprehensive Transplant Biorepository Speaker at Department of Surgery Grand Rounds, OSU	10/2018
Using Social Media as a Tool not just a Toy Organizer and panelist for American Thoracic Society (San Diego, CA)	5/2018
How to Survive in a Lean Funding Climate Panelist for Faculty, Achievement, Mentoring and Engagement, OSU	5/2018
Strategies for Fellows and Early Career Faculty to get closer to Work-Life Balance Organizer and panelist for American Thoracic Society (Washington DC)	5/2017
Why Choose a Career in Pulmonary Research Panelist for Pulmonary and Critical Care Fellowship program, OSU	2/2017
Innate and Adaptive Immunity in Pulmonary and Critical Care Medicine Nationwide Children's Hospital Fellowship Program, NCH	9/2016
Demystifying "What you want to be when you grow up"? Panelist for American Thoracic Society (San Francisco, CA)	5/2016

Involvement in graduate/professional exams, theses and dissertations

Doctoral Student Dissertation Advisor:

Doctoral Student Dissertation Committee Member:

Maria Ford, BS Biomedical Science Graduate Program, OSU	11/2023-present
Yogesh Budhatoki, BS Molecular, Cellular and Developmental Biology, OSU	7/2023-present
Jason (Jiaxing) Miao, MS Biomedical Science Graduate Program, OSU	10/2022-present
Michael Yaeger, BS, MS Biomedical Sciences Graduate Program, OSU	3/2021-present
Christopher Bobba, BS Medical Scientists Training Program (MSTP), OSU	1/2017-4/2019

Doctoral Student Candidacy Examination Committee Member:

Ludmila Diaz-Starokosheva, BS Molecular, Cellular and Developmental Biology, OSU	3/2023-12/2023
Rawan Makkawi, BS Molecular, Cellular and Developmental Biology, OSU	11/2021-12/2022
Trica Oyster, BS Biomedical Engineering PhD program, OSU	12/2019

Master's Student Advisor

Gina Torres Matias, BS Biomedical Sciences Graduate Program, OSU	3/2021-12/2022
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Master's Student plan B (advisor)

Derrick Herman, M.D. 9/2017-4/2019
College of Medicine Master's in Medical Science

Students/Trainees who worked in my lab:

Faculty Mentor for CREATES Undergraduate: Madelyn Mullett	5/2023-8/2023
Faculty Mentor for Undergraduate Student: Brooke Sendik	1/2023-present
Faculty Mentor for Biomedical Science Undergraduate Student: Dhishan Kashyap	5/2022-present
Faculty Mentor for Destination OSU undergraduate student: Jana Wheat Current position: Researcher in Biotechnology Industry	9/2021-4/2023
Faculty Mentor for Pulmonary and Critical Care Fellow: Matthew Huang, M.D. Current position: Assistant Professor at OSU	7/2021-10/2022
Faculty Mentor for Biomedical Sciences Graduate Student: Gina Torres Matias, M.S. Current position: Laboratory Technician at Ohio Health	3/2021-12/2022
Faulty Mentor for Postdoctoral Research Fellow: Caymen Novak, Ph.D. Current position: Assistant Professor at U of M-Dearborn	3/2020-6/2023
Faculty Mentor for Undergraduate Student: Rhea Iyer Current position: Undergraduate researcher	5/2021-4/2022
Faculty Mentor for Pulmonary and Critical Care Fellow: Kevin Ho, M.D. Current position: Assistant Professor at OSU	7/2019-6/2021
Faculty Mentor for Undergraduate Student: Kristina Luikart, Current position: Clinical Studies Research Coordinator at OSU	5/2019-6/2021
Faculty Mentor for Pulmonary and Critical Care Fellow: Derrick Herman, M.D. Current position: Assistant Professor at OSU	7/2017-6/2019
Faculty Mentor for Undergraduate Student: Shruthi Sethuraman Current position: Internal Medicine Resident-UPMC	3/2017-5/2019
Dissertation Committee Member for MSTP student: Christopher Bobba, B.S. Current position: Surgery Residency	1/2017-4/2019
Faculty Mentor for Pulmonary and Critical Care Fellow: Bryan Hay, M.D. Current position: PCCS physician	7/2016-6/2018
Faculty Co-Mentor for Postdoctoral Research Fellow: Brenda Reader, Ph.D. Current position: CTC Biorepository Manager	10/2015-5/2017
Faculty Mentor for Undergraduate Student: Jacqueline Neagos Current position: Anesthesiologist assistant	7/2011-8/2012

Rotating Students/trainees:

MCDB rotational student: Anandi Batabyal, BS	3/2023-4/2023
BSGP rotational student: Christina Sanders, BS, MS	8/2021-10/2021
Rotational Student from Resident/PhD program at OSU Veterinary School: Arin Cox, D.V.M	2/2021
BSGP rotational student: Gina Torres Matias, BS	10/2020-12/2020
BSGP rotational student: Sarah Dinh, BS	7/2020
Rotational Student from Resident/PhD program at OSU Veterinary School: Susan Smith, D.V.M.	1/2020

Rotational Student from Resident/PhD program at OSU Veterinary School: Sarah Linn, D.V.M	10/2019
BSGP rotational student: Marlena Merling, BS	6/2019-9/2019
Resident rotation project: Justin Asquith, M.D.	4/2015-7/2015

Honors and Awards

American Journal of Cell and Molecular Biology Top Review Award	3/2021
ATS Allergy, Immunology and Inflammation Early Career Achievement Awardee	5/2019
Jo Rae Wright Award for Outstanding Science, American Thoracic Society	5/2016
Parker B. Francis Fellowship	2/2012
Internal Medicine Research Day Abstract Finalists	5/2010
Keystone Symposium Scholarship Winner	4/2009
Hartwell Foundation Fellowship	1/2008
The Miller Fund Award for Innovative Immunology Research	5/2005
Graduate of University of Toledo Honors College	5/2002
Sullivan Research Fellowship	5/2000
University of Toledo Academic Scholarship	9/1998

Grants and Contract Awards

Active

1. NIH/NHLBI R01HL141217
The Pivotal Role of Macrophages in Regulating Pulmonary Fibrosis
4/1/2019-3/31/2024
Role: Principle Investigator (50% effort)
2. NIH/NINDS R01NS124681
Mechanisms of mineralocorticoid receptor antagonism on inflammation in muscular dystrophy
1/1//2022-12/31/2026
Role: Co-I (10% effort)
PI: Jill Rafael-Fortney
3. NIH/NHLBI R01HL168128
Macrophage NUDT21-mediated alternative polyadenylation in lung injury
12/1/2023-11/30/2028
Role: Co-I (5% effort-subcontract with UT Health science center)
PI: Tingting Mills
4. OSU Dean's Development Grant
TSLP mediates asthma exacerbation following ozone exposure
7/1/2021-12/31/2023 (\$50,000) NCE
Role: Multi-PI (0% effort)
5. NIH/NHLBI R43HL165998
The role of Oxy210 in regulating pulmonary fibrosis
9/1/2022-8/30/2024
Role: Co-I (10% effort)
PI: Parhami/ Max BioPharma

Previous

NIH/NHLBI F32HL164020
Influence of macrophage-fibroblast interaction and mechanotransduction on fibrotic progression
9/1/2022-6//2023 (\$205,410)
Role: Mentor (0% effort)
PI: Caymen Novak-postdoc

OSU President's Research Excellence Accelerator Award
Development of novel targets for preventing mechanically induced injury in lung fibrosis patients
7/1/2021-9/30/2022 (\$50,000)
Role: Multi-PI (0% effort)

OSU/Davis Heart and Lung Research Institute Synergy Seed Grant
Novel role of macrophage CD163 in obesity
5/6/2021-5/31/2022 (\$36,717)
Role: Co-Investigator (0% effort)
PI: Gowdy and Townsend

OSU/Davis Heart and Lung Research Institute Synergy Seed Grant
The comparative analysis of organ specific mechanism underlying fibrosis
5/6/2021-5/31/2022 (\$25,000)
Role: Co-Investigator (0% effort)
PI: Rafael-Fortney

NIH/NHLBI R01HL137224
Regulation of Macrophage Inflammatory Phenotypes in ARDS
12/1/2017- 12/31/2021 (\$2,232,913)
Role: Co-investigator (5% effort)

Drug Development Institute from Ohio State University
Role of Estrogen Receptor Beta Signaling in regulating pulmonary fibrosis
4/1/2019-3/31/2020 (\$20,501)
Role: Principle Investigator

ATS Foundation/Genentech Research Grant in IPF
The Role of SOCS1 in Regulating Macrophage Activation during Pulmonary Fibrosis
1/1/2017-12/31/2019 (\$100,000 for 2 years)
Role: Principal Investigator (20% effort)

Scientist Development Grant-American Heart Association
The Role of Macrophages in Regulating Pulmonary Fibrosis
07/01/2016-06/30/2019 (\$231,000 for 3 years)
Role: Principal Investigator (20% effort)

NIH/NIEHS R01 ES020350
Extracellular Matrix, Innate Immunity, and Ozone-Induce Airway Disease
06/01/2014-03/07/2018 (\$1,565,434)
Role: Co-Investigator (30% effort)

InterMune Junior Faculty Program
Role of ILC2 cells in regulating pulmonary fibrosis
6/01/2014-06/30/2016 (\$100,000 for 2 years)
Role: Principal Investigator (40% effort)

Parker B. Francis Fellowship Program
IRAK-M regulates hyperoxic lung injury
07/01/12-08/30/15 (\$156,000 for 3 years)
Role: Principal Investigator (60% effort)

NIH/NHLBI, T32 HL07749
Multi-Disciplinary Training Grant in Lung Diseases
PI: G. Toews
07/01/10 – 06/30/12 (\$719,108 annual direct costs)
Role: Trainee (100% effort)

Hartwell Foundation
Role of Prostaglandin E2 in Mediating Intracellular Signaling
PI: M. Peters-Golden and B. Moore
01/2008-12/2009 (\$100,000 for 2 years)
Role: Research Fellow

NIH/NHLBI, T32 HL07749
Multi-Disciplinary Training Grant in Lung Diseases
PI: G. Toews
07/01/07 – 06/30/08 (\$728,644 annual direct costs)
Role: Trainee (100% effort)

Herman and Dorothy Miller Fund for Innovative Immunology
Immunology Program, University of Michigan
5/2005-6/2006 (\$18,000 for 1 year)
Role: Trainee

Immunology Training Grant
Research Training in Experimental Immunology
PI: R. Miller
9/2003-9/2004 (\$253,948 annual direct costs)
Role: Trainee

Publications

Peer-reviewed journal articles

1. Macrophage-targeted lipid nanoparticle delivery of microRNA-146a to mitigate hemorrhagic shock-induced acute respiratory distress syndrome. Fei Q, Shalosky EM, Barnes R, Shukla VC, **Ballinger MN**, Farkas L, Lee RJ, Ghadiali SN, Englert JA. *ASC Nano* 2023 Sep 12;17(17):16539-16552.
2. Building Career Paths for PhD, Basic and Translational Scientists in Clinical Departments in the United States: An Official American Thoracic Society Workshop Report. Moore BB, **Ballinger MN**, Bauer NN, Blackwell TS, Borok Z, Budinger GRS, Camoretti-Mercado B, Erzurum SC, Himes BE, Keshamouni VG, Kulkarni HS, Mallampalli RK, Marianai TJ, Martinze FJ, McCombs JE, Newcomb DC, Johnston RA, O'Reilly MA, Parkash YS, Ridge KM, Sime PJ, Sperling AI, Violette S, Wilkes DS, Konigshoff M. *Ann Am Thorac Soc*. 2023 Aug;20(8):1077-1087.
3. Fakhouri F, Joseph M, **Ballinger M**, Shukla V, Weimar D, Novak C, Ghadiali S, Kolipaka A. Magnetic Resonance Elastography (MRE) of Bleomycin-Induced Pulmonary Fibrosis in an Animal Model. *Invest Radiol*. 2023 Apr 1;58(4):299-306.
4. Alveolar macrophages drive lung fibroblast function during idiopathic pulmonary fibrosis. Novak CM, Sethuraman S, Luikart KL, Reader BF, Wheat J, Whitson B, Ghadiali SN, **Ballinger MN**. *Am J Physiol Lung Cell Mol Physiol* 2023 Apr 1;324(4):L507-520.
5. Ho K, Weimar D, Torres-Matias G, Lee H, Shamsi S, Shalosky E, Yaegar M, Hartzler-Lovins H, Dunigan-Russel K, Jelic D, Novak CM, Gowdy KM, Englert JA, **Ballinger MN**. Ozone impairs endogenous compensatory responses in allergic asthma. *Toxicol Appl Pharmacol*. 2023, Jan 15;459:116341
6. Ho K, Weimar D, Torres-Matias G, Lee H, Shamsi S, Shalosky E, Yaegar M, Hartzler-Lovins H, Dunigan-Russel K, Jelic D, Novak CM, Gowdy KM, Englert JA, **Ballinger MN**. Ozone impairs endogenous compensatory responses in allergic asthma. *Toxicol Appl Pharmacol*. 2023, Jan 15;459:116341
7. Bobba CM, Fei Q, Shukla V, Lee H, Patel P, Putman RK, Spitzer C, Tsai M, Wewers MD, Lee RJ, Christman JW, **Ballinger MN**, Ghadiali SN, Englert JA. Nanoparticle delivery of microRNA-146a regulates mechanotransduction in lung macrophages and mitigates injury during mechanical ventilation. *Nat Commun*. 2021 Jan 12;12(1):289.
8. Nie Y, Nirujogi TS, Ranjan R, Reader BF, Chung S, **Ballinger MN**, Englert JA, Christman JW, Karpurapu M. PolyADP-Ribosylation of NFATc3 and NF- κ B Transcription Factors Modulate Macrophage Inflammatory Gene Expression in LPS-Induced Acute Lung Injury. *J Innate Immun*. 2020 Oct 12:1-11 doi: 10.1159/000510269

9. Reader BF, Sethuraman S, Hay BR, Thomas Becket RV, Karpurapu M, Chung S, Lee YG, Christman JW, **Ballinger MN**. IRAK-M Regulates Monocyte Trafficking to the Lungs in Response to Bleomycin Challenge. *J Immunol*. 2020 May 15;204(10):2661-2670.
10. Chung S, Lee YG, Karpurapu M, Englert JA, **Ballinger MN**, Davis IC, Park GY, Christman JW. Depletion of microRNA-451 in response to allergen exposure accentuates asthmatic inflammation by regulating Sirtuin2. *Am J Physiol Lung Cell Physiol* 2020 May 1;318(5):L921-L930
11. Poblete JMS, **Ballinger MN**, Bao S, Alghothani M, Nevado JB Jr, Eubank TD, Christman JW, Magalang UJ. Macrophage HIF-1 α mediates obesity-related adipose tissue dysfunction via interleukin-1 receptor-associated kinase M. *Am J Physiol Endocrinol Metab*. 2020 May 1;318(5):E689-E700.
12. Chung S, Kim JY, Song MA, Park GY, Lee YG, Karpurapu M, Englert JA, **Ballinger MN**, Pabla N, Chung HY, Christman JW. FoxO1 is a critical regulator of M2-like macrophage activation in allergic asthma. *Allergy*. 2019 Mar;74(3):535-548.
13. Lee YG, Reader BF, Herman D, Streicher A, Englert JA, Ziegler M, Chung S, Karpurapu M, Park GY, Christman JW, **Ballinger MN**. Sirtuin 2 enhances allergic asthmatic inflammation. *JCI Insight*. 2019 Jan 22. pii: 124710. doi: 10.1172/jci.insight.124710.
14. Richardson, RT, **Ballinger MN**, Qian F, Christman JW, and Johnson RM Morphological and functional characterization of honey bee, *Apis mellifera*, hemocyte cell communities. *Apidologie* 2018 49, 397-410
15. Karpurapu M, Lee YG, Qian Z, Wen J, **Ballinger MN**, Rusu L, Chung S, Deng J, Qian F, Reader BF, Nirujogi TS, Park GY, Pei D, Christman JW. Inhibition of nuclear factor of activated T cells (NFAT) c3 activation attenuates acute lung injury and pulmonary edema in murine models of sepsis. *Oncotarget*. 2018 Jan 25;9(12):10606-10620.
16. Wiet MG, Piscioneri A, Khan SN, **Ballinger MN**, Hoyland JA, Purmessur D. Mast Cell-Intervertebral disc cell interactions regulate inflammation, catabolism and angiogenesis in Discogenic Back Pain. *Sci Rep*. 2017 Oct 2;7(1):12492.
17. Chung S, Lee TJ, Reader BF, Kim JY, Lee YG, Park GY, Karpurapu M, **Ballinger MN**, Qian F, Rusu L, Chung HY, Unterman TG, Croce CM, Christman JW. FoxO1 regulates allergic asthmatic inflammation through regulating polarization of the macrophage inflammatory phenotype. *Oncotarget*. 2016 Apr 5;7(14):17532-46.
18. Podsiad A, Standiford TJ, **Ballinger MN**, Eakin R, Park P, Kunkel SL, Moore BB, Bhan U. MicroRNA-155 regulates host immune response to postviral bacterial pneumonia via IL-23/IL-17 pathway. *Am J Physiol Lung Cell Mol Physiol*. 2016 Mar 1;310(5):L465-75.
19. Domingo-Gonzalez R, Martínez-Colón GJ, Smith AJ, Smith CK, **Ballinger MN**, Xia M, Murray S, Kaplan MJ, Yanik GA, Moore BB. Inhibition of Neutrophil Extracellular Trap Formation after Stem Cell Transplant by Prostaglandin E2. *Am J Respir Crit Care Med*. 2016 Jan 15;193(2):186-97.
20. Julian MW, Strange HR, **Ballinger MN**, Hotchkiss RS, Papenfuss TL, Crouser ED. Tolerance and Cross-Tolerance following Toll-Like Receptor (TLR)-4 and -9 Activation Are Mediated by IRAK-M and Modulated by IL-7 in Murine Splenocytes. *PLoS One*. 2015 Jul 28;10(7):e0132921.
21. Neagos J, Newstead MW, Zheng X, Huang S, Standiford TJ, **Ballinger MN**. The induction of tolerance in alveolar epithelial cells in response to TLR ligands. *Am J Respir Cell Mol Biol*. 2015 Dec;53(6):872-81
22. Bhan U, Podsiad AB, Kovach MA, **Ballinger MN**, Keshamouni V, Standiford TJ. Linezolid has unique immunomodulatory effects in post-influenza community acquired MRSA pneumonia. *PLoS One*. 2015 Jan 30;10(1):e0114574.
23. **Ballinger MN**, Newstead MW, Zheng X, Bhan U, Mo XM, Kunkel SL, Moore BB, Flavell F, Christman JW, Standiford TJ. IRAK-M promotes alternative macrophage activation and fibroproliferation in bleomycin-induced lung injury. *J Immunol*. 2015 Feb 15;194(4):1894-904.

24. Tolle L, Yu FS, Kovach MA, **Ballinger MN**, Newstead MW, Zeng X, Nunez G, Standiford TJ. Redundant and Cooperative Interactions between TLR5 and NLRC4 in Protective Lung Mucosal Immunity against *Pseudomonas aeruginosa*. *J Innate Immun*. 2015;7(2):177-86.
25. Bhan U, Newstead MJ, Zeng X, Podsaid A, Goswami M, **Ballinger MN**, Kunkel SL, Standiford TJ. TLR9-dependent IL-23/IL-17 is required for the generation of *Stachybotrys chartarum*-induced hypersensitivity pneumonitis. *J. Immunol* 2013 Jan 1;190(1):349-56
26. **Ballinger MN**, Newstead MW, Zeng X, Bhan U, Horowitz JC, Moore BB, Pinsky DJ, Flavell RA, Standiford TJ. Critical role for IRAK-M in regulating antioxidant production during hyperoxic lung injury *J. Immunol* 2012 Jul 1;189(1):356-64.
27. Kovach MA, **Ballinger MN**, Newstead MW, Zeng X, Bhan U, Yu F, Moore BB, O'Riordan M, Gallo R, Standiford TJ. Cathelicidin related antimicrobial peptide is required for effective lung mucosal immunity in Gram-negative bacterial pneumonia *J. Immunol* 2012 Jul 1;189(1):304-11.
28. Serezani CH, Medeiros AI, Kane S, Kim SH, Marques MM, Lee SP, Lewis C, Cornett A, Bourdonnay E, **Ballinger MN**, White E, Peters-Golden M. PTEN directly activates the actin depolymerization factor cofilin-1 during PGE₂-mediated inhibition of phagocytosis of fungi. *Science Signaling*. 2012 Feb 7;5(210):ra12
29. Standiford LR, Standiford TJ, Newstead MJ, Zeng X, **Ballinger MN**, Kovach MA, Reka AK, Bhan U. TLR4-Dependent GM-CSF protects against lung injury in Gram-negative bacterial pneumonia. *Am J Physiol Lung Cell Mol Physiol*. 2012 Mar;302(5):L447-54.
30. **Ballinger MN**, Peters-Golden M, Moore BB. Impaired neonatal macrophage phagocytosis is not explained by overproduction of prostaglandin E₂. *Respir Res*. Dec 5;12(1):155, 2011.
31. Bhan U, Kovach M, **Ballinger M**, Newstead MW, Zeng X, Standiford L, Standiford TJ. *Stachybotrys chartarum*-induced hypersensitivity pneumonitis is TLR9 dependent. *Am J Pathol* Dec;179(6):2779-87, 2011.
32. Morato-Marques M, Campos MR, Kane S, Rangel AP, Lewis C, **Ballinger MN**, Kim SH, Peters-Golden M, Jancar S, Serezani CH. Leukotrienes Target F-actin/Cofilin-1 to Enhance Alveolar Macrophage Anti-fungal Activity. *J Biol Chem*. Aug 19;286(33):28902-13, 2011.
33. **Ballinger MN**, Welliver T, Straight S, Peters-Golden M, Swanson JA. Transient increase in cyclic AMP localized to macrophage phagosomes. *PLoS One*. 5(11):e13962, 2010.
34. Hubbard LL, **Ballinger MN**, Thomas PE, Wilke CA, Standiford TJ, Kobayashi KS, Flavell RA, Moore BB. A role for IL-1 Receptor-associated kinase-M in Prostaglandin E₂-induced immunosuppression post-bone marrow transplantation. *J Immunol* 184:6299-6330, 2010
35. Bhan U, **Ballinger MN**, Zeng X, Newstead MJ, Cornicelli MD, Standiford TJ. Cooperative interactions between TLR4 and TLR9 regulate interleukin 23 and 17 production in a murine model of gram negative bacterial pneumonia. *PLoS One* 5:e9896, 2010
36. Sagana RL, Yan M, Cornett AM, Tsui JL, Stephenson DA, Huang SK, Moore BB, **Ballinger MN**, Melonakos J, Kontos CD, Aronoff DM, Peters-Golden M, White ES. Phosphatase and tensin homologue on chromosome 10 (PTEN) directs prostaglandin E₂-mediated fibroblast responses via regulation of E prostanoid 2 receptor expression. *J Biol Chem* 284:32264-32271, 2009.
37. Lee SP, Serezani CH, Medeiros AI, **Ballinger MN**, Peters-Golden M. Crosstalk between prostaglandin E₂ and leukotriene B₄ regulates phagocytosis in alveolar macrophages via combinatorial effects on cyclic AMP. *J Immunol* 182:530-537, 2009.
38. Hubbard LL, **Ballinger MN**, Wilke CA, Moore BB. Comparison of conditioning regimens for alveolar macrophage reconstitution and innate immune function post bone marrow transplant. *Exp Lung Res* 34:263-275, 2008.

39. **Ballinger MN**, Hubbard LL, McMillan TR, Toews GB, Peters-Golden M, Paine R 3rd, Moore BB. Paradoxical role of alveolar macrophage-derived granulocyte-macrophage colony-stimulating factor in pulmonary host defense post-bone marrow transplantation. *Am J Physiol Lung Cell Mol Physiol.* 295:L114-122, 2008.
40. Serezani CH, Chung J, **Ballinger MN**, Moore BB, Aronoff DM, Peters-Golden M. Prostaglandin E2 Suppresses Bacterial Killing in Alveolar Macrophages by Inhibiting NADPH Oxidase. *Am J Respir Cell Mol Biol* 37:562-570, 2007.
41. Aronoff DM, Peres CM, Serezani CH, **Ballinger MN**, Carstens JK, Coleman N, Moore BB, Peebles RS, Faccioli LH, Peters-Golden M. Synthetic prostacyclin analogs differentially regulate macrophage function via distinct analog-receptor binding specificities. *J Immunol* 178:1628-1634, 2007.
42. **Ballinger MN**, Aronoff DM, McMillan TR, Cooke KR, Olkiewicz KM, Toews GB, Peters-Golden M, Moore BB. Critical Role in Prostaglandin E2 Overproduction in Impaired Pulmonary Host Response Post-Bone Marrow Transplantation. *J Immunol* 177:5499-5508, 2006. (IF: 4.382, citation count: 93).
43. Lindell DM, **Ballinger MN**, McDonald RA, Toews GB, Huffnagle GB. Immunologic Homeostasis during Infection: Coexistence of Strong Pulmonary Cell-Mediated Immunity to Secondary *Cryptococcus neoformans* Infection While the Primary Infection Still Persists at Low Levels in the Lungs. *J Immunol* 177: 4652-4661, 2006.
44. Lindell DM, **Ballinger MN**, McDonald RA, Toews GB, Huffnagle GB. Diversity of the T-cell response to pulmonary *Cryptococcus neoformans* infection. *Infect Immun* 74:4538-4548, 2006.
45. **Ballinger MN**, Paine R 3rd, Serezani CH, Aronoff DM, Choi ES, Standiford TJ, Toews GB, Moore BB. Role of GM-CSF during Gram-negative Lung Infection with *Pseudomonas aeruginosa*. *Am J Respir Cell Mol Biol* 34:766-774, 2006.
46. Moore BB, **Ballinger MN**, White ES, Green M, Herrygers A, Wilke CA, Toews GB, and Peters-Golden M. Bleomycin-Induced E Prostanoid Receptor Changes Alter Fibroblast Responses to Prostaglandin E2. *J Immunol* 174:5644-5649, 2005
47. Rex E, Molitor SC, Hapiak V, Xiao H, **Henderson M**, Komuniecki R. Tyramine receptor (SER-2) isoforms are involved in the regulation of pharyngeal pumping and foraging behavior in *Caenorhabditis elegans*. *J Neurochem* 91:1104-15, 2004. (Published under my maiden name).
48. Ojielo CI, Cooke K, Mancuso P, Standiford TJ, Olkiewicz KM, Clouthier S, Corrion L, **Ballinger MN**, Toews GB, Paine R 3rd, Moore BB. Defective Phagocytosis and Clearance of *Pseudomonas aeruginosa* in the Lung Following Bone Marrow Transplantation. *J Immunol* 171: 4416-4424, 2003.

Editor-reviewed journal articles

1. Penke LRK, Torres Matias G, **Ballinger MN**. Pumping the Breaks on Pulmonary Fibrosis: A New Role for Regulator of Cell Cycle. *Am J Respir Cell Mol Biol.* 2022 Feb;66(2):113-114
2. **Ballinger MN**, Mora AL. Epigenetic Landscape, A Cornerstone of Macrophage Phenotype Regulation in the Fibrotic Lung. *Am J Respir Crit Care Med.* 2021 Oct 15;204(8):881-883
3. Novack CM, Tighe RM, **Ballinger MN**. What is 'Normal' When Examining Myeloid Cells in Human Airways? *Am J Respir Crit Care Med.* 2021 Apr 15;203(8):931-932
4. **Ballinger MN**, Davis IC. CD8+ T cells- Extracting A Toll in Viral Pneumonia. *Am J Respir Cell Mol Biol.* 2020 Dec;63(6):717-718.
5. Englert JA, Christman JW, **Ballinger MN**. Unhinging the machinery of sepsis: An unexpected role for vascular smooth muscle. *J Leukoc Biol.* 2018 Oct;104(4):661-663
6. McQuattie-Pimentel AC, Budinger GRS, **Ballinger MN**. Monocyte-derived Alveolar Macrophages: The Dark Side of Lung Repair? *Am J Respir Cell Mol Biol.* 2018 Jan;58(1):5-6.

7. **Ballinger MN**, Christman JW. Pulmonary Macrophages: Overlooked and Underappreciated. *Am J Respir Cell Mol Biol*. 2016 Jan;54(1):1-2.

Reviews (all reviews were peer reviewed)

1. Britt RD, Porter N, Grayson MH, Gowdy KM, **Ballinger MN**, Wada K, Kim HY, Guerau-de-Arellano M. Sterols and Immune Mechanisms in Asthma. *JACI* 2023 Jan 1;151(1):47-59
2. Nho RS, **Ballinger MN**, Rojas MM, Ghadiali SN, Horowitz JC. Biomechanical Force and Cellular Stiffness in lung Fibrosis. *Am J Pathol*. 2022 Feb 12:S0002-9440(22)
3. Novak C, **Ballinger MN**, Ghadiali SN. Mechanobiology of Pulmonary Disease: A Review of Engineering Tools to Understand Lung Mechanotransduction. *J. Biomech Eng* 2021 Nov 1;143(11):110801.
4. **Ballinger MN**, Standiford TJ. Postinfluenza Bacterial Pneumonia: Host Defenses Gone Awry. *Interferon Cytokine Res* 2010 30(9):643-52
5. Serezani CH, **Ballinger MN**, Aronoff DM, Peters-Golden M. Cyclic AMP: master regulator of innate immune cell function. *Am J Respir Cell Mol Biol* 2008 39:127-132
6. **Ballinger MN**, McMillan TR, Moore BB. Eicosanoid regulation of pulmonary innate immunity post-hematopoietic stem cell transplantation. *Arch Immunol Ther Exp (Warsz)* 2007 55:1-12. Review.

Published Abstracts and Oral Presentations

International

1. The TLR signaling inhibitor, IRAK-M promotes alternative macrophage activation and fibroproliferation in bleomycin-induced lung injury. *International colloquium of lung and airway fibrosis* **Ballinger MN**, Newstead M, Zheng X, Mo XM, Moore BB, Standiford TJ. (Mont Tremblant, Quebec, Canada). 9/2014

National:

1. Macrophage-fibroblast interactions contribute to collagen expression and contractility in pulmonary fibrosis. *Gordon Research Conference: Lung injury and repair*. Novak C, Luikart, Weimar D, Reader B, **Ballinger MN**. (Waterville, NH) 11/2021
2. The role of type 2 innate lymphoid cells in regulating macrophage activation in bleomycin-induced pulmonary fibrosis. *American Thoracic Society*. **Ballinger MN**, Moore BB, Standiford TJ, Christman JW. (Denver, CO). 5/2015
3. The role of an important negative regulator of Toll-like receptor signaling, IRAK-M in mediating the generation of antioxidants during hyperoxic lung injury *American Thoracic Society* **Ballinger MN**, Newstead M, Zheng X, Standiford TJ (Denver, CO) 5/2011
4. The role for an important negative regulator of Toll-like receptor signaling, IRAK-M, in mediating the generation of antioxidants during hyperoxic lung injury *Gordon Research Conference: Lung injury and repair*. **Ballinger MN**, Newstead MW, Zheng X, Standiford TJ. (Newport, RI) 8/2011

Invited Oral Presentations

National/International Meetings

1. Macrophage-Fibroblast Interactions in the Setting of Pulmonary Fibrosis *The Immune Modulation and Engineering Symposium* (Philadelphia, PA) 12/2022
2. Macrophages in Pulmonary Fibrosis: More than Big Easter? *The University of Texas Health Science Center Department of Biochemistry and Molecular Biology Seminar Series* (Houston, TX) 3/2022

3. Cross-talk between macrophages and fibroblast regulates pulmonary fibrosis. *University of Wisconsin-Madison Cell & Regenerative Biology Seminar Series* (online due to COVID19) 3/2021
4. Cross-talk between macrophages and fibroblast regulates pulmonary fibrosis. *Vanderbilt University Department of Pathology, Microbiology and Immunology Seminar Series* (online due to COVID19) 3/2021
5. Mechanisms regulating the recruitment of monocyte-derived macrophages during pulmonary fibrosis. *The New York Academy of Sciences Novel Approaches in Pulmonary Fibrosis: Beyond the Fibroblast* (Online due to COVID19). 3/2020

Local/Regional Meetings

1. Pivotal role of macrophages in regulating pulmonary fibrosis *Ohio State University Pulmonary Research Conference* (Columbus, OH) 2/2022
2. The role of macrophages in regulating lung disease *Organoid Technology Research Conference Series* (Columbus, OH) 6/2021
3. The role of IRAK-M in regulating innate immunity within the lung *Cystic Fibrosis C3 Seminar Series* (Columbus, OH) 6/2021
4. Modeling asthma exacerbation from air pollution *Ohio State University Pulmonary Research Conference* (co-presented with Dr. Joshua Englert) (Columbus, OH) 2/2021
5. The role of IRAK-M in regulating macrophage function in the setting of pulmonary fibrosis *Ohio State University Pulmonary Research Conference* (Columbus, OH) 11/2018
6. The role of macrophages in regulating pulmonary fibrosis. *Ohio State University Pulmonary Research Conference* (Columbus, OH) 9/2017
7. Establishing a translational research program using human lung tissue. *Cystic Fibrosis Research Symposia* (Columbus, OH) 1/2017
8. The role of macrophages in regulating pulmonary fibrosis *Davis Heart and Lung Research Institute Work in Progress* (Columbus, OH) 2/2016
9. The pivotal role of macrophages in regulating pulmonary fibrosis. *Microbial, Infection and Immunity Lung Working Group* (Columbus, OH) 5/2015
10. The role of macrophages and innate lymphoid type 2 cells in regulating pulmonary fibrosis. *Ohio State University Pulmonary Research Conference* (Columbus, OH) 2/2015

Poster Presentations

****Underline denotes trainee**

International

1. Alveolar Macrophages Drive Lung Fibroblast Contraction and Changes in Gene Expression of Extracellular Matrix Proteins. *International colloquium of lung and airway fibrosis*. Novak CM, Ghadiali SN, **Ballinger MN**. (Reykjavik, Iceland) 10/2022
2. The role of IRAK-M in regulating monocyte trafficking to the lung following bleomycin challenge *International colloquium of lung and airway fibrosis* **Ballinger MN**, Reader BF, Thomas Becket RV, Christman JW. (San Francisco, CA, USA) 10/2018
3. The role of TLR signaling in regulating collagen uptake in the setting of pulmonary fibrosis *International colloquium of lung and airway fibrosis* **Ballinger MN**, Reader BF, Pope-Harman A, Whitson B, Shah S, Keller B, Leight J, Moore BB, Christman JW. (Dublin, Ireland) 9/2016

4. Differential expression and functionality of Toll-like receptors in macrophages isolated from patients with Idiopathic Pulmonary Fibrosis. *International colloquium of lung and airway fibrosis* Reader BF, Pope-Harmon A, Whitson B, Shah S, Keller B, Wewers M, Christman JW, **Ballinger MN**. (Dublin, Ireland) 9/2016
5. Eicosanoid regulation of host defense post-bone marrow transplantation. *Immunocompromised Host Society Meeting* **Ballinger MN**, McMillian TR, Aronoff DM, Peters-Golden M, Moore BB. (Crans-Montana, Switzerland). 7/2006
6. Increased susceptibility to gamma-herpes virus post-bone marrow transplantation. *Immunocompromised Host Society Meeting* McMillian TR, **Ballinger MN**, Moore BB. (Crans-Montana, Switzerland). 7/2006

National

1. Mechano-memory of Pulmonary Fibroblasts Demonstrates Reversibility of Transcriptomics and Contraction Phenotypes. *Biomedical Engineering Society*. Novak CM, Wheat JS, Ghadiali SN, **Ballinger MN**. (Seattle, WA) 10/2023
2. COVID-19 Spike Protein Directly Alters Pulmonary Fibroblast Mediated Remodeling of the Extracellular Matrix. *Biomedical Engineering Society*. Ertin C, **Ballinger MN**, Ghadiali SN. (Seattle WA) 10/2023
3. Fresh Biospecimen Distribution to Enhance Pulmonary Research Via Human Tissue Biobanking. *American Thoracic Society*. Stacey SD, Vrsan AJ, Miller ZE, Calyeca J, Chamucero-Millares A, Khaliullin T, Peters V, Rosas L, Whitson BA, Black SM, **Ballinger MN**, Schenk AD, Rosenheck J, Nunley DR, Keller BC, Reader BF, Washburn WK, Mora AI, Rojas M. (Washington DC) 5/2023
4. Sex Differences Modulate Airway Hyperresponsiveness in a Model of Ozone-exacerbated Allergic Asthma. *Society of Toxicology*. Jelic D, Kashyap D, Barnes R, Englert JA, **Ballinger MN**. (Nashville, TN) 3/2023
5. Interactions of IPF alveolar macrophages results in increased extracellular matrix gene expression and fibroblast contraction. *Keystone Symposium: Tissue Fibrosis and Repair*. Novak CM, Sethuraman S, Luikart K, Reader B, Ghadiali S, **Ballinger MN** (Keystone, CO) 6/2022
6. A novel two-hit model for ozone-induced allergic asthma exacerbation. *American Thoracic Society* Ho K, Weimar D, Torres Matias GS, Lee H, Gowdy K, Englert JA, **Ballinger MN** (San Francisco, CA) 5/2022
7. Toll-like receptor signaling mediates macrophage collagen fragment uptake in the lung. *American Thoracic Society*. Torres-Matias GS, Leight J, **Ballinger MN**. (San Francisco, CA) 5/2022
8. Lung fibroblast phenotypes are regulated by micro-environmental culture conditions. *American Thoracic Society*. Novak CM, Ghadiali S, **Ballinger MN** (San Francisco, CA) 5/2022
9. Micro-environmental attributes regulate lung fibroblast phenotypes. *Society for Biomaterial Annual Meeting*. Novak CM, Ghadiali S, **Ballinger MN** (Baltimore, MD) 3/2022
10. Micro-environmental attributes regulate lung fibroblast phenotypes. *Gordon Research Conference: Lung injury and repair*. Novak CM, Ghadiali S, **Ballinger MN** (Waterville, NH) 11/2021
11. A novel two-hit model for ozone-induced allergic asthma exacerbation. *Society for Toxicology* Ho K, Weimar D, Torres Matias GS, Lee H, Gowdy K, Englert JA, **Ballinger MN** (online due to COVID19) 3/2021
12. IRAK-M regulates airway hyperactivity in a novel model of ozone-induced allergic inflammation *American Thoracic Society* Ho K, Derrick H, Chung S, Thomas Becket RV, Weimer D, Tighe R, Englert JS, **Ballinger MN**. (online due to COVID) 5/2020
13. Non-soluble macrophage-epithelial interactions modulate cell injury during cyclic airway reopening *Biomedical Engineering Society* Oyster T, Christman JW, Englert JA, **Ballinger MN**, Ghadiali S. (Philadelphia, PA) 10/2019

14. The role of IRAK-M in regulating collagen uptake and degradation by macrophages in pulmonary fibrosis. *Gordon Research Conference: Lung, Injury and Repair*. **Ballinger MN**, Hay BR, Thomas Becket RV, Reader B, Leight J, Christman JW (Lewiston, ME) 9/2019
15. The role of IRAK-M in regulating innate immune responses following acute ozone exposure. *American Thoracic Society Herman D*, Englert JA, Tight R, Thomas Becket RV, Lee H, Wewers M, Christman JW, **Ballinger MN**. (Dallas, TX) 5/2019
16. Nanoparticle-based delivery of microRNA-146a mitigates ventilator induced lung injury and inflammation. *American Thoracic Society Bobba C*, **Ballinger MN**, Ghadiali S, Englert JA. (Dallas, TX) 5/2019
17. The role of IRAK-M in regulating monocyte trafficking to the lung following bleomycin challenge. *American Thoracic Society Ballinger MN*, Reader BF, Thomas Becket RV, Christman JW. (Dallas, TX) 5/2019
18. The role of TLR signaling in regulating collagen degradation by macrophages in fibrosis. *American Thoracic Society*. Hay BR, Reader BF, Christman JW, **Ballinger MN**. (San Diego, CA) 5/2018
19. Macrophage regulation of collagen and alpha-smooth muscle actin in fibroblasts. *American Thoracic Society*. Sethuraman S, Reader BF, Christman JW, **Ballinger MN** (San Diego, CA) 5/2018
20. MicroRNA-146a is differentially regulated in alveolar macrophages during mechanotransduction in ventilator induced lung injury. *American Thoracic Society*. Bobba C, **Ballinger MN**, Englert JA, Ghadiali SN (San Diego, CA) 5/2018
21. The role of TLR signaling in regulating monocyte recruitment into the lungs following bleomycin-induced pulmonary fibrosis. *Gordon Research Conference: Lung, injury and repair*. **Ballinger MN**, Reader BF, Hay BR, Sethuraman S, Moore BB, Christman JW (New London, NH) 8/2017
22. The role of TLR signaling in regulating macrophage recruitment and activation during bleomycin-induced pulmonary fibrosis. *American Thoracic Society*. **Ballinger MN**, Reader BF, Hay BR, Moore BB, Christman JW. (Washington DC) 5/2017
23. The role of TLR signaling in regulating collagen uptake and degradation in macrophages following bleomycin-induced pulmonary fibrosis. *American Thoracic Society*. Hay BR, Reader BF, Christman JW, Leight J, **Ballinger MN**. (Washington DC) 5/2017
24. Alveolar epithelial cell and macrophage co-culture regulates mechanically-induced inflammation. *American Thoracic Society*. Bobba C, Englert JA, **Ballinger MN**, Ghadiali SN. (Washington DC) 5/2017
25. Mir-451 regulates allergic lung inflammation via Sirt2-mediated alternative macrophage activation. *American Thoracic Society*. Lee YG, Chung S, Karpurapu M, **Ballinger MN**, Reader BF, Deng J, Feng Q, Christman JW. (San Francisco, CA) 5/2016
26. FoxO1 mediates asthmatic lung inflammation by promoting alternative activation of pulmonary macrophages. *American Thoracic Society*. Chung S, Reader B, Kim JY, Lee YG, Karpurapu M, **Ballinger MN**, Park GY, Christman JW. (San Francisco, CA) 5/2016
27. The TLR signaling inhibitor, IRAK-M, potentiates bleomycin-induced lung injury by regulating the production of the profibrotic cytokine IL-13. *American Thoracic Society Ballinger MN*, Newstead MW, Zheng X, Mo XM, Moore BB, Christman JW, Standiford TJ. (San Diego, CA) 5/2014
28. The TLR signaling inhibitor IRAK-M potentiates bleomycin-induced lung injury by regulating the production of the profibrotic cytokine IL-13. *American Thoracic Society Ballinger MN*, Newstead M, Zheng X, Bhan U, Moore BB, Standiford TJ. (Philadelphia, PA) 5/2013
29. Post viral bacterial pneumonia: role of microRNA *American Thoracic Society*. Bhan U, Podsaid A, **Ballinger MN**, Domingo RG, Moore BB, Standiford TJ. (Philadelphia, PA) 5/2013

30. The TLR signaling inhibitor IRAK-M potentiates bleomycin-induced lung injury and fibrosis. *American Thoracic Society* **Ballinger MN**, Newstead MW, Zheng X, Moore BB, Standiford TJ. (San Francisco, CA) 5/2012
31. Expression of novel IL-1 family members in murine gram-negative pneumonia. *American Thoracic Society* Kovach MA, Zheng X, Newstead MW, **Ballinger MN**, Standiford TJ. (San Francisco, CA) 5/2012
32. The role of IRAK-M in mediating acute lung injury. *American Thoracic Society* **Ballinger MN**, Lyn-Kew K, Bhan U, Newstead MW, Standiford TJ. (New Orleans, LA) 5/2010
33. Prostaglandin E2 mediates impaired host defense functions in alveolar macrophages from young rats. *American Thoracic Society* **Ballinger MN**, Peters-Golden M. (San Diego, CA) 5/2009

Local/Regional Meetings

1. Sex differences in airway hyper-responsiveness in a model of ozone exacerbation of allergic asthma. *Ohio Valley Society of Toxicology*. Ray J, Jelic D, Walum J, Kashyap D, Barnes R, Britt R, Englert JA, **Ballinger MN**. (West Lafayette, IN) 10/2023
2. Activated macrophages affects collagen turnover within the lung. *Davis Heart and Lung Institute Research Day*. Kashyap D, Torres Matias GS, **Ballinger MN**. (Columbus, OH) 10/2023
3. Sex Differences Modulate Airway Hyperresponsiveness in a Model of Ozone-exacerbated Allergic Asthma. *OSU Internal Medical Research Day*. Jelic D, Kashyap D, Barnes R, Englert JA, **Ballinger MN**. (Columbus, OH) 5/2023
4. Mechanomemory of pulmonary fibroblasts demonstrates reversibility of transcriptomics and contractions phenotypes. *OSU Internal Medicine Research Day* Novack CM, Ghadiali SN, Wheat J, **Ballinger MN** (Columbus, OH). 5/2023
5. Sex Induces differences in contractility and extracellular matrix gene expression in lung fibroblasts. *Davis Heart and Lung Institute Research Day*. Wheat J, Novak CM, Ghadiali S, **Ballinger MN** (Columbus, OH) 10/2022
6. Alveolar macrophages drive lung fibroblast contraction and changes in gene expression of extracellular matrix proteins. *Davis Heart and Lung Institute Research Day*. Novak CM, Ghadiali SN, **Ballinger MN**. (Columbus, OH) 10/2022
7. Sex differences modulate airway hyperresponsiveness in a model of ozone-exacerbated allergic asthma. *Davis Heart and Lung Institute Research Day*. Jelic D, Kashyap D, Barnes R, Englert JA, **Ballinger MN**. (Columbus, OH) 10/2022
8. Micro-environment attributes regulate lung fibroblast phenotypes. *Davis Heart and Lung Research Institute Research Day*. Novak CM, Ghadiali S, **Ballinger MN** (Columbus, OH) 10/2021
9. Toll-like receptor signaling pathways mediate the ability of macrophages to identify and uptake collagen fragments. *Davis Heart and Lung Research Institute Research Day*. Torres Matias GS, Leight J, **Ballinger MN**. (Columbus, OH) 10/2021
10. Role of CD163 deficiency in adipose macrophage induced inflammation leading to obesity. *Davis Heart and Lung Research Institute Research Day*. Hutton G, Blaskiewicz M, Dunnigan-Russel K, Yaeger M, Sasnoor L, Baer L, **Ballinger MN**, Townsend K, Gowdy KM. (Columbus, OH) 10/2021
11. Micro-environment attributes regulate lung fibroblast phenotypes. *Ohio State University Department of Internal Medicine Research Day*. Novak CM, Ghadiali S, **Ballinger MN**. (Columbus, OH) 5/2021
12. A novel two-hit model for ozone-induced allergic asthma exacerbation. *Ohio State University Department of Internal Medicine Research Day* Ho K, Weimar D, Torres Matias GS, Lee H, Gowdy K, Englert JA, **Ballinger MN** (Columbus, OH) 5/2021

13. Using the pig to establish a new large animal model of pulmonary fibrosis. *Davis Heart and Lung Research Institute Research Day*. Weimar DA, Joseph M, Luikart K, Kolipaka A, **Ballinger MN**. (Columbus, OH) 10/2020
14. IRAK-M regulates airway hyperreactivity in a novel model of ozone induced allergic inflammation. *Davis Heart and Lung Research Institute Research Day*. Ho K, Herman D, Chung S, Thomas Becket RV, Weimer DM, Tighe R, Englert JA, **Ballinger MN** (Columbus, OH) 10/2020
15. The role of IRAK-M in regulating collagen uptake by macrophages in pulmonary fibrosis. *Davis Heart and Lung Research Institute Research Day* Thomas Becket RV, Hay B, Reader BF, Leight J, Christman JW, Luikart K, Ho K, Ruane-Foster, M, **Ballinger MN**. (Columbus, OH) 10/2019
16. Investigating the role of estrogen receptor beta agonist in regulating bleomycin-induced pulmonary fibrosis. *Davis Heart and Lung Research Institute Research Day*. Weimar D, Thomas Becket RV, Luikart K, **Ballinger MN** (Columbus, OH) 10/2019
17. Alteration in macrophage activation regulates collagen expression by fibroblasts in idiopathic pulmonary fibrosis *Davis Heart and Lung Research Institute Research Day*. Luikart K, Sethuraman S, Thomas Becket RV, Weimar D, Reader BF, Christman JW, **Ballinger MN** (Columbus, OH) 10/2019
18. Altered macrophage phenotype results in elevated collagen by fibroblasts in idiopathic pulmonary fibrosis *Davis Heart and Lung Research Institute Research Day* Sethuraman S, Reader BF, Christman JW, **Ballinger MN** (Columbus, OH) 10/2018
19. Role of IRAK-M expression in regulating macrophage recruitment, differentiation and maturation during bleomycin-induced pulmonary fibrosis. *Davis Heart and Lung Research Institute Research Day*. Asquith JM, Christman JW, **Ballinger MN** (Columbus, OH) 10/2015
20. The TLR signaling inhibitor IRAK-M promotes alternative macrophage activation and fibroproliferation in bleomycin-induced lung injury. *Davis Heart and Lung Research Institute Research Day*. **Ballinger MN**, Mo XM, Moore BB, Deng J, Lee YG, Christman JW, Standiford TJ. (Columbus, OH) 10/2014
21. Induction of tolerance in alveolar epithelial cells by toll-like receptor agonists: role of TLR signaling inhibitors. *University of Michigan Department of Internal Medicine Research Day*. Neagos JE, Standiford TJ, Newstead MW, Zheng X, **Ballinger MN** (Ann Arbor, MI) 5/2012
22. The role of IRAK-M in mediating acute lung injury. *University of Michigan Department of Internal Medicine Research Day*. **Ballinger MN**, Bhan U, Newstead MW, Standiford TJ. (Ann Arbor, MI) 5/2010

Social Media

Tweet chat: Women in Medicine and Science: Effect of COVID-19 pandemic on career of WIMS 3/31/22
I was a panelists for a tweet chat sponsored by ATS community. The discussion focused on the challenges associated with being a women in the setting of medicine and science. The tweet had over 2 million impressions and a twitter moment was created, and can be viewed here: <https://twitter.com/i/events/1509865399701192710>

Tweet chat: Women in Medicine and Science: Mentoring Twitter Chat. 3/25/21
I was a moderator for a tweet chat hosted by the Media Subcommittee for the Women in Medicine and Science Committee at Ohio State University. The metrics for this tweet chat are: 29,053 impressions, 880 engagements and an engagement rate of 3.0%.

Tweet chat: Challenged to Women in Medicine & Science in the COVID Era Tweet Chat. 9/13/20
I was a moderator for a tweet chat hosted by the Media Subcommittee for the Women in Medicine and Science Committee at the Ohio State University. The metrics for this: 16,474 impressions, 708 engagements. A twitter moment was created, and can be viewed here: <https://twitter.com/i/events/1305271219869175808?s=11>

Tweet chat: Women in Medicine Part 2. 3/6/2020
I was a panelists for a tweet chat sponsored by ATS community. The discussion focused on the challenges associated with being a women in the setting of medicine and science. A twitter moment was created, and can be

viewed here: <https://twitter.com/i/events/1235956710453452800?s=11>

Tweet chat: Women in Medicine Part 1.

1/30/2020

I was a panelists for a tweet chat sponsored by ATS community. The discussion focused on how being a woman in medicine and science has positively affected our career. The metric for this was over 400,000 potential impressions. A twitter moment was created: <https://twitter.com/i/events/1223235246134628352?s=11>

Tweet chat: Help! It's my first ATS!

5/9/2019

I was a panelists for a tweet chat sponsored by the Members in Training and Transition Committee for the American Thoracic Society regarding how to navigate the annual international conference A twitter moment was created, and can be viewed here: <https://twitter.com/i/events/1126852613968924673?s=11>

Tweet chat: Tips on Mentoring.

9/24/2018

I was a panelists for a tweet chat sponsored by the Members in Training and Transition Committee for the American Thoracic Society regarding the role of mentorship and how to be a good mentor in an academic research setting. A twitter moment was created: <https://twitter.com/i/events/1044242415576649728?s=11>

Other Creative Products

Redefining Failure:

1/2022

I was a panelists on an ATS Core Training Webinar and Podcast series about 'Redefining Failure' where I joined other esteemed panelists while we first tried to define failure and discussed how we talked about building resiliency within an academic career.

Setting up a Lab Part 2:

7/2019

This was the second part to a podcast recorded as part of the Berathe Easy Podcast of the American Thoracic Society. <https://www.thoracic.org/about/ats-podcasts/setting-up-a-lab-part-2.php>

Setting up a Lab Part 1:

5/2019

This was the first part to a podcast recorded as part of the Berathe Easy Podcast of the American Thoracic Society. I, along with another junior faculty member, was interviewed by the Early Career Working Group about things to consider when establishing your own independent basic science research lab.
<https://www.thoracic.org/about/ats-podcasts/setting-up-a-lab-part-1.php>

Patents and Technology Transfer

None