

CURRICULUM VITAE
University of Pittsburgh
School of Medicine

BIOGRAPHICAL

Name: Janet S. Lee, MD

Business Address: Division of PACCM
MUH 628 NW
3459 Fifth Ave
Pittsburgh, PA 15213

EDUCATION AND TRAINING

UNDERGRADUATE:

1987-1991 The Johns Hopkins University, Baltimore, MD B.A. Natural Sciences
1991

GRADUATE:

1991-1995 Georgetown University, Washington, DC M.D. Medicine
1995

POSTGRADUATE:

1995-1996 Internship, Department of Medicine, University of Alabama at Birmingham,
Birmingham, AL. William Dismukes, MD – Program Director

1996-1998 Residency, Department of Medicine, University of Alabama at Birmingham,
Birmingham, AL. William Dismukes, MD – Program Director

1998-2001 Fellowship, Pulmonary and Critical Care Medicine, University of Washington, Seattle,
WA. Leonard D. Hudson, MD – Program Director

1999-2004 Postdoctoral Fellowship, VA Pulmonary Research Laboratories, University of
Washington, Seattle, WA. Thomas R. Martin, MD –Senior Advisor/Sponsor

APPOINTMENTS AND POSITIONS

Diplomat, Pulmonary Diseases	2000-present, recertified 2010, 2020 till 2030
Diplomat, Critical Care Medicine	2001-present, recertified 2011, 2021 till 2031

MEDICAL LICENSURE:

Alabama, #20164	1996-1998
Washington, #36059	1998-2004
Pennsylvania, #424312	2004-present

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

Member, American Thoracic Society	2000-present
Member, Respiratory Cell and Molecular Biology Assembly, American Thoracic Society	2000-present
Member, ATS Program Committee, Allergy, Immunology, and Inflammation Assembly	2005-2008
Member, American Association for Blood Banks	2011-present
Member, AAI	2011-present
Member, American Thoracic Society Research Advocacy Committee	2011-2016
Member, Advisory Board of the ATS Research Quarterly Newsletter	2012-2016
Member, American Thoracic Society Membership Committee	2013-2015
Elected Member, American Society for Clinical Investigation (ASCI)	2013
Vice Chair, American Thoracic Society Membership Committee	2015-2017
Member, American Thoracic Society Finance Committee	2016
Chair, American Thoracic Society Membership Committee	2017-2019
Member, ATS All Assembly Executive Committee	2017-2019
Member, ATS All Assembly Nomination Committee	2019
Member, ATS All Assembly Planning Committee	2019-2021
Member, ATS Scientific Grant Review Committee	2019-2021
Member, ATS International Task Force Committee	2019-2020
Elected Member, Association of American Physicians (AAP)	2020

HONORS AND AWARDS

Alpha Omega Alpha, Georgetown University	1994
Janet M. Glasgow Memorial Achievement Citation for Scholastic Achievement, AMWA	1995
<i>cum laude</i> , Georgetown University School of Medicine	1995
Outstanding Senior Resident, William E. Dismukes Award of Excellence, University of Alabama at Birmingham	1998
Recipient, American Lung Association Research Grant	2004

(declined upon receipt of AHA grant)	
Recipient, NIH Loan Repayment Program	2004
Vascular Medicine Institute Scholar Award, University of Pittsburgh	2013
PACCM Outstanding Mentor Award, University of Pittsburgh	2015
American Medical Association Women Physicians Section Inspirational Physicians Honoree	2017
American Thoracic Society Recognition Award for Scientific Accomplishment	2020

PUBLICATIONS

Original Peer-Reviewed Articles:

1. **Lee JS**, Kahlon SS, Culbreth R, Cooper Jr. JAD. Modulation of Monocyte Chemokine Production and Nuclear Factor kappa B Activity by Oxidants. *J Interferon Cytokine Res.* 1999;19:761-767 PMID: 10454347
2. **Lee JS**, Caras WE LTC. Pulmonary Vein Varix. *Clinical Pulmonary Medicine.* 2001;8(4):255-256.
3. **Lee JS**, Frevert CW, Wurfel MM, Peiper SC, Wong VA, Ballman KK, Ruzinski JT, Rhim J, Martin TR, Goodman RB. Duffy Antigen Facilitates Movement of Chemokine Across the Endothelium *In Vitro* and Promotes Neutrophil Transmigration *In Vitro* and *In Vivo*. *J Immunology.* 2003, 170: 5244-5251. PMID: 12734373, PMCID: PMC4357319
4. **Lee JS**, Frevert CW, Thorning DR, Segerer S, Alpers CE, Cartron JP, Colin Y, Martin TR, Goodman RB. Enhanced Expression of Duffy Antigen In the Lungs During Suppurative Pneumonia. *J Histochem Cytochem.* 2003; 51(2):159-166. PMID: 12533524
5. Matute-Bello G, **Lee JS**, Frevert CW, Sutlief S, Liles WC, Ballman K, Selk A, Wong V, Martin TR. Optimal Timing to Repopulation of Resident Alveolar Macrophages with Donor Cells Following Total Body Irradiation and Bone Marrow Transplantation in Mice. *J Immunol Methods.* 2004 Sep; 292(1-2):25-34. PMID: 15350509
6. Matute-Bello G, **Lee JS**, Liles WC, Frevert CW, Mongovin S, Wong V, Ballman K, Sutlief S, Martin TR. Fas-mediated Acute Lung Injury Requires Fas Expression on Non-myeloid Cells of the Lung. *J Immunol.* 2005 Sep 15; 175(6):4069-75. PMID: 16148156
7. **Lee JS**, Frevert CW, Matute-Bello G, Wurfel MM, Wong VA, Mongovin S, Goodman RB, Martin TR. TLR-4 pathway mediates the inflammatory response but not bacterial elimination in *E. coli* pneumonia. *Am J Physiol Lung Cell Mol Physiol.* 2005 Nov; 289(5):L731-8. PMID: 16024722
8. Tan RJ, **Lee JS**, Manni ML, Fattman CL, Tobolewski JM, Zheng M, Kolls JK, Martin TR, Oury TD. Inflammatory Cells as a Source of Airspace Extracellular Superoxide Dismutase after Pulmonary Injury. *Am J Respir Cell Mol Biol.* 2006 Feb; 34(2):226-32. PMID: 16224105, PMCID: PMC2644184.
9. **Lee JS***, Wurfel MM, Matute-Bello G, Frevert CW, Rosengart MR, Ranganathan M, Wong VW, Holden T, Sutlief S, Richmond A, Peiper SC, Martin TR. The Duffy Antigen Modifies Systemic and Local Tissue Chemokine Responses Following LPS Stimulation. *J Immunol*

2006 Dec 1; 177(11):8086-94. *corresponding author PMID: 17114483, PMCID: PMC2665269

10. Slebos DJ, Ryter SW, van der Toorn M, Liu F, Guo F, Baty CJ, Karlsson JM, Watkins SC, Kim HP, Wang X, **Lee JS**, Postma DS, Kauffman HF, Choi AMK. Mitochondrial Localization and Function of Heme Oxygenase-1 in Cigarette Smoke-Induced Cell Death. *Am J Resp Cell Mol Biol* Apr; 36(4):409-17, 2007. PMID: 17079780. PMCID: PMC1899328.
11. Matute-Bello G, Wurfel MM, **Lee JS**, Park DR, Frevert CW, Madtes DK, Shapiro SD, Martin TR. Essential Role of MMP-12 in Fas-induced Lung Fibrosis. *Am J Respir Cell Mol Biol* 2007 Aug; 37(2):210-21. PMID: 17446527, PMCID: PMC1976544.
12. **Lee JS***, Rosengart MR, Kondragunta V, Zhang Y, McMurray J, Branch RA, Choi AMK, Scirba FC. Inverse Association of Plasma IL-13 and Chemokines with Lung Function Impairment in Stable COPD: a Cross-Sectional Cohort Study. *Respiratory Research* 2007 Sep 14; 8(1):64. *corresponding author. PMID: 17868461, PMCID: PMC2064925.
13. Chen ZH, Kim HP, Scirba FC, Lee SJ, Feghali-Bostwick C, Stolz DB, Dhir R, Landreneau RJ, Schuchert MJ, Yousem SA, Nakahira K, Pilewski JM, **Lee JS**, Zhang Y, Ryter SW, Choi AM. Egr-1 regulates autophagy in cigarette smoke-induced chronic obstructive pulmonary disease. *PLoS ONE*. 2008 Oct 2; 3(10):e3316. PMID: 18830406, PMCID: PMC2552992.
14. McComb JG, Ranganathan M, Liu XH, Pilewski JM, Ray P, Watkins SC, Choi AM, **Lee JS***. CX3CL1 Upregulation is Associated with Recruitment of CX3CR1⁺ Mononuclear Phagocytes and T Lymphocytes in the Lungs during Cigarette Smoke Induced Emphysema. *Am J Pathol* 2008 Oct; 173(4):949-61. PMID: 18772344, PMCID: PMC2543064.
15. Mangalmurti NS, Xiong Z, Hulver M, Ranganathan M, Liu XH, Oriss T, Fitzpatrick M, Rubin M, Triulzi D, Choi A, **Lee JS***. Loss of Red cell Chemokine Scavenging Promotes Transfusion Related Lung Inflammation. *Blood* 2009 Jan 29; 113(5):1158-66. PMID: 19064726, PMCID: PMC2635081.
16. Bon JM, Leader JK, Weissfeld JL, Coxson HO, Zheng B, Branch RA, Kondragunta V, **Lee JS**, Zhang Y, Choi AMK, Lokshin AE, Kaminski N, Gur D, Scirba FC. The influence of radiographic phenotype and smoking status on peripheral blood biomarker patterns in chronic obstructive pulmonary disease. *PLoS ONE* 2009 Aug 31; 4(8):e6865. PMID: 19718453, PMCID: PMC2730536.
17. Mangalmurti NS, Chatterjee S, Chen GJ, Mohammed A, Anderson E, Siegel DL, Schmidt AM, Albelda SM, **Lee JS***. Advanced glycation endproducts on stored erythrocytes increase endothelial reactive oxygen species generation through interaction with RAGE. *Transfusion*. 2010 May 13. [Epub ahead of print]. PMID: 20492604, PMCID: PMC3010325
18. Mei J, Liu Y, Dai N, Favara M, Greene T, Jeyaseelan S, Poncz M, **Lee JS**, Worthen GS. CXCL5 regulates chemokine scavenging and pulmonary host defense to bacterial infection. *Immunity*. 2010 Jul 23;33(1):106-117. PMID: 20643340, PMCID: PMC3748840
19. Xiong Z, Cavaretta J, Qu L, Stolz DB, Triulzi D, **Lee JS***. Red cell microparticles show altered inflammatory chemokine binding and release ligand upon interaction with platelets. *Transfusion*. 2010 Aug 24. [Epub ahead of print]. PMID: 20738825, PMCID: PMC3963470

20. Xiong Z, Leme AS, Ray P, Shapiro SD, **Lee JS***. CX3CR1⁺ Lung Mononuclear Phagocytes Spatially Confined to the Interstitium Produce TNF- α and IL-6 and Promote Cigarette Smoke Induced-Emphysema. *J Immunol*. 2011 Mar 1;186(5):3206-14. Epub 2011 Jan 28. PMID: 21278339, PMCID: PMC3912553
21. Zhang XH, Tsung A, Guo L, Robert SM, Billiar TR, **Lee JS**, Rosengart MR. Calcium/Calmodulin-dependent Protein Kinase (CAMK) α mediates the macrophage inflammatory response to sepsis. *J Leukocyte Biology*. Epub 2011 March 3. PMID: 21372190 PMCID: PMC3133437
22. Donadee C, Raat N, Tejero J, **Lee JS**, Kelley EE, Zhao XJ, Liu C, Reynolds H, Azarov I, Frizzell S, Meyer EM, Donnenberg AD, Qu L, Triulzi D, Kim-Shapiro DB, Gladwin MT. Nitric oxide scavenging by red cell microparticles and cell free hemoglobin as a mechanism for the red cell storage lesion. *Circulation*. July 11, 2011 [Epub ahead of print]. PMID: 21747051, PMCID: PMC3891836
23. Woodske M, Donahoe M, Yazer M. **Lee JS***. Acute exacerbation of subclinical pulmonary fibrosis following red cell transfusion: a case report. *Transfusion*. 2011 Aug 9. doi: 10.1111/j.1537-2995.2011.03296.x. [Epub ahead of print]; PMID 21827507, PMCID: PMC3214228
24. Azarov I, Liu C, Reynolds H, Tsekouras Z, **Lee JS**, Gladwin MT, Kim-Shapiro DB. Mechanisms of slower nitric oxide uptake by red blood cells and other hemoglobin containing vesicles. *J Biol Chem*. 2011 Sep 23;286(38):33567-79. doi: 10.1074/jbc.M111.228650. Epub 2011 Jul 30. PMID: 21808057 PMCID: PMC3190873
25. Zhao Y, Mangalmurti N, Xiong Z, Prakash B, Guo F, Stolz DB, **Lee JS***. Duffy antigen mediates chemokine endocytosis through a macropinocytosis-like process in endothelial cells. *Plos One*. 2011;6(12):e29624. PMID 22216333, PMCID: PMC3246497
26. **Lee, JS***. Heterogeneity of Lung Mononuclear Phagocytes in Chronic Obstructive Pulmonary Disease. *J Innate Immun*. 2012 May 3. PMID 22572241, PMCID: PMC3804221
27. Xiong Z, Oriss TB, Rosengart MR, **Lee JS***. Red Cell Microparticle Enumeration: Validation Using a Flow Cytometric Approach. *Vox Sanguinis*. 2012 Jan 11. doi: 10.1111/j.1423-0410.2011.01577.x.. PMID 22236393, PMCID: PMC4753527
28. **Lee JS***, Sperry JL, Vodovotz Y, Rosengart MR. Persistence of elevated CXCL8 concentrations following red cell transfusion in a trauma cohort. *Shock*. 2012 Apr;37(4):373-7. PMID 22293598 PMCID: PMC3346279
29. Nouraie M, **Lee JS**, Zhang Y, Kanas T, Zhao XJ, Xiong Z, Oriss TB, Zeng Q, Kato GJ, Gibbs SR, Hildesheim ME, Sachdev V, Barst RJ, Machado RF, Hassell KL, Little JA, Schraufnagel DE, Krishnamurti L, Novelli E, Girgis RE, Morris CR, Rosenzweig EB, Badesch DB, Lanzkron S, Castro OL, Goldsmith JC, Gordeuk VR, Gladwin MT on behalf of the Walk-PHASST Investigators and Patients. The relationship between the severity of hemolysis, clinical manifestations and risk of death in 415 patients with sickle cell anemia in the US and Europe. *Haematologica*. 2012 Sep 14. [Epub ahead of print]. PMID:22983573, PMCID: PMC3659937
30. Shi Y, Cao J, Gao J, Zheng L, Goodwin A, An CH, Patel A, **Lee JS**, Duncan SR, Kaminski N, Pandit KV, Rosas IO, Choi AM, Morse D. Retinoic acid-related orphan receptor- α is induced

in the setting of DNA damage and promotes pulmonary emphysema *Am J Respir Crit Care Med* 2012 Sep 1;186 (5):412-9. PMID: 22744720, PMCID: PMC5450975

31. Mangalmurti N, Friedman J, Wang L, Stolz DB, Muthukumar G, Siegel D, Schmidt AM, **Lee JS**, Albelda S. The Receptor for Advanced Glycation End Products Mediates Lung Endothelial Activation by RBCs. *American Journal of Physiology Lung Cellular and Molecular Physiology* 2012 Dec 14 [Epub ahead of print]. PMID:23275625, PMCID: PMC3567359
32. Poe SL, Arora M, Oriss TB, Yarlagadda M, Isse K, Khare A, Levy DE, **Lee JS**, Mallampalli RK, Chan YR, Ray A, Ray P. STAT1-Regulated Lung MDSC-like Cells Produce IL-10 and Efferocytose Apoptotic Neutrophils With Relevance In Resolution of Bacterial Pneumonia. *Mucosal Immunol.* 2013 Jan;6(1):189-99. PMID:22785228 PMCID: PMC3505806
33. Guo L, Stripay JL, Zhang X, Collage RD, Hulver M, Carchman EH, Howell GM, Zuckerbraun BS, **Lee JS**, Rosengart MR. CaMKI α regulates AMP kinase-dependent, TORC-1-independent autophagy during lipopolysaccharide-induced acute lung neutrophilic inflammation. *J Immunol* 2013 Apr 1;190(7):3620-8. PMID: 23447692, PMCID: PMC3608723
34. Collage RD, Howel GM, ZhangXH, Stripay JM, **Lee JS**, Angus DC, Rosengart MR. Calcium supplementation during sepsis exacerbates organ failure and mortality via calcium/calmodulin-dependent protein kinase kinase (CAMKK) signaling. *Crit Care Med.* 2013 Nov.;41 (11): e 352-60 doi: 10.1097/ccm.0b013e31828cf436. PMID 23887235, PMCID: PMC3812408
35. Helms CC, Marvel M, Zhao W, Stahle M, Vest R, Kato GJ, **Lee JS**, Christ G, Gladwin MT, Hantgan RR, Kim-Shapiro DB. Mechanisms of hemolysis associated platelet activation. *J Thrombosis Haemostasis* 2013 Oct. 1 PMID 24119131 PMCID: PMC3947421
36. Li HH, Li J, Wasserloos KJ, Sullivan MG, Bauer PM, Stolz DB, **Lee JS**, Watkins SC, Pitt BR, Zhang LM. Caveolae-dependent and independent uptake of albumin in cultured rodent pulmonary endothelial cells. *PLOS ONE* 2013 Nov. 27;8(11):e81903. PMID 24312378, PMCID: PMC3842245
37. Zhao Y, Xiong Z, Lechner EJ, Klenotic PA, Hamburg BJ, Hulver M, Khare A, Oriss T, Mangalmurti N, Chan Y, Zhang Y, Ross MA, Stolz DB, Rosengart MR, Pilewski J, Ray P, Ray A, Silverstein RL, **Lee JS***. Thrombospondin-1 triggers macrophage IL-10 production and promotes resolution of experimental lung injury. *Mucosal Immunol.* 2014 Mar;7(2):440-8. doi: 10.1038/mi.2013.63. Epub 2013 Sep 18. PMID 24045574, PMCID: PMC3945733
38. Zhao Y, Olonisakin TF, Xiong Z, Hulver M, Sayeed S, Yu MT, Gregory AD, Kochman EJ, Chen BB, Mallampalli RK, Sun M, Silverstein RL, Stolz DB, Shapiro SD, Ray A, Ray P, **Lee JS***. Thrombospondin-1 regulates neutrophil microbial killing by restraining granule serine proteases during *K. pneumoniae* infection. *Mucosal Immunol.* 2015 Jul;8(4):896-905. PMID: 25492474, PMCID: PMC4465063
39. Bueno M, Lai Y, Romero Y, Brands J, St. Croix C, Kamga C, Corey C, Herzo-Maya J, Sembrat J, **Lee JS**, Duncan SR, Pilewski J, Shiva S, Chu CT, Mora AL. PINK1 deficiency impairs mitochondrial homeostasis promoting lung fibrosis. *J Clin Invest.* 2015;125(2):521–538. PMID: 25562319. PMCID: PMC4319413

40. Balasubramanian KK, Maeda A, **Lee JS**, Mohammadyani D, Tyurin VA, Tyurina YY, Ray P, Klein-Seetharaman J, Mallampalli RK, Bayir H, Fadeel B, Kagan VE. Dichotomous roles for externalized cardiolipin in extracellular signaling: Promotion of phagocytosis and attenuation of innate immunity. *Science Signal*. 2015 Sep 22;8(395):ra95. PMID:26396268, PMCID: PMC4760701
41. Zou C, Synan MJ, Li J, Xiong S, Manni ML, Liu Y, Chen BB, Zhao Y, Shiva S, Tyurina YY, Jiang J, **Lee JS**, Das S, Ray A, Ray P, Kagan VE, Mallampalli RK. Lipopolysaccharide impairs oxygen utilization in lung epithelia by triggering degradation of the mitochondrial remodeling enzyme acyl-CoA:lysocardiolipin acyltransferase 1. *J Cell Sci*. 2016 Jan 1;129(1):51-64. PMID: 26604221, PMCID: PMC4732295.
42. Pinilla-Vera M, Xiong Z, Zhao Y, Zhao J, Donahoe MP, Barge S, Horne WT, Kolls JK, McVerry BJ, Birukova A, Tighe RM, Foster WM, Hollingsworth J, Ray A, Mallampalli R, Ray P, **Lee JS***. Full Spectrum of LPS Activation in Human Alveolar Macrophages by Whole Transcriptomic Profiling. *PLOS ONE* 2016 Jul 19;11(7):e0159329. doi: 10.1371/journal.pone.0159329. eCollection 2016. PMID: 27434537, PMCID: PMC4951018
43. Osei-Hwedieh D, Kanas D, St. Croix C, Jessup M, Xiong Z, Sinchar D, Franks J, Xu Q, Novelli E, Sertorio J, Potoka K, Binder R, Basu S, Belanger M, Kim-Shapiro DB, Triulzi D, **Lee JS***, Gladwin MT*. Sickle cell trait increases storage hemolysis and RBC post-transfusion clearance. *EBioMedicine*. 2016 Aug 4. *co-senior authors. PMID: 27523807, PMCID: PMC5049931
44. Olonisakin T, Li HH, Xiong Z, Kochman E.J.K., Yu MT, Qu Y, Hulver M, Kolls JK, St. Croix C, Doi Y, Nguyen MH, Shanks RMQ, Mallampalli RK, Kagan VE, Ray A, Silverstein RL, Ray P, **Lee JS***. CD36 provides host protection against *Klebsiella pneumoniae* intrapulmonary infection by enhancing LPS responsiveness and macrophage phagocytosis. *J Infectious Dis* 2016 Sep 28. pii: jiw451. [Epub ahead of print]. PMID: 27683817, PMCID: PMC5142085
45. Chen K, Eddens T, Trevejo-Nunez G, Way EE, Elsegeiny W, Ricks DM, Garg AV, Erb CJ, Bo M, Wang T, Chen W, **Lee JS**, Gaffen SL, Kolls JK. Epithelial IL-17R signaling is required for mucosal chemokine gradients and pulmonary host defense against *K. pneumoniae*. *Cell Host & Microbe*. 2016 Nov 9;20(5):596-605. doi: 10.1016/j.chom.2016.10.003. PMID: 27923703, PMCID: PMC5149406
46. Flitter BA, Hvorecny KL, Ono E, Eddens T, Yang J, Kwak DH, Bahl CD, Hampton T, Morisseau C, Hammock BD, Liu X, **Lee JS**, Kolls JK, Levy BD, Madden DR, Bomberger JM. *Pseudomonas aeruginosa* sabotages the generation of host pro-resolving lipid mediators. *Proc Natl Acad Sci U S A*. 2016 Dec 15. pii: 201610242. [Epub ahead of print]. PMID: 27980032, PMCID: PMC5224368
47. Chakraborty K, Raundhal M, Chen B, Morse C, Tyurina YY, Khare A, Oriss TB, Huff R, **Lee JS**, St. Croix CM, Watkins S, Mallampalli RK, Kagan V, Ray A, Ray P. The Mito-DAMP Cardiolipin Blocks IL-10 Production Causing Persistent Inflammation During Bacterial Pneumonia. *Nature Communications* 2017 Jan 11;8:13944. PMID:28074841, PMCID: PMC5241690
48. Ryu H, Choi K, Qu Y, Kwon TH, **Lee JS**, Han JY. Closed-loop Inertial Microfluidics: Airway Secretion Dissociation Technique to Isolate and Concentrate Immune Cells from Clinical Samples. *Anal Chem*. 2017 Apr 21. PMID: 28402103; PMCID: PMC5660608

49. Han SH, Olonisakin TF, Pribis JP, Zupetic J, Yoon JH, Holleran KM, Jeong K, Shaikh N, Rubio DM, **Lee JS**. A Checklist is associated with Increased Quality of Reporting Preclinical Biomedical Research: A Systematic Review. *PLoS one*. Sep 2017; 12(9):e0183591. PMID: 28902887; PMCID: PMC5597130
50. Qu Y, Olonisakin T, Bain W, Zupetic J, Brown R, Hulver M, Xiong Z, Tejero J, Shanks RMQ, Bomberger JM, Cooper VS, Zegans ME, Ryu H, Han J, Pilewski J, Ray A, Cheng Z, Ray P, **Lee JS***. Thrombospondin-1 protects against pathogen-induced lung injury by limiting extracellular matrix proteolysis. *JCI Insight*. 2018 Feb 8;3(3). PMID: 29415890; PMCID: PMC5821195
51. Ryu H, Choi K, Qu Y, Kwon T, **Lee JS**, Han JY. Label-free Neutrophil Enrichment from Patient-derived Airway Secretion using Closed-loop Inertial Microfluidics. *J Vis Exp*. 2018 Jun 7;(136). PMID: 29939191 PMCID: PMC6101596
52. Kitsios GD, Fitch A, Manatakis DV, Rapport SF, Li K, Qin S, Huwe J Zhang Y, Doi Y, Evankovich J, Bain W, **Lee JS**, Methe B, Benos P, Morris A, McVerry BJ. Respiratory microbiome profiling as a diagnostic tool for bacterial pneumonia in mechanically ventilated patients. *Frontiers in Microbiol* 2018 Jul 10;9:1413. PMID: 30042738. PMCID: PMC6048198
53. Dar HH, Tyurina Y, Mikulska-Raminska K, Shrivastava I, Tyurin V, Krieger J, St. Croix C, Watkins S, Bayir E, Ting HC, Mao G, Ogunsola AF, Flitter R, Freedman C, Gaston JR, Holman T, Pilewski J, Greenberger J, Mallampalli R, Doi Y, **Lee JS**, Bahar I, Bomberger J, Bayir H, Kagan V. *Pseudomonas aeruginosa* utilizes host polyunsaturated phosphatidylethanolamines to trigger theft-ferroptosis in bronchial epithelium. *J Clin Invest*. 2018 Oct 1;128(10):4639-4653. PMID:30198910. PMCID: PMC6159971
54. Bain W, Olonisakin T, Yu M, Qu Y, Hulver M, Xiong Z, Li H, Pilewski J, Mallampalli R, Ray A, Ray P, Cheng Z, Shanks R, Alexander W, St. Croix C, Silverstein R, **Lee JS***. Platelets inhibit apoptotic lung epithelial cell death and protect mice against infection-induced lung injury. *Blood Adv*. 2019 Feb 12;3(3):432-445. PMID: 30733303. PMCID: PMC6373758
55. Xie M, **Lee JS**, Crespo M, Fajt ML, Shigemura N, Pilewski JM, Petrov A. Successful Lung Transplantation in a Patient with Chronic Granulomatous Disease. *Journal of Clinical Immunology* 2019 May;39(4):347-349. PMID: 31016643
56. Griepentrog JE, Zhang XH, Lewis AJ, Gianfrate G, Labiner HE, Zou B, Xiong Z, **Lee JS**, Rosengart MR. Rev-Erba links blue light with enhanced immune competence and improved survival in murine *Klebsiella pneumoniae* pneumonia. *J Leukocyte Biol* Aug 4, 2019. <https://doi.org/10.1002/JLB.4HI0519-155R> PMID: 31379019. PMCID: PMC7456460.
57. Kitsios GD, Yang L, Manatakis DV, Nourai M, Evankovich J, Bain W, Dunlap DG, Shah F, Barbash IJ, Rapport SF, Zhang Y, DeSensi RS, Weathington NM, Chen BB, Ray P, Mallampalli RK, Benos PV, **Lee JS**, Morris A, McVerry BJ. Host-Response Subphenotypes Offer Prognostic Enrichment in Patients With or at Risk for Acute Respiratory Distress Syndrome. *Crit Care Med*. 2019 Oct 18. PMID: 31634231. PMCID: PMC6865808 (available on 2020-12-01).
58. Kotok D, Yang L, Evankovich JW, Bain WG, Dunlap DG, Shah F, Zhang Y, Manatakis DV, Benos PV, Barbash IJ, Rapport S, **Lee JS**, Morris A, McVerry BJ, Kitsios GD. The evolution

- of radiographic edema in ARDS and its association with clinical outcomes: a prospective cohort study in adult patients. *J Critical Care* 2020 Apr. PMID: 32028223. PMCID: PMC7136845 (available on 2021-04-01)
59. Bain WG, Li HH, van der Geest R, Kitsios GD, Moore S, Ehinger S, De Sensi R, Rapport S, Saul M, Olonisakin TF, Ahn B, Xiong Z, Mallampalli RK, Ray P, Morris A, Zhang Y, McVerry B, Ferreira V, **Nourai M***, **Lee JS***. Increased Alternative Complement Pathway Function and Improved Survival During Critical Illness. *Am J Resp Crit Care Med*; 2020 May 6. doi: 10.1164/rccm.201910-2083OC..PMID: 32374177. PMCID: PMC7365364
 60. Jiang Y, Rosborough BR, Chen J, Kitsios GD, McVerry GD, **Lee JS**, Ray A, Chen W, Ray P. Single Cell RNA Sequencing Identifies an Early Monocyte Gene Signature in Acute Respiratory Distress Syndrome. *JCI Insight* 2020. PMID: 32554932. PMCID: PMC7406263
 61. Bain W, **Lee JS**, Watson A, Stitts-Fischer M. Practical Guidelines for Collection, Manipulation and Inactivation of SARS-CoV-2 and COVID-19 Clinical Specimens. *Curr Protoco Cytom* 2020 Jun;93(1):e77. doi: 10.1002/cpcy.77. PMID: 32502333. PMCID: PMC7300551
 62. Sun W, Tang Y, Tai Y, Handen A, Zhao J, Speyer G, Al Aaraj Y, Watson A, Romanelli ME, Sembrat J, Rojas M, Simon MA, Zhang Y, **Lee JS**, Xiong Z, Dutta P, Vasamsetti S, McNamara D, McVerry B, McTiernan C, Sciorba F, Kim S, Smith A, Mazurek JA, Han Y, Vaidya A, Nourai M, Kelly NJ, Chan SY. SCUBE1 Controls BMPR2-Relevant Pulmonary Endothelial Function: Implications for Diagnostic Marker Development in Pulmonary Arterial Hypertension. *JACC: Basic to Translational Science* 2020 Nov 4 PMID: 33294740. PMCID: PMC7691287.
 63. Zuchelkowski BE, Wang L, Gingras S, Xu Qinzi, Yang M, Triulzi D, Page GP, Gordeuk VR, Kim-Shapiro DB, **Lee JS**, Gladwin MT. Brief Report: Hydroxychloroquine does not induce hemolytic anemia or organ damage in a "humanized" G6PD A- mouse model. *PLOS ONE* 2020. PMID: 33007039 PMCID: PMC7531777
 64. Bain WG, Penaloza H, Ladinsky M, van der Geest R, Sullivan M, Ross M, Kitsios G, Methe B, McVerry B, Morris A, Watson A, Watkins S, St. Croix C, Stolz D, Bjorkman P, **Lee JS***. Lower respiratory tract myeloid cells harbor SARS-CoV-2 and display an inflammatory phenotype. *Chest* 2020.PMID: 32817968; PMCID: PMC7430612.
 65. Olonisakin TF, Suber T, Gonzalez-Ferrer S, Xiong Z, Peñaloza HF, van der Geest R, Xiong Y, Osei-Hwedie DO, Tejero J, Rosengart MR, Mars WM, Van Tyne D, Perlegas A, Brashears S, Kim-Shapiro DB, Gladwin MT, Bachman MA, Hod EA, St. Croix C, Tyurina Y, Kagan VE, Mallampalli RK, Ray A, Ray P, **Lee JS***. Stressed erythrophagocytosis induces immunosuppression during sepsis through heme-mediated STAT1 dysregulation. *J Clin Invest* 2021 Jan 4;131(1):e137468. doi: 10.1172/JCI137468. PMID: 32941182
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 67. Bain WG, Yang H, Shah F, Suber T, Drohan C, Al-Yousif N, DeSensi Rs, Bensen N, Schaefer C, Somasundaram A, Workman CJ, Lampenfeld C, Cillo AR, Cardello C, Shan F,

- Bruno TC, Vignali D, Ray P, Ray A, Zhang Y, **Lee JS**, Methe B, McVerry BJ, Morris A, Kitsios GD. COVID-19 versus non-COVID-19 ARDS: comparison of demographics, physiology, inflammatory biomarkers and clinical outcomes. *Ann Am Thorac Soc* 2021 Feb 5. doi: 10.1513/AnnalsATS.202008-1026OC. PMID: 33544045
- Peñaloza HF, Olonisakin TF, Bain WG, Qu Y, van der Geest R, Zupetic J, Hulver M, Xiong Z, Newstead MW, Zou C, Alder JK, Ybe JA, Standiford TJ, **Lee JS***. Thrombospondin-1 restricts unbridled neutrophilic inflammation during *Pseudomonas aeruginosa* infection by restraining the extracellular proteolytic environment required for IL-36 γ activation. *mBio* Apr 2021 6;12(2):e03336-20. PMID: 33824208 PMCID: PMC8092289
68. Zupetic J, Penaloza HF, Bain WG, Hulver M, Mettus R, Jorth P, Doi Y, Bomberger J, Pilewski J, Nouraie M, **Lee JS***. Elastase Activity from *Pseudomonas aeruginosa* Respiratory Isolates and ICU Mortality, *Chest* Apr 2021. PMID: 33878342
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70. Yu J, Xu C, **Lee JS**, Alder JK, Wen Z, Wang G, Gil Silva AA, Sanchez PG, Pilewski JM, McDyer JF, Wang X. Rapid postmortem protective ventilation improves donor lung viability by extending the tolerable warm ischemic time after cardiac death in mice. *Am J Physiol Lung Cell Mol Physiol*. 2021 Jul 28. PMID: 34318693
71. Jacobs JL, Bain W, Naqvi A, Staines, B, Da Silva Castanha P, Yang H, Boltz VF, Barratt-Boyes S, Marques ETA, Mitchell SL, Olonisakin TF, Haidar G, Denny T, Woods C, McVerry BJ, **Lee JS**, Watkins SC, St Croix CM, Morris A, Kearney MF, Ladinsky MS, Bjorkman PJ, Kitsios GD, Mellors JW. SARS-CoV-2 viremia is associated with COVID-19 severity and predicts clinical outcomes. *Clin Infect Dis* 2021 Aug 10;ciab686. PMID: 34374761
72. Lai Y, Li X, Li T, Nyunoya T, Chen K, Kitsios GD, Nouraie SM, Zhang Y, McVerry BJ, **Lee JS**, Mallampalli RK, Zou C. LPS promotes the protein stability of Protein Arginine Methyltransferase 4 (PRMT4) to induce lung epithelial cell death. *Cell Death Dis*. 2021 Sep 3;12(9):828. PMID: 34480022
73. Kulkarni H, **Lee JS**, Bastarache J, Kuebler W, Downey G, et al. on behalf of the American Thoracic Society Assembly on Allergy, Immunology and Inflammation. Revised features and measurements of experimental acute lung injury in animals: an official American Thoracic Society workshop report. *Am J Resp Cell Mol Biol* accepted October 19, 2021.
74. Cillo AR, Somasundaram A, Shan F, Cardello C, Workman C, Kitsios G, Ruffin A, Kunning S, Lampenfeld C, Onkar S, Grebinoski S, Deshmukh G, Methe B, Liu C, Andrews L, Duprex WP, Joglekar A, Benos P, Ray P, Ray A, McVerry B, Zhang Y, **Lee JS**, Das J, Singh H, Morris A, Bruno TC, Vignali DAA. Bifurcated monocyte states predictive of mortality outcomes in severe COVID-19. bioRxiv. 2021 Feb 10:2021.02.10.430499. doi: 10.1101/2021.02.10.430499. Preprint. PMID: 33594364. Manuscript in revision *Cell Rep Med* CR-Medicine-D-21-00203R1 Accepted November 10, 2021.

Peer-reviewed editorials, invited reviews and perspectives articles:

75. Goodman RB, Pugin J, **Lee JS**, Matthay MA. Cytokine-Mediated Inflammation in Acute Lung Injury. *Cytokines and Growth Factors Rev.* 2003; 14:523-535. PMID: 14563354
76. **Lee JS**, Gladwin MT. Bad Blood: The Risks of Red Cell Storage. Bedside to Bench Invited Commentary. *Nature Medicine* 2010 Apr;16(4):381-2. PMID:20376046,PMCID: PMC5320870
77. Kim-Shapiro D, **Lee JS**, Gladwin MT. Storage Lesion. Role of Red Cell Breakdown. *Transfusion.* 2011 Apr 51(4):844-851. PMID:21496045, PMCID: PMC3080238
78. **Lee JS**, Kim-Shapiro D. Stored Blood: How Old is Too Old? *J Clin Invest.* 2016 Dec 12. pii: 91309. doi: 10.1172/JCI91309. PMID: 27941251; PMCID: PMC5199682
79. Olonisakin T, **Lee JS***. Fighting Bacterial Pathogens in the Lung: Platelets to the Rescue? *Am J Respir Cell Molec Biol* 2018 Mar;58(3):282-283. doi: 10.1165/rcmb.2017-0349ED. PMID: 29493323; PMCID: PMC5854961
80. Bain WG, **Lee JS***. Ventilator Circuit Trash May Be a Research Treasure. *Am J Resp Crit Care Med.* 2018 Apr 15;197(8):979-980; PMID: 29324185; PMCID: PMC5909169
81. Lewis A, **Lee JS**, Rosengart MR. Translational Sepsis Research: Spanning the Divide. *Critical Care Medicine* 2018 Sep;46(9):1497-1505. PMID:30113370. PMCID: PMC6097250
82. Suber T, Neptune E, **Lee JS**. Inclusion in the pulmonary, critical care, and sleep medicine physician-scientist workforce: building with intention. *ATS Sch* 2020 Aug 12;1(4):353-363. doi: 10.34197/ats-scholar.2020-0026PS.PMID: 33870306; PMCID: PMC8015761
83. Gonzalez-Ferrer S, Penaloza HF, Budnick JA, Bain WG, Nordstrom HR, **Lee JS**, Van Tyne D. Finding Order in the Chaos: Outstanding questions in *Klebsiella pneumoniae* pathogenesis. *Infect Immun.* 2021 Feb 8:IAI.00693-20. doi: 10.1128/IAI.00693-20. Online ahead of print. PMID: 33558323
84. Peñaloza HF, **Lee JS**, Ray P. Neutrophils and lymphopenia, an unknown axis in severe COVID-19 disease. *PLoS Pathog* 2021 Sep 2;17(9):e1009850. PMID: 34473802; PMCID: PMC841227
85. Peñaloza HF, Rick van der Geest, Ybe JA, Standiford TJ, **Lee JS***. Interleukin-36 cytokines in infectious and non-infectious lung diseases. *Frontiers Immunol*, 23 Nov 2021, 12:754702 PMID: 34887860 PMCID: PMC8651476

Peer-reviewed manuscripts under review or in revision:

86. Ren Shuangxia*, Zupetic J*, Tabary M*, Desensi R, Nouriae M, Liu Xinghua, Boyce RD, **Lee JS**. Machine Learning Based Algorithms to Impute PaO₂ from SpO₂ Values and Development of an Online Calculator. MEDRXIV/2021/255877 on 4/21/21. *Scientific Reports* manuscript in revision January 8, 2022.
87. Lai Y, Li X, Li T, Nyunoya T, Chen K, Kitsios GD, Nouriae SM, Zhang Y, McVerry BJ, **Lee JS**, Mallampalli RK, Zou C. Protein Arginine Methyltransferase 4 (PRMT4) contributes to

lymphopenia in experimental sepsis. Manuscript in revision ID: thoraxjnl-2021-217526, July 2021.

88. Peddireddy S, Rahman SA, Cillo AR, Vijay GM, Somasundaram A, Workman C, Bain WG, McVerry BJ, Methe B, Lee JS, Ray A, Bruno TC, Vignali DA, Kitsios GD, Morris A, Singh H, Sarakar A, Das J. Antibodies targeting conserved non-canonical antigens and endemic coronaviruses associate with favorable outcomes in severe COVID-19. Manuscript submitted December 12, 2021.
89. Jacobs JL, Naqvi S, Shah FA, Boltz VF, Kearney MF, McVerry BJ, Ray P, Schaefer C, Fitzpatrick M, Methe B, Lee J, Morris A, Mellors JW, Kitsios GD, Bain WG. Plasma SARS-CoV2 RNA levels as a biomarker of respiratory tract SARS-CoV2 infection in critically ill patients with COVID-19. Manuscript submitted January 19, 2022.

Published proceedings of conferences, books, book chapters, other:

1. **Lee JS.** Review for Books, Films, Tapes & Software on Pulmonary Pathophysiology, 5th edition, *Respiratory Care* 2001; 46:720-721.
2. **Lee JS.** Review on Pulmonary Pathophysiology, 5th edition, *Respiratory Care* 2001; 46(7):720-721.
3. Ning W, **Lee J**, Kaminski N, Feghali-Bostwick CA, Watkins SC, Pilewski JM, Peters DG, Hogg JC, Choi AM. *Proc Am Thorac Soc.* 2006 Aug;3(6):466. PMID: 16921106
4. **Lee JS*** & Donahoe M (Editors.) (2016). *Hematologic abnormalities and Acute Lung syndromes.* (Respiratory Medicine series). New York, NY: Springer. October 2016 and Zhang, P. and **Lee, JS** (2016). The Lung-Blood Interface. In *Hematologic abnormalities and Acute Lung syndromes* (Chapter 1). New York, NY: Springer.

PROFESSIONAL ACTIVITIES

TEACHING:

Translational Research Track Director, Master of Science in Clinical Research program, Institute for Clinical Research Education, University of Pittsburgh appointment July 1, 2014- August 7, 2020. My responsibilities included advising and mentoring junior faculty, clinical fellows, and residents across the School of Medicine who are enrolled in the Translational Research track pathway. I met one-on-one with each MS candidate within the track a minimum of three times per year for 1 to 1.5 hours for course selection and provide guidance for the development of their thesis project. I also provided formal evaluation during their mid-review of core competency requirements and during their Master of Science Thesis Defense as Chair of the thesis committee. I provided guidance for their grant writing and served as a sounding board for their overall scientific and career development outside of their primary mentors.

I co-directed and taught CLRES 2700 Fundamentals of Bench Research

Course dates: July 20-31, 2015, student number 18

Course dates: July 18-29, 2016, student number 20

Course dates: July 17-28, 2017, student number 15

Course dates: July 16-27, 2018, student number 24
Course dates: July 22-August 2, 2019, student number 17
Course dates: July 20-30, 2020, student number 24

I served as the course director for the following courses:

CLRES 2725 Translational Research Practicum within the Translational Research track
Course dates: offered through Spring, Fall, Summer semesters and is a requirement within the Translational Research track. The course typically spans two consecutive semesters for up to 3 credits; one-on-one individualized practicum focused on learning a methodology or technique in mentored laboratory setting, average number of students taught: 1-2 per semester

CLRES 2085 Directed Research/Independent Study within the Translational Research track
Course dates: offered through Spring, Fall, Summer semesters and is a requirement within the Translational Research track. The course typically spans two consecutive semesters for up to 3 credits; one-on-one independent study focused on a project that builds upon basic laboratory skills that translates to clinical cohort or clinical setting, average number of students taught: 1-2 per semester.

Translational Research Track Pathway students:

1. Shahab Shaffiey, MD, Resident in General Surgery, Division of Trauma and General Surgery, Department of Surgery, Matriculation to ICRE MS Program Summer 2013, MS Thesis Defense "*Regulation of the Adaptive Intestinal Response through Wnt and Notch Signaling in Short Bowel Syndrome*" completed April 2015. Graduation December 2015- pursued clinical fellowship in Pediatric Surgery at the University of Pittsburgh. Pediatric Surgeon, Nicklaus Children's Hospital, Miami, FL.
2. Ruchira Jha, MD, T32 Scholar and Fellow in Critical Care Medicine, Department of Critical Care Medicine, Matriculation to ICRE MS Program Summer 2014. Thesis Defense "*Translational assessment of sulfonylurea receptor-1 as a biomarker and therapeutic target for cerebral edema in traumatic brain injury*" completed Aug 2016. Graduation December 2016. Dr. Jha is Associate Professor of Neurocritical Care, Barrow Neurological Institute, Phoenix, AZ.
3. Paschalis Vergidis, MD, K12 Scholar and Assistant Professor, Division of Infectious Diseases, Department of Medicine, Matriculation to ICRE MS program Summer 2014. Submission of two first-author manuscripts for Thesis Defense "*Histoplasmosis complicating tumor necrosis factor-alpha blocker therapy: a retrospective analysis of 98 cases*" and "*Intra-abdominal candidiasis: the importance of early source control and antifungal treatment*", completed October 2016. Graduation December 2016. Dr. Vergidis is clinical faculty member in Infectious Diseases, Mayo Clinic, Rochester, MN.
4. Britanni Seynnaeve, MD, Fellow in Pediatric Hematology Oncology, Department of Pediatrics, Matriculation to ICRE MS Program Summer 2015. MS Thesis Defense "*Pediatric Spitzoid and Atypical Melanocytic Neoplasm Outcome Study*" March 2017- passed. Dr. Seynnaeve is Director, Pediatric Melanoma Program and Assistant Professor of Pediatrics in the Division of Pediatric Hematology Oncology, Children's Hospital of Pittsburgh, PA.
5. Nahmah Kim-Campbell, MD, T32 Scholar and Clinical Instructor, Division of Pediatric Critical Care Medicine, Department of Critical Care Medicine, Matriculation to ICRE MS Program Summer 2014. Submission of two first author manuscripts for Thesis Defense "*Cell-Free Plasma Hemoglobin and Male Gender are Risk Factors for Acute Kidney Injury in Low Risk*"

Children Undergoing Cardiopulmonary Bypass” and “Bioactive Oxylipins in Infants and Children with Congenital Heart Disease Undergoing Pediatric Cardiopulmonary Bypass” October 2017- passed. Dr. Kim-Campbell is Assistant Professor of Pediatrics and Critical Care Medicine, Children’s Hospital of Pittsburgh, PA.

6. Kaitlin Stanley, MD, Fellow in Pediatric Hematology Oncology, Department of Pediatrics, Matriculation to ICRE MS Program Summer 2016. Submission of ASCO grant for Thesis Defense “Defining the Clinical Course and Genomic Landscape of Posttransplant Lymphoproliferative Disorder (PTLD) in Pediatric Intestinal Transplant Recipients. Dr. Kaitlin Stanley is staff physician in the Department of Pediatrics at NYU Lagone Medical Center, New York, NY.
7. Konstantinos Lontos, MD, Fellow in Hematology/Oncology, Department of Medicine, who is pursuing a PhD in Clinical Translational Science. Although not formally within the T1 track pathway, he enrolled and completed CLRES 2725 Translational Research Practicum Fall semester 2018 with project focusing on development of an acute myelogenous leukemia model to study immune response.
8. Carl Koch, MD, Fellow in Pulmonary, Allergy, Critical Care Medicine, Department of Medicine, Matriculation to ICRE MS Program Spring 2015. His project focused on pulmonary hypertension and reduced oral microbial nitrate metabolism capacity. He is Clinical Instructor in the Division of Pulmonary, Allergy, and Critical Care Medicine.
9. Brian Orr, MD, Assistant Professor of Gynecologic Oncology, University of Pittsburgh, Magee-Women’s Hospital, Matriculation to ICRE MS Program Summer 2017. MS Thesis defense “Ovarian Cancer Developmental Therapeutics Platform” completed April 2020. He is Assistant Professor of Gynecologic Oncology, Medical University of South Carolina, Hollings Cancer Center.
10. Amanda Artsen, MD, Fellow in Female Pelvic Medicine & Reconstructive Surgery, Department of Gynecology, Matriculation to ICRE MS Program Summer 2018. MS Thesis Defense (2 manuscript option): “Mesh-induced fibrosis: the protective role of T regulatory cells” and “T regulatory cells and TGF- β : predictors of the host response in mesh complications” completed March 2020. Dr. Artsen is Assistant Professor of Obstetrics and Gynecology, University of Pittsburgh.
11. Marc Gauthier, MD, Instructor in Pulmonary, Allergy, and Critical Care Medicine, Department of Medicine, Matriculation to ICRE MS Program Summer 2018. Marc enrolled in CLRES 2725 during Fall semester 2018-Spring semester 2019 with project focusing on utilization of spirometry and intracellular cytokine signaling in a murine severe asthma model. Dr. Gauthier is Assistant Professor of Medicine, Division of Pulmonary, Allergy, and Critical Care Medicine, University of Pittsburgh.
12. Lauren Huckaby, MD, Resident in General Surgery, Department of Surgery, Matriculation to ICRE MS Program Summer 2018. MS These Defense (2 manuscript option): “Sex-Based Aortic Dissection Outcomes from the International Registry of Acute Aortic Dissection” and “Modeling Aortic Wall Stress from CT- and Echo-Derived Biomechanical Parameters for Clinical Risk Prediction” completed April 2020, graduation May 2020.

Mentorship of Postdoctoral Fellows

1. **Research Supervisor/ Mentor to Nilam Patel Mangalmurti, MD, Pulmonary Research Fellow**, Division of PACCM, meeting approximately 4 h per week, August 2006-2008. 1st authored publication *Blood* 2009 and *Transfusion* 2010, Individual NRSA, Post-doctoral fellowship at U Pennsylvania School of Medicine, and Co-mentor on KO8. Dr. Mangalmurti is Assistant Professor of Medicine in the Division of Pulmonary and Critical Care Medicine, Department of Medicine, University of Pennsylvania. Dr. Mangalmurti was Principal Investigator on a Department of Defense PI-initiated grant (2015-2018) on HMGB1 in transfusion-associated acute lung injury. She was Principal Investigator on a R01 examining the role of RAGE and necroptosis in transfusion-mediated lung inflammation.
2. **Research Supervisor/ Mentor to Jennifer Gonzalez McComb, MD, Pulmonary Research Fellow**, Division of PACCM, meeting approximately 2 h per week, August 2006-June 2008. 1st authored publication *Am J Pathol* 2008. Dr. McComb is Section Chief and Clinical Associate Professor of Medicine at UPMC Shadyside Campus Hospital.
3. **Research Supervisor/Mentor to Brian Hamburg, MD, Pulmonary Research Fellow**, Division of PACCM, meeting approximately 2 h per week, August 2009-June 2011. 1st author of 2011 American Thoracic Society International Conference Abstract, "A Lack of Thrombospondin-1 Predisposes the Lungs to Inflammation following Exposure to Endotoxin." Selected for Poster Discussion session; co-author on *Mucosal Immunol* 2014 manuscript. Dr. Hamburg is in private practice in Ohio following graduation.
4. **Research Supervisor/Mentor to Yani Zhao, MD PhD, Post-doctoral Research Fellow**, Division of PACCM, meeting approximately 3 h per week, January 2010-2014. 1st authored publication *PLoS One* 2011, *Mucosal Immunol* 2013, *Mucosal Immunol* 2014. Promoted to Research Associate 2011. Dr. Zhao entered Pathology Residency Program at NYU, Department of Pathology, 2015. Dr. Zhao entered the Pathology Fellowship Program at NYU Langone Medical Center in 2019.
5. **Research Supervisor/Mentor to Elizabeth Lechner, MD, Pulmonary Research Fellow**, Division of PACCM, meeting approximately 3 h per week, 2012-2014. Dr. Lechner (now Dr. Kochman) was awarded an Individual F32 through the NHLBI for a proposal examining the role of scavenger receptor CD36 in lung inflammation following intra-pulmonary infection with *Klebsiella pneumoniae*. Dr. Lechner declined the F32 and is currently a practicing pulmonary and critical medicine specialist and Member of The Lung Center, Mercy Medical Center/University of Maryland Affiliate Hospitals. She was co-author on *Mucosal Immunol* 2014 and *J Infectious Dis* 2016 papers.
6. **Research Supervisor/Mentor to Zeyu Xiong, MD, Research Associate**, Division of PACCM, meeting approximately 1 h per week, December 2008-current. Promoted to Research Assistant Professor, July 2013. Dr. Xiong has continued to collaborate with Dr. Lee, the author of numerous publications, and is co-investigator on projects focusing on creating cells reporter constructs and mouse genetic tools in the laboratory.
7. **Research Supervisor/Mentor to Yan Yan Qu, PhD, Research Associate**, Division of PACCM, meeting approximately 3 h per week, November 2014- May 2018. Project involves examining the role of matricellular protein thrombospondin-1 in *P. aeruginosa* lung infection. She is first author on *JCI Insight* manuscript 2018 and co-author on several manuscripts. Yanyan accepted a position as Research Scientist in the R&D autoimmunity program at Sanofi in May 2018.

8. **Research Supervisor/Mentor to Hui-Hua Li, MD PhD, Research Associate**, Division of PACCM, meeting approximately 3 h per week, July 2016-2018. Project involves examining the mechanism of CD36-mediated bacterial phagocytosis and LPS responsiveness. He co-authored 3 manuscripts while in the lab. Huihua matriculated into University of Madison/Wisconsin Pathology Residency program in June 2018 and accepted into Thoracic/Pulmonary Pathology Fellowship at the University of Chicago beginning July 2022.
9. **Research Supervisor/Mentor to William Bain, MD, Pulmonary Research Fellow, Division of PACCM**. meeting approximately 1 h per week, March 2017-current. Dr. William Bain pursued research training during his fellowship in the lab. His project involves examining the mechanisms of platelet-mediated protection of the alveolar barrier during pathogen-induced lung injury. He was awarded 1 F32 HL142172 (May 1, 2018), Vascular Medicine Institute institutional award (July 2018, 2019), NIH Loan Repayment Program recipient (August 2018). William Bain is Assistant Professor of Medicine at the University of Pittsburgh and is the recipient of a VA Career Development Award in April 2020.
10. **Research Supervisor/Mentor to Jill Zupetic, MD, Pulmonary Research Fellow, Division of PACCM**. Dr. Zupetic trained as UPMC Resident in Internal Medicine and worked on a project in the lab during her residency from 2015-2016. She co-authored two manuscripts (*PLOS ONE*, *JCI Insight*) during her research time in the laboratory. She entered fellowship program in Pulmonary, Allergy, Critical Care Medicine at University of Pittsburgh in July 2017. Her current project focuses on phenotypic characterization of *P. aeruginosa* ICU respiratory isolates and evaluating the role of endothelial specific thrombospondin-1 in protection and repair of the alveolar barrier in infection and sterile injury models. Dr. Zupetic was selected as one of the Burroughs Wellcome Fund scholars to develop MD-only physicians interested in basic science research pathway through the University of Pittsburgh Physician Scientist Incubator Program Burroughs Wellcome Fund in March 2019. Jill Zupetic is the recipient of an F32 NRSA award and promoted to Instructor in July 2020.
11. **Research Supervisor/Mentor to Hernan Peñaloza Cerda, PhD, Post-doctoral Fellow**, Division of PACCM, meeting approximately 1 h per week, August 2018- current. He received in PhD in Microbiology and Molecular Genetics at Pontificia Catolica de Chile in August 2018. His project focuses on mechanisms of amplified neutrophilic inflammation during proteolytic injury induced by *P. aeruginosa* and the role of platelet-specific thrombospondin-1. He is a recipient of the University of Pittsburgh Vascular Medicine Institute Pilot Project Program in Hemostasis and Vascular Biology grant in August 2020.
12. **Research Supervisor/Mentor to Tomeka Suber, MD PhD, Assistant Professor of Medicine, Division of PACCM**. Dr. Suber was previously working in the laboratory of Dr. Rama Mallampalli, recipient of an F32 and Burroughs Wellcome Fund Enrichment Program. Her research examined FBXO17 as a novel F-box protein targeting Glycogen Synthase Kinase-3 β . Dr. Suber is currently examining the role of Acod1 in host defense against *K. pneumoniae* infection. She was a recipient of a Diversity Supplemental on 2R01 HL142084-02 in May 2019-June 2020, and Winters Foundation grant in 2019. She is a recipient of institutional KL2 in June 2020, and the Harold Amos Medical Faculty Development Program, funded by the Robert Wood Johnson Foundation in August 2020. Dr. Suber received a priority score of 14 on recent K08, October 2021 review.
13. **Lecturer**, Pulmonary Fellows Research Retreat, "Transition to Independence", 2008-2009. Number of students: 6. Lecture time and preparation: 2 h

14. **Lecturer**, Fundamentals in Bench Research Summer Course, Department of Medicine, University of Pittsburgh, 2009. Number of students: ~15. Lecture time and preparation: 2 h

Teaching of Resident Physicians

1. **Research Supervisor/ Mentor to Meghan Fitzpatrick, MD, Medicine Resident UPMC**, October 2008, Total contact hours 5 h/ week (Culminated in accepted co-authored publication *Blood* 2009, accepted to Pulmonary/ Critical Care Medicine fellowship at University of Pittsburgh 2009). Dr. Fitzpatrick is Assistant Professor of Medicine at the University of Pittsburgh and Division Chief, UPMC East Critical Care Medicine.
2. **Research Supervisor/ Mentor to Bharat Ved Prakash, MD, Medicine Resident UPMC Mercy**, June-July 2009. Total contact hours 4 h/week (co-author on 2010 American Thoracic Society International Conference Abstract "Chemokine endocytosis by Duffy antigen is mediated preferentially through cholesterol dependent pathway in endothelial cells." Accepted to Pulmonary/Critical Care Medicine fellowship at Wake Forest University 2011. Co-author on *PLOS ONE* 2011 publication. Dr. Prakash was Assistant Professor in the Department of Internal Medicine – Transmountain, Texas Tech University Health Sciences Center, El Paso, Texas. He is in private practices in Salem, Oregon.
3. **Research Supervisor/Mentor to Miguel Pinilla-Vera, MD, Medicine Resident UPMC International Scholar**, 2013-2016. During his 2nd year of his Medicine Residency, Miguel entered the laboratory Summer 2014. His project focused on identification and validation of novel ubiquitin specific peptidase-41 gene upregulation by whole transcriptomic profiling of human bronchoalveolar lavage cells from healthy volunteers following LPS stimulation. He was 1st author on a manuscript in *PLOS ONE* 2016. He pursued a Cardiology fellowship at the Johns Hopkins University in July 2016.
4. **Research Supervisor/Mentor to Peng Zhang, MD, UPMC International Scholar**, 2014. During her intern year Medicine Residency, she co-authored a chapter on the Lung Blood Interface, part of a textbook Hematologic Abnormalities and Acute Lung Syndromes (now published), Summer 2015. Dr. Zhang pursued Pulmonary fellowship July 2017 at the Cleveland Clinic, Cleveland, OH.
5. **Research Supervisor/Mentor to Brian Ahn, MD, UPMC Medicine Resident**, July 2017. Dr. Ahn's project is examining virulence properties of multi-drug resistant *K. pneumoniae* clinical isolates using an in vitro serum killing assay. He is first author on ATS abstract 8811-Development of Human Serum resistance in carbapenemase-producing *Klebsiella pneumoniae* and persistent bacteremia. C61 Thematic Poster Session, Pulmonary Infections: Clinical Investigations. ATS International Conference, May 22, 2018, San Diego, CA. He entered Pulmonary and Critical Care fellowship at the University of Colorado in Denver, CO in July 2019.

In-Patient Clinical Teaching

1. **Attending Physician**, Harborview Chest Clinic, Harborview Medical Center, Seattle, WA, providing supervision and training of clinical pulmonary fellows rotating through the Chest Clinic, ½ day out of each week, 2002-2003.

2. **Consultant and Attending Physician**, Pulmonary/Critical Care Medicine, Fred Hutchinson Cancer Research Center Inpatient and Outpatient Consultation Service, 2002, providing supervision and training of clinical pulmonary fellows rotating through service, 6 weeks out of the year 2002.
3. **Attending physician**, Medical Intensive Care Unit, Presbyterian Hospital, University of Pittsburgh Medical Center, Pittsburgh, PA, providing supervision, training, and teaching of house staff physicians and clinical fellows rotating through the MICU, 2-4 weeks out of the year, 2004-current.
4. **Attending Physician**, Pulmonary, Allergy, and Critical Care Medicine. Inpatient Respiratory Stepdown/Advanced Lung Diseases/Pulmonary Consult Service, providing supervising and training of clinical pulmonary fellows rotating through service, 2-3 weeks out of the year 2010-2011, 2014-current.

Teaching of Medical School Students

1. **Small group leader**, Respiratory System classroom teaching for ~6-8 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours=~6-8, October 2004.
2. **Small group leader**, Respiratory System classroom teaching for ~6-8 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours=~6-8, October 2005. Evaluation 4.0 on a scale of 1-5.
3. **Small group leader**, Respiratory System classroom teaching, for ~6-8 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours=~6, October 2007. Evaluation 4.7 on a scale of 1-5.
4. **Small group leader**, Respiratory System classroom teaching, for ~8 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours= 10, October 2008. Evaluation 4.7 on a scale of 1-5.
5. **Lecturer**, "Respiratory Failure", Pulmonary Section of Body Fluid Homeostasis Course, University of Pittsburgh School of Medicine, Pittsburgh, PA, October 2008. Number of students: 2nd year medical student class; total contact hours: 1. Evaluation 3.7 on a scale of 1-5.
6. **Small group leader**, Respiratory System classroom teaching, for ~6-8 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours= 10, October 2009. Evaluation 4.7 on a scale of 1-5.
7. **Lecturer**, "Respiratory Failure", Pulmonary Section of Body Fluid Homeostasis Course for 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, October 2009. Number of students: 2nd year medical student class; total contact hours:1. Evaluation 5 on a scale of 1-5.
8. **Lecturer**, "Respiratory Failure", Pulmonary Section of Body Fluid Homeostasis Course for 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA,

October 2010. Number of students: 2nd year medical student class; total contact hours:1. Evaluation = 3.8 on a scale of 1-5.

9. **Small group leader**, Respiratory System classroom teaching, for eight 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours= 10, October 2010. Evaluation= 4.1 on a scale of 1-5.
10. **Small group leader**, Body Fluid Homeostasis Respiratory System small classroom teaching for ~8 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours =3, October 29th and 30, 2012.
11. **Career Advisor for Medical Student Bhavana Vangara, Physician Scientist Training Program (PSTP)**, University of Pittsburgh School of Medicine, October 2011 to present, bi-annual face to face meetings. Graduated May 2016, Preliminary- Dept. of Medicine, Baylor College of Medicine; Residency- Radiation Oncology, MD Anderson Medical Center, Houston, TX.
12. **Guest expert** "Research Basis of Medical Knowledge" MSTP/PSTP Journal Club, Presenter MSTP candidate: Neil Jeremiah, University of Pittsburgh School of Medicine, 2010 on article "Extracellular superoxide dismutase protects against pulmonary emphysema by attenuating oxidative fragmentation of ECM" Proc Natl Acad Sci U S A. 2010 Aug 31;107(35):15571-6.
13. **Guest expert** "Research Basis of Medical Knowledge" MSTP/PSTP Journal Club, Presenter PSTP candidate: Erin Cummings, University of Pittsburgh School of Medicine, October 31, 2012 on article "Early infection with respiratory syncytial virus impairs regulatory T cell function and increases susceptibility to allergic asthma" PMID: 22961107
14. **Guest expert** "Research Basis of Medical Knowledge" MSTP/PSTP Journal Club, Presenter PSTP candidate: Ahmed Basim Al-Khafaji, University of Pittsburgh School of Medicine, October 16, 2013 on article "Suppression of inflammation and acute lung injury by Miz1 by repression of C/EBP- δ " PMID:23525087
15. **Faculty grant reviewer** for Medical Student Ahmed Basim Al-Khafaji, Physician Scientist Training Program, University of Pittsburgh School of Medicine, Fall-Winter 2013.
16. **Research Mentor for Medical Student Tolani Olonisakin, Medical Scientist Training Program (MSTP), University of Pittsburgh School of Medicine**, PSTP program, 2014-2017; entered MSTP 2017-current. Tolani received a HHMI Medical Research Fellows Award 2015-2017 for a project on blocking platelet thrombospondin-1 and neutrophil serine protease interaction to enhance bacterial killing of *Klebsiella pneumoniae*. Tolani Olonisakin received an ATS Minority Trainee Travel award in 2015, the ATS Allergy, Immunology, and Inflammation Assembly Travel Award and the TYLENOL Future Care Scholarship award in 2016. Tolani received an ATS Minority Trainee Travel award and was awarded the AAAS/Program for Excellence in Science in 2017. Tolani matriculated into the MSTP program at University of Pittsburgh SOM 2017. Tolani was selected as one of 600 young scientists around the world to attend the 68th Lindau Nobel Laureate Meeting (#LINO18) in Lindau, Germany June 2018 dedicated to physiology and medicine and meet 41 laureates. Tolani was awarded a pre-doctoral award from the American Heart Association #18PRE3396033, July 2018-June 2020. She is recipient of the ATS Allergy, Immunology, and Inflammation Assembly Travel Award in 2019. Her PhD through the Cellular Molecular Pathology graduate program was on the mechanism of impaired host immunity in *K. pneumoniae* sepsis during

heightened RBC disposal by macrophages (conferral of PhD in April 2020). Her manuscript which is the basis of her dissertation defense was accepted in JCI September 2020. She has 3 first-authored, and 5 co-authored publications.

17. **Career Advisor for Medical Student Brian Rosborough, Medical Scientist Training Program (MSTP)**, January 2014- May 2016, face to face meetings each semester. Graduated program May 2016, accepted to Internal Medicine Residency Program, Massachusetts General Hospital July 2016. Fast tracked into the Medicine Residency Program in Pulmonary, Allergy, Critical Care Medicine Fellowship, UPMC, July 2017.
18. **Guest faculty member**, MSTP class reviewing “Thrombospondin-1 triggers macrophage IL-10 production and promotes resolution of experimental lung injury”. *Mucosal Immunol.* 2014 Mar;7(2):440-8. PMID 24045574. June 30, 2014.
19. **Career Advisor for Medical Student Elizabeth Megan Kenny, Physician Scientist Training Program (PSTP)**, University of Pittsburgh School of Medicine, August 2014-2017, bi-annual face to face meetings.
20. **Career Advisor for Medical Student Matthew Amdahl, Medical Scientist Training Program (MSTP)**, November 2014 -2018, bi-annual face to face meetings. Contact hours: 3/yr. Graduated SOM 2020. Clinician Investigator Program at the Mayo Clinic (Internal Medicine Residency, with fellowship in Cardiology).
21. **Career Advisor for Medical student George Gabriel, Medical Scientist Training Program (MSTP)**, May 2015-current, face to face meetings each semester. Contact hours: 3/yr
22. **Career Advisor for Medical student Alison Butler, Medical Scientist Training Program (MSTP)**, May 2016-2018, bi-annual face to face meetings. Contact hours: 2/yr
23. **Guest faculty member**, PSTP Professional Development I: Molecular Medicine lecture series, University of Pittsburgh School of Medicine, July 12, 2016. Contact hours: 1 total
24. **Research Supervisor for Medical student Jacob Jerome, Physician Scientist Training Program**, University of Pittsburgh School of Medicine, summer rotation 2016. Jake’s project was examining human bronchial airway epithelial cell responses to *P. aeruginosa* type II exoproduct-mediated injury.
25. **Small group leader**, Body Fluid Homeostasis Respiratory System small classroom teaching for nine 2nd year medical students, University of Pittsburgh School of Medicine, Pittsburgh, PA, total contact hours =1, November 1, 2016.
26. **Research Supervisor for Medical student Rebecca Brown, Physician Scientist Training Program**, University of Pittsburgh School of Medicine, summer rotation 2017. Rebecca Brown was involved in a project evaluating the cellular source of early IL17-A production in *P. aeruginosa* lung injury focusing on innate lymphocyte populations. She is co-author on *JCI Insight* manuscript 2018; PMID: 29415890.
27. **Guest faculty member**, PSTP Professional Development I: Molecular Medicine lecture series, University of Pittsburgh School of Medicine, June 20, 2017. Contact hours: 1 total

28. **Guest expert**, "Research Basis of Medical Knowledge" MSTP/PSTP Journal Club, Presenter PSTP candidate: Jake Jerome and Aneta Kowalski, University of Pittsburgh School of Medicine, October 24, 2017 on article "Brown-adipose-tissue macrophages control tissue innervation and homeostatic energy expenditure" PMID:28459435. Contact hours: 3 total.
29. **Guest faculty member**, PSTP Professional Development I: Molecular Medicine lecture series, University of Pittsburgh School of Medicine, July 10, 2018. Contact hours: 1 total.
30. **Guest faculty member**, PSTP Professional Development I lecture series, University of Pittsburgh School of Medicine, July 16, 2019. Contact hours: 1.5 total.
31. **Career Advisor for Medical student Julia Knight, Physician Scientist Training Program (PSTP)**, May 2020. Contact hours: 1

Teaching of Graduate Students

1. **Graduate Student Project Supervisor to Morgan DiLeo, Independent Study in Bioengineering**, Neutrophil –Chemokine Interactions During Sepsis. University of Pittsburgh School of Bioengineering, Pittsburgh, PA. Total contact hours 1 h/week, Spring semester 2009. Course= 3 credits. Dr. DiLeo Fedorchak is Assistant Professor of Ophthalmology, Chemical Engineering, and Clinical and Translational Science and the Louis J. Fox Center for Vision Restoration at the University of Pittsburgh School of Medicine.
2. **Co-mentor for PhD Candidate in Pharmacology/Chemical Biology, David Osei-Hwedieh**, 2013-2016. PhD thesis defense on "The effect of sickle hemoglobin mutation on red blood cell storage integrity and post transfusion viability", December 15, 2015. David was awarded an ATS Minority Travel award in 2016 for his abstract on storage effects of sickle cell trait blood which was subsequently published with him as 1st author in *eBioMedicine* 2016. David matriculated into the University of Pittsburgh School of Medicine in Fall 2016.
3. **Thesis Committee Member, PhD Candidate in Immunology, Abigail Overacre-Delgoffe**, 2015-current. Mentor: Dario Vignali, PhD. Department of Immunology, University of Pittsburgh. PhD Thesis Defense, "Intrinsic and extrinsic drivers of T_{reg} fragility in the tumor microenvironment", February 20, 2018.
4. **Thesis Committee Member, PhD Candidate in Environmental and Occupational Health, Rahel Birru**, 2015. Mentor: George Leikauf, PhD. Department of Environmental and Occupational Health, School of Public Health, University of Pittsburgh. PhD Thesis Defense, "Phloretin, an apple polyphenol, modulates the pathogenicity of chronic obstructive pulmonary disease associated bacteria", July 15, 2019.
5. **Thesis Committee Member, PhD Candidate in Bioengineering, Catalina Pineda Molina**, Fullbright Scholar-CLAS Scholar. Fall 2017. Mentor: Steve Badylak, PhD. McGowan Institute for Regenerative Medicine, University of Pittsburgh. PhD Thesis Defense, "Characterization of the host tissue response induced by a biosynthetic material composed of Poly (4-hydroxybutyrate)", June 28, 2018.
6. **Research supervisor/primary mentor for Rick van der Geest**, graduate student researcher, Molecular and Cellular Pathology Graduate School Program, University of Pittsburgh, laboratory rotation March 26 – May 26, 2018. Rick entered the laboratory June

2018 focusing on the role of CD36 in heterotypic receptor signaling during *K. pneumoniae* infection. Recipient of ATS Allergy, Immunology, and Inflammation Assembly Travel Award to ATS International Conference 2019. PhD Comprehensive Exam, "Role of BATF2 in *Klebsiella pneumoniae* infection", August 28, 2019: passed.

7. **Thesis Committee Member, PhD Candidate in Program in Microbiology and Immunology, Ellyse Cipolla.** Spring 2019. Mentor: John Alcorn, PhD. Rangos Research Institute, University of Pittsburgh. PhD Comprehensive Exam, "Influence of checkpoint receptors on changes in effector molecule production during acute influenza-associated super-infection.", April 12, 2019: Passed.
8. **Research supervisor/primary mentor for Shekina Gonzalez-Ferrer (co-mentor: Dr. Daria Van Tyne),** graduate student researcher, Program in Microbiology and Immunology, University of Pittsburgh, May 2019. She entered the lab in May 2020. PhD Comprehensive Exam, "heme-mediated STAT1 dysregulation during *K. pneumoniae* infection.", January 2021: Passed.
9. **Co-mentor for Phillip Mannes, MSTP student and graduate student researcher, Molecular Cellular Pathology Program (primary mentor: Dr. Sina Tavakoli, Department of Radiology),** May 2020. His project is Molecular Imaging of the ChemR23-Chemerin Axis in Acute Lung Injury. Phillip Mannes was awarded an F30 in April 2021.
10. **Thesis Committee Member, PhD Candidate in Program in Microbiology and Immunology, Dani Antos.** Spring 2021. Mentor: John Alcorn, PhD. Rangos Research Institute, University of Pittsburgh.
11. **Research supervisor for Delmaliz Barreto Vasquez,** graduate student researcher, Program in Environmental Occupational Health, Graduate School of Public Health, University of Pittsburgh, Spring Rotation 2021.
12. **Thesis Committee Member, Benjamin Zuchelkowski,** CSTP student and MS Candidate in Clinical and Translational Science, Institute for Clinical Research Education, University of Pittsburgh, April 29, 2021. Degree conferred May 2021.
13. **Thesis Committee Member, Benjamin E. Zusman,** CSTP student and MS Candidate in MS Candidate in Clinical and Translational Science, Institute for Clinical Research Education, University of Pittsburgh, April 19, 2021. Degree conferred May 2021.
14. **Research supervisor for Nathalie Dai Chen,** MSTP Student, University of Pittsburgh School of Medicine, Summer Rotation 2021.
15. **Co-mentor for Justin Sui, MSTP student and graduate student researcher, Molecular Cellular Pathology Program (primary mentor: Dr. Corrine Kliment, Department of Medicine),** July 2021. His project is on Mitochondrial ANT proteins in cigarette-smoke induced inflammation.
16. **Research supervisor for Alexis McCollum,** Graduate Student, Program in Microbiology and Immunology, University of Pittsburgh, Fall Rotation 2021.

17. **Thesis Committee Member PhD Candidate in Program in Microbiology and Immunology, Jorna Sojati.** Fall 2021. Mentor: John Williams, MD. Rangos Research Institute, University of Pittsburgh.

Teaching of Undergraduate Students and High School Students, Summer Research Fellowships

1. **Research supervisor to Heather Metz, University of Pittsburgh Undergraduate,** 2005-2006. (1st author on abstract, "Differential Expression of Chemokine Fractalkine/CX3CL1 and Angiogenic Factor CYR61 in In Vivo and In Vitro Models of Cigarette Smoke Exposure" presented at American Thoracic Society International Conference, San Diego, CA 2006). Heather received her PhD from the University of Pittsburgh Cellular Molecular Pathology Program in 2015.
2. **Research Supervisor to Maura Lewandowski, 11th grade high school student,** Callomon Internship, The Ellis School, Pittsburgh, PA. To provide initial exposure to high school students interested in a combined career in basic research and clinical medicine, June 15-July 15 2009, Total contact hours 3 h/week.
3. **Research Supervisor to Min Ting Yu, University of Pittsburgh Undergraduate.** Min Ting was a first-generation college student interested in basic research and clinical medicine in my laboratory during Summer 2013, Summer 2014, Fall 2014-Spring 2015. Total contact hours: 1 h/week. Min Ting Yu was co-author on *Mucosal Immunol* 2015, *J Infectious Dis* 2016 papers. She was awarded the Summer Undergraduate Research Program (SURP) Fellowship award 2015 through the Interdisciplinary Biomedical Graduate Program at the University of Pittsburgh School of Medicine. Min Ting Yu was awarded the University of Pittsburgh Honors College Breckenridge Fellowship for Summer 2015 but declined due to acceptance into the SURP SOM program. She received the Klionsky Summer Research Fellowship in 2016 and matriculated as a medical student Fall 2016 at the University of Pittsburgh School of Medicine. Her abstract to the Dean's Summer Research Program (DSRP) 2017 received the Stephen Phillips Award for basic science and selected for oral presentation. Min Ting pursued her medical school scholarly project focused studies of epithelial cell death through the *P. aeruginosa* type II secretion exoproducts. She is co-author on *Blood Adv* 2019 for her work on live cell imaging of MLEC and in vitro cell death assays and was co-mentored by Dr. William Bain. She graduated from the SOM April 2020, and currently pursuing Internal Medicine Residency at the University of Pittsburgh Medical Center.
4. **Research Supervisor to Jason Darell, Amherst College Undergraduate.** Summer Undergraduate Research Program (SURP) Fellowship student for Summer 2016 through the Interdisciplinary Biomedical Graduate Program at the University of Pittsburgh School of Medicine.
5. **Research Supervisor to Yasmeen Mahady, Virginia Commonwealth University Undergraduate.** Pittsburgh Undergraduate Research Diversity Program (PURDiP) student for Summer 2017 through the Center for Translational and International Hematology, Vascular Medicine Institute, University of Pittsburgh School of Medicine.
6. **Research Supervisor Breyanah Graham, Xavier University of Louisiana Undergraduate.** Pittsburgh Undergraduate Research Diversity Program (PURDiP) student

for Summer 2018 through the Center for Translational and International Hematology, Vascular Medicine Institute, University of Pittsburgh School of Medicine.

7. **Research Supervisor to Lauren Rank, Des Moines University School of Osteopathic Medicine, OMS-1.** Klionsky Summer Research Fellowship, Pathology Graduate Program and Summer Undergraduate Research Program 2018.
8. **Research Supervisor to Sarah Gimbel,** High School student, Summer 2021.

RESEARCH:

Current Grant Support:

2R01 HL136143-05 **Lee, Janet S. (PI)** **08/01/17-08/31/25**

NIH/NHLBI

Mechanisms of Host Protection against Pathogen-Secreted Proteases in Acute Lung Injury

Annual Direct: \$368,736

The broad, long term objective is to identify host-protective mechanisms that counter pathogen-initiated lung inflammation and injury utilizing acute *Pseudomonas aeruginosa* lung infection as a model system.

Role: PI

5R01 HL136143-03S1 **Lee, JS (PI)** **05/18/20 - 06/30/21 (Requested carryover with parent R01 renewal)**

NIH/NHLBI

Understanding mechanisms of vaping-associated lung injury

Annual Direct: \$275,000

This is an administrative supplemental to the existing R01 *Mechanisms of Host Protection Against Pathogen-Secreted Proteases in Acute Lung Injury*

Role: PI

5R01 HL142084-04 **Lee, Janet S. (PI)** **04/01/2018-03/31/2022**

NIH/NHLBI

Host Control Mechanisms of K. pneumoniae in the Lungs

Annual direct: \$250,000

The broad, long term objective is to define distinct host determinants that control *K. pneumoniae* (KP) infection. The major hypothesis is that the scavenger receptor CD36 is pivotal in the proximal control of macrophage effector cytokine responses and phagocytosis to amplify host defense against *K. pneumoniae* in the lungs.

Role: PI

5R01 HL142084-03S1 **Lee, JS (PI)** **07/15/20-03/31/22**

NIH/NHLBI

Infection as a Risk Factor for Dementia: Role of CD36

Annual direct: \$250,000

This is an administrative supplemental to existing R01 *Mechanisms of Host control mechanisms against K. pneumoniae infection in the lungs*

Role: PI

5P01HL114453-08 **Mallampalli, R (PI)** **04/01/2019 – 04/30/2024**

NIH/NHLBI

Immunosuppression in Acute Lung Injury

Project 4: Mechanisms of Impaired Macrophage Function in Lung Injury

Annual Direct: \$250,000

The focus of Project 4 is to examine the major hypothesis that macrophage dysfunction characterized by defects in interferon signaling marks the host for an immunosuppressive fate during infection due to impaired cytokine response, microbial killing, and complement activity.

Role: Project 4 PI (awarded as subaccount through Ohio State University)

5K24 HL143285-02 Lee, Janet S. (PI) 04/01/2019-04/30/2024

NIH/NHLBI

Patient-Oriented Research in Acute Lung Injury and Host Defense in the ICU

Annual Direct: \$109,487

The overall goal of this application is to build and expand research and mentoring programs in patient-oriented research in acute lung injury and host defense focused on translational studies in acute lower respiratory tract infections.

Role: PI

5R01HL098032-13 Gladwin MT, Kanias T, Kim-Shapiro D (MPI) 08/05/18-06/30/22

NIH/NHLBI

Omics, Mice and Men: Development of Precision Transfusion Medicine

The focus of this proposal centers on the hypothesis that variability in donor RBC stability and function during cold storage and post-transfusion recovery is more dependent on the donor, than to the actual time the unit is in storage.

Role: Co-I (% effort only)

5 R38 HL150207-02 Lee, Janet S. and Field, Jessica (MPI) 02/15/20-01/31/24

NIH/NHLBI

Pittsburgh Innovation in Collaborative Training of Residents Alliance

Annual Direct: \$220,408

This application is in response to RFA HL18-023 Stimulating Access to Research in Residency (StARR) (R38). The purpose is to train resident investigators interested in pursuing research that is broadly aligned with NHLBI strategic vision and match them with research preceptors within the Departments of Medicine, Pediatrics, Pathology and Surgery and the University of Pittsburgh.

Role: Contact PI

5R21HL148088-02 Lee, Janet S. and Nouraie, Seyed (MPI) 08/09/2020-05/31/2022

Evaluation of alternative complement activity within an ARDS cohort

Annual Direct: \$79,403

The goal is to evaluate complement components and activity in biosamples from ARDSNet studies and correlating with patient outcomes.

Role: Contact PI

Pending Grant Support:

1R01 GM1145674-01 Rosengart, Matthew R. (PI) 4/1/2022-3/31/2027

The role of circadian clock proteins in innate and adaptive immunity

Role: Co-investigator (1.2 calendar months)

Percentile: 10%

Prior Grant Support:

3R01 HL142084-02S1 Lee, Janet S. (PI) 04/01/2018-05/31/2021

NIH/NHLBI

The Role of Acod1 in Immunomodulation in intrapulmonary Klebsiella pneumoniae infection

Annual direct: \$135,900

This is a diversity supplemental grant for a junior faculty member and trainee, Dr. Tomeka Suber, who is studying pulmonary host defense and lung injury using gram-negative bacteria pneumonia as a model system.

Role: Mentor Effort: 0%

P01HL114453 Mallampalli, R (PI) 01/03/2014 – 04/31/2019

(Project 3: 1.2 calendar; Core A: 0.36 calendar)

NIH/NHLBI

Cardiolipin as a Novel Mediator of Acute Lung Injury

\$1,321,749

Project 3: Dysregulation of innate immune response in bacterial pneumonia by cardiolipin.

The focus of Project 3 is to examine the mechanism by which the novel DAMP cardiolipin compromises host immunity in the lungs by suppressing production of the anti-inflammatory cytokine IL-10.

Role: Co-I on Project 3 (PI on Proj. 3: Ray, P); Administrative Core

5R01HL086884-10 Lee, JS (PI) 04/05/13-03/31/19

NIH/NHLBI

Red cell transfusion: Modifier of Systemic and Lung Inflammatory Responses

Annual Direct: \$ 260,168

Utilizing red cell transfusion as a relevant model to study injury in the lungs, this project aims to better understand regulatory mechanisms employed by mononuclear phagocytes to curtail innate immune activation following exposure to injurious stimuli.

Role: PI

5R21AI119042-02 Lee, JS (PI) 06/15/2015- 05/31/2018

NIH/NIAID

Enhancing Neutrophil Responses to Counter MDR Gram Negative Bacterial Pneumonia

Annual Direct: \$150,632

The focus of this proposal examines whether blocking interaction of the extracellular protease inhibitor thrombospondin-1 can enhance neutrophil granule serine protease activity and microbial killing of multi-drug resistant Gram-negative pathogen *K. pneumoniae*.

Role: PI

1R13HL134193-01 Ray, A and Lee, JS (co-PI) 08/01/16-07/31/17

NIH/NHLBI

Conference

LUNG IMMUNE RESPONSES AND INFLAMMATION IN HEALTH AND DISEASE

Annual Direct: \$25,000

This application requested partial funding for the 2016 Pittsburgh-Munich Lung Conference entitled "Lung Immune Responses and Inflammation in Health and Disease." The conference was held on October 5-7, 2016, at the University Club in Pittsburgh, PA.

Vascular Medicine Institute Scholar Lee, JS (PI) 07/01/13-6/30/18

Institute for Transfusion Medicine

Hemostasis and Vascular Biology Research Institute

Total Direct: \$250,000

The project aims to determine the molecular mechanisms underlying clinically important biomedical problems of hemostasis, thrombosis, transfusion medicine and vascular biology.

Role: PI

Cystic Fibrosis RDP Frizzell, R (PI) 07/01/15-06/30/17 0.6 calendar

Translational Pilot Project

Regulation of neutrophilic inflammation in Cystic Fibrosis

Annual Direct: \$80,000 for Translational Project component of RDP

The main goal of this proposal is to examine a novel endogenous inhibitor of neutrophil serine proteases (NSPs) such as neutrophil elastase called thrombospondin-1 (TSP-1) in its ability to alter neutrophil microbial killing of *Pseudomonas aeruginosa*.

Role: Janet S. Lee, MD (PI for the Translational Project)

8 UL1 RR024153-09 (Kapoor) 07/01/11 - 06/30/16 1.2 calendar

NCRR

University of Pittsburgh Clinical and Translational Science Institute (Research Education Core)

\$1,061,496 (Salary support only)

The specific aims of Core C are 1) to provide early exposure to clinical and translational science to increase interest in this discipline 2) to educate all predoctoral students in the Schools of the Health Sciences to the basics of the CTS discipline; 3) to provide opportunities for concentration through certificate; 4) to offer advanced degrees, including PhDs for individuals who will become future leaders in cts; 5) to provide opportunities for faculty to hone their skills relevant to the teaching and conduct of clinical and translational research; and 6) to provide education and training opportunities along the entire pipeline of individuals in training to become academicians.

Role: T1 Translational Track Director for the Masters of Science in Clinical and Translational Research

Hemostasis and Vascular Biology Grant Lee, JS (PI) 07/1/10-06/31/16 Vascular Medicine Institute, Hemophilia Center of Western Pennsylvania, and the Institute of Transfusion Medicine

Role of Red Cell Microparticles in Altering Innate Immune Response Following Transfusion

Total direct: \$25,000

The proposed studies focus upon storage-related red cell microparticles, and microparticle interactions with mononuclear phagocytes in altering inflammation.

Role: PI

Breathe Pennsylvania Research Grant Lee, JS (PI) 11/01/13-06/31/16

Immunophenotyping Lung Mononuclear Phagocytes in Chronic Obstructive Pulmonary Disease

Annual Direct: \$10,000

This is a continuation of project to identify distinct chemokine receptor and scavenging receptor signatures expressed by alveolar mononuclear phagocytes of former smoking COPD and normal control subjects.

Role: Janet S. Lee, M.D., PI; Michael P. Donahoe, M.D., co-PI (1%, cost-share)

113033 Clinical Innovator Award Lee, JS (PI) 07/01/12-10/31/15

Flight Attendants Medical Research Institute

CX3CR1 and Lung Inflammation by Second Hand Smoke

Annual direct: \$100,000

The focus of this proposal is to identify the signaling properties of a discrete subset of lung mononuclear phagocytes identified by the surface expression of the chemokine receptor CX3CR1 that propagates the abnormal inflammatory signature characteristic of COPD.

Role: PI

Healthy Lungs Pennsylvania Research Grant

Immunophenotyping Lung Mononuclear Phagocytes in Chronic Obstructive Pulmonary Disease

Janet S. Lee, M.D., PI ; Michael P. Donahoe, M.D., co-PI (1%, cost-share)

3/1/12-2/28/13

Annual Direct: \$10,000

This is a small pilot project to identify distinct chemokine receptor and scavenging receptor signatures expressed by alveolar mononuclear phagocytes of former smoking COPD and normal control subjects.

R01HL086884-05 (NIH/NHLBI)

Duffy Antigen: Modifier of Systemic and Lung Chemokine Responses in Inflammation.

Janet Lee, M.D., PI

7/1/07-4/01/13

Annual Direct: \$250,000

The major goal of this project is to better understand the role of red cell and endothelial Duffy antigen in influencing chemokine networks that mobilize phagocytes into the lungs during inflammation.

Clinical Innovator Award (Flight Attendant Medical Research Institute)

Lung Activation of CX3CL1 During Second Hand Smoke

Janet Lee, MD, PI

7/1/09-6/31/12

Annual Direct: \$100,000

R01HL086884-03S1 (NIH/NHLBI)

Duffy Antigen: Modifier of Systemic and Lung Chemokine Responses in Inflammation

Janet S. Lee, M.D., PI

07/01/09-05/31/12

Annual Direct: \$85,123

P50 HL084948-03 (NIH/NHLBI)

Molecular and Cellular Determinants of Disease Heterogeneity in COPD - Project 1

Frank C. Scirba, M.D., PI.

Janet Lee, M.D., Co-Investigator

1/12/07 - 1/31/11

Annual Direct: \$4,053 (salary support only)

R01HL085547-01A2 (NIH/NHLBI subcontract through Brigham and Women's Hospital)

Egr-1: Regulator of Apoptosis and Inflammation in COPD

Augustine M.K. Choi, M.D., PI

Janet S. Lee, M.D., Co-investigator

07/01/09-6/30/11

Annual Direct: \$36,742

Junior Scholar Award (University of Pittsburgh, Department of Medicine)

This project focuses upon determining the mechanism underlying neutrophil recruitment to the lungs following transfusion of erythrocyte concentrates in a murine model of sepsis.

Janet Lee, M.D., PI

9/1/07-8/31/09

Annual Direct: \$35,000

NIH K08 HL070178 (NIH/NHLBI)

Role of endothelial Duffy antigen in lung inflammation.

Janet Lee, M.D., PI

07/01/02-6/30/07

Annual Direct: \$118,975

American Thoracic Society Research Grant Innovative Research in COPD

Fractalkine/CX₃CL1: A Novel Pathway Related to the Pathogenesis of COPD

Janet Lee, M.D., PI

1/01/05-12/31/06.

Annual Direct: \$50,000

American Heart Association Beginning Grant-in-Aid, Pacific Mountain Affiliate

Function of Duffy Antigen in Leukocyte Recruitment and Organ Inflammation.

Janet Lee, M.D., PI

01/01/04-12/31/05

Annual Direct: \$60,000

NIH Individual NRSA (F32 HL10470)

Functional Role of Duffy Antigen in Endothelial Cells

Janet Lee, M.D., PI/trainee.

07/01/01-06/30/03

Relinquished 6/30/02 upon receipt of KO8.

Annual Direct: \$40,560

Poncin Scholarship Award

Functional Role of DARC in Endothelial Cells

Janet Lee, MD, PI/trainee.

07/01/01-06/30/02

Annual Direct: \$17,933

Other Research Related Activities

PATENTS

United States Patent No. US 10,004,764 B2. Red Blood Cell Membrane-Derived Microparticles and Their Use for the Treatment of Lung Disease. Application no. 15/034,700. PCT filed November 6, 2014. PCT no. PCT/US2014/064352; Date; May 5, 2016; Inventors: Janet S. Lee, Timothy Corcoran, Valerian Kagan. Application No. 15/995,513, filed June 1, 2018; Country: U.S.; Patent Number: 10,596,197; Patent Issue Date: March 24, 2020

Other Research Related Activities

National or International Conference Participation:

1. Facilitator, Fibroblasts and Extracellular Matrix, Thematic Poster Session, American Thoracic Society International Conference, Atlanta, GA, May 2002.
2. Facilitator, COPD: Pathogenesis II, Thematic Poster Session, American Thoracic Society International Conference, San Diego, CA, May 2006.

3. Facilitator, Neutrophil in Inflammatory Processes, Thematic Poster Session, American Thoracic Society International Conference, San Francisco, CA, May 2007.
4. Facilitator, Airway and Alveolar Epithelium: General, Thematic Poster Session, American Thoracic Society International Conference, San Francisco, CA, May 2007.
5. Facilitator, Inflammation and Lung Injury: Acute Injury, Immune Function, and Infection. American Thoracic Society International Conference, Toronto, CA, May 18, 2008.
6. Facilitator, COPD Pathogenesis I: Oxidative Stress, Cellular and Structural Adaptation, Polymorphisms and Clinical Presentation, American Thoracic Society International Conference, Toronto, CA, May 20, 2008.
7. Contributor, "Starting a Lab," featured in Career Talk: The Book on CD-ROM, American Thoracic Society Respiratory Cell and Molecular Biology Assembly Project 2008-2009, <http://www.thoracic.org/assemblies/rcmb/career-talk-book/index.php>
8. Invited Chair, Mini-Symposium on Acute Lung Injury, "The Yin and Yang of Lung Injury: New Insights into the Mechanisms of Progression and Resolution," ATS International Conference, San Diego CA. May 18, 2009.
9. Featured in ATS Work-Life Balance Initiative, "How Do They Do It?," ATS News vol. 36 (3):5 March 2010; <http://www.thoracic.org/newsroom/ats-news/resources/march-2010.pdf>
10. Featured in PITTMED, University of Pittsburgh School of Medicine Magazine. In Attending "Married, With Science." Summer 2010. Vol. 12. Issue 2. http://pittmed.health.pitt.edu/Summer_2010/index.htm
11. Co-chair, Symposium on "Microparticles: Small Wonders or a Big Deal in Pulmonary Injury and Disease?" ATS International Conference, San Francisco, CA, May 20, 2012.
12. Organizing Committee Member and Speaker at Pittsburgh International Lung Conference, ACUTE LUNG INJURY: New Mechanisms, Future Therapies, and the Translation to Clinical Care, Pittsburgh, PA, October 5, 2012.
13. Program Session Organizer and Speaker, Session on "Microparticles: Implications in Thrombosis and Inflammation," American Association for Blood Banks and Cellular Therapeutics Annual Meeting, Boston, Massachusetts, October 7, 2012.
14. Speaker, Topic on "Physician Scientists Careers", Center for Career Development, American Thoracic International Conference, Philadelphia, PA, May 20, 2013.
15. Session Chair, Poster Discussion Session C22-NEW INSIGHTS INTO ACUTE LUNG INJURY, American Thoracic International Conference, Philadelphia, PA, May 21, 2013
16. Speaker and Session Co-Chair, B90-Symposium Session on "Red, White, and blood: the Heme-Pulmonary Circulation Axis of Inflammation, Injury, and Hemolysis", American Thoracic International Conference, Philadelphia, PA, May 19, 2014.
17. Invited Ad Hoc Member, Research Program Oversight Committee, Lovelace Respiratory Research Institute, Albuquerque, New Mexico, October 9-10th, 2014. Research Program

Oversight Committee External Review for Lovelace Respiratory Research Institute Environmental Toxicology, Acute Lung Injury, and Pulmonary Hypertension Programs.

18. Session Moderator and Speaker, Mini-Symposium 9101-S-CT, “Endogenous Membranes and Microparticles as Platforms for Novel Cell-Inspired Therapeutics and Diagnostics”, American Association for Blood Banks and Cellular Therapeutics Annual Meeting, Philadelphia, PA, October 25, 2014.
19. Speaker, A85-Scientific Symposium, “Dr. Jekyll or Mr. Hyde? Bridging the chasm between mouse and human macrophages in health and disease” in symposium entitled “Dr. Jekyll or Mr. Hyde? Macrophage Contributions in Pulmonary Disease”, American Thoracic International Conference, Denver, CO, May 17, 2015.
20. Session Co-Chair, A93-Mini-Scientific Symposium, “New Insights into Pulmonary Host Defense”, American Thoracic International Conference, Denver, CO, May 17, 2015.
21. Session Co-Chair, C12-Scientific Symposium, “Defining the Academic Scholar in the 21st Century: Multiple Pathways to Success”, American Thoracic International Conference, Denver, CO, May 19, 2015.
22. Co-Chair and Course Director, “Lung Immune Responses and Inflammation in Health and Disease”, Pittsburgh-Munich International Lung Conference, Pittsburgh, PA, October 6-7, 2016.
23. Chair, ATS Membership Committee, sponsoring the Women’s Forum, Diversity Forum and inaugural year of the ATS Fellows Program, ATS International Conference, San Diego, CA, May 18-23, 2018.
24. Chair, ATS Membership Committee, sponsoring the Women’s Forum, Diversity Forum and the ATS Fellows Program, ATS International Conference, Dallas, TX, May 18-22, 2019.
25. Invited Speaker, C6-Scientific Symposium, “The Forgotten Cell: Red Blood Cells as Modulators of Immunity”, ATS International Conference, Dallas, TX, May 21, 2019.
26. Invited Speaker, C88-Scientific Symposium, “Complement as a Novel Target to Mitigate Lung Disease”, ATS International Conference, Dallas, TX, May 21, 2019.
27. Co-Chair, 15th Annual Respiratory Disease Young Investigators’ Forum, Warwick-Allerton Chicago, Chicago, IL, October 10-13, 2019. njhealth.org/YIF2019.
28. Co-Chair, 16th Annual Respiratory Disease Young Investigators’ Forum, Virtual conference, October 8-10, 2020. <https://www.nationaljewish.org/yif2020>
29. Invited Speaker, “ARDS Pathogenesis Through the Prism of Host-Pathogen Interactions”, ATS Recognition Award for Scientific Accomplishment, ATS 2020 Virtual available through November 10, 2020.
30. Co-Moderator, Workshop Webinar on supporting the pipeline of women and underrepresented physician-scientists, sponsored by the Assembly on Allergy, Immunology, and Inflammation and Respiratory Cell and Molecular Biology, April 12, 2021.

31. Invited Panelist, KAMA Career Development Symposium, sponsored by the Korean American Medical Association, virtual zoom meeting, September 29, 2021.

Journal Reviewer (Ad Hoc):

- Allergy
- Am Journal of Respiratory Critical Care Medicine
- Am Journal of Respiratory Cell and Molecular Biology
- American Journal of Physiology: Lung Cellular and Molecular Physiology
- Critical Care Medicine
- Blood
- Immunobiology
- J Leukocyte Biology
- J Immunology
- J Clinical Investigation
- JCI Insight
- mBio
- Mucosal Immunology
- Nature Reviews Immunology
- Science Translational Medicine
- PLOS One, Experimental Lung Research, Frontiers Physiol, Hematology, Scientific Reports, British Journal of Hematology, European Respiratory Journal, Virulence

Website Journal Club Associate Editor, Pulmonary Circulation Leukocyte Adhesion/Migration, Pulmonary Circulation Assembly Website Journal Club, Reviews Online, <http://www.thoracic.org/assemblies/pc/pcclub.asp>, American Thoracic Society, 2002-2005.

Associate Editor, Microbes and Innate Immunity section, *Frontiers in Cellular and Infection Microbiology*, September 2018-current.

Editorial Board Member, Immunobiology, 2021-2025

Grant Reviewer:

1. American Heart Association, Mid-Atlantic Region, Study Section 5, Molecular signaling, 2007.
2. American Heart Association, Mid-Atlantic Region, Study Section 5, Molecular signaling, 2008.
3. American Heart Association, R1 & 2, Immunology and Virology Committee, 2009.
4. American Heart Association, Immunology BSc1 Committee, 2010.
5. Kentucky Science and Engineering Foundation R&D Excellence Awards, April 2010
6. Grant Reviewer, Special Emphasis Panel, NHLBI initiatives ZRG1 VH-F 50 (S): Selected Topics in Transfusion Medicine, June 17, 2010
7. Flight Attendant Medical Research Institute, Study Section 2, COPD and Emphysema, 2010
8. Grant Reviewer, Special Emphasis Panel, NHLBI initiatives ZRG1 VH-F 50 (S): Selected Topics in Transfusion Medicine, Feb 7-8, 2011
9. Grant Reviewer, Special Emphasis Panel, NHLBI initiatives ZRG1 VH-F 50 (S): Selected Topics in Transfusion Medicine, June 20-21, 2011

10. Ad hoc Grant Reviewer, Medical Research Council, United Kingdom, Populations and Systems Medicine Board Partnership June 2011
11. **Co-Chair**, Special Emphasis Panel, NHLBI initiatives ZRG1 VH-F 50 (S): Selected Topics in Transfusion Medicine, September 26-27, 2011
12. **Co-Chair**, Special Emphasis Panel, NHLBI initiatives ZRG1 VH-F 50 (S): Selected Topics in Transfusion Medicine, Feb 1-2, 2012
13. Grant Reviewer, Israel Science Foundation. March 27, 2012.
14. Grant Reviewer, National Blood Foundation, March 26, 2012
15. Ad hoc Grant Reviewer, ZRG1 BCMB-A (51) R RFA RM11-006: Transformative R01 Roadmap Review, May 31, 2012
16. **Co-Chair**, Special Emphasis Panel, NHLBI initiatives ZRG1 VH-F 50 (S): Selected Topics in Transfusion Medicine, June 12-13, 2012 and **Chair**, Special Emphasis Panel, NHLBI initiatives ZRG1 VH-A 50 (S): Selected Topics in Transfusion Medicine, June 13, 2012
17. Ad hoc Grant Reviewer, ZRG1 VH-F (50) S meeting, 06/24/2013
18. Ad hoc Grant Reviewer, 2014/01 ZHL1 CSR-P (F1) 1 Mentored Transition to Independence, NHLBI K99/R00 and Career Transition (K22) Awards: November 21-22, 2013.
19. Ad hoc Grant Reviewer, Medical Research Council, United Kingdom, Populations and Systems Medicine Board, December 2013
20. Ad hoc Grant Reviewer, 2014/05 ZHL1 CSR-P (M1) 1 Mentored Transition to Independence: NHLBI K99/R00 and Career Transition (K22) Awards, March 5-6, 2014
21. Ad hoc External Grant Reviewer, Scientific Advisory Council of the Dutch Landsteiner Foundation for Blood Transfusion Research, June 2014
22. Mail-in Ad hoc Reviewer, NIH ZRG1 SBIB-V (82) SBIB Clinical Pediatric and Fetal Applications, September 23, 2014
23. Ad hoc Reviewer, Innate Immunity and Inflammation NIH Standing Study Section, Salt Lake City, Utah, October 21-22, 2014
24. Ad hoc Reviewer, Innate Immunity and Inflammation NIH Standing Study Section, Pentagon City, Arlington, VA, February 12-13, 2015
25. **Chartered Member**, Innate Immunity and Inflammation NIH Standing Study Section, October 1, 2015-June 30, 2019.
26. Ad hoc Reviewer, 2019/10 ZAI1 JHM-1(SI) 1, NIAID SBIR Phase II clinical Trial Implementation Cooperative Agreement (U44), May 7, 2019.
27. Ad-hoc reviewer, NHLBI Program Project (P01) Review, 2020/01 HLBP 1, Work Group #10, September 27, 2019.
28. Member, Scientific Advisory Committee, Grant Applications Review for the American Thoracic Society Foundation, Chicago, IL, November 14-15, 2019.
29. Ad-hoc reviewer, NHLBI Program Project (P01) Review, HLBP 12, April 15, 2020.
30. Ad-hoc reviewer, Lung Injury Repair and Resolution (LIRR) NIH Standing Study Section, IAR, June 17-18, 2020.
31. Member, Scientific Advisory Committee, Grant Applications Review for the American Thoracic Society Foundation GSK grants on COVID-19, August 12, 2020.
32. Ad-hoc reviewer, NHLBI Program Project (P01) Review, HLBP 7, October 15, 2020.
33. Member, Scientific Advisory Committee, Letter of Intent reviews for the American Thoracic Society Foundation grants, October 21, 2020.
34. Ad-hoc reviewer, NIH 2021/05 ZRG1 PSE-H (70) R RFA-RM-20-014 and RFA-RM-20-021: NIH Director's Early Independence Award, December 12, 2020.
35. Member, Scientific Advisory Committee, grant reviews for the American Thoracic Society Foundation, January 28-29, 2021.
36. Ad-hoc reviewer, 2021/05 HLBP (6) 1 Heart, Lung, and Blood Program Project Review Committee, February 17, 2021

37. Ad-hoc reviewer, NIH Lung Injury, Repair and Remodeling Study Section, February 22-23, 2021.
38. Ad-hoc reviewer, NIH 2021/10 ZHL1 CSR-I (O1) 1 NHLBI Outstanding Investigator Award (OIA) – R35, August 4-5, 2021

LIST OF CURRENT RESEARCH INTERESTS

- Myeloid cell effector function, Phagocyte biology
- Lung inflammation, Lung injury, Host defense mechanisms, Innate Immunity
- Host-pathogen interactions in the lung
- Cytokines, Chemokines, Chemokine receptors
- RBC storage, RBC storage lesion, RBC transfusion, RBC phagocytosis

Seminars and Invited Lectureships

Local:

1. Invited Speaker, Advanced Lung Diseases Conference, “Sepsis and MODS: State of the Art,” Center for Continuing Education In the Health Sciences, University of Pittsburgh School of Medicine, Pittsburgh, PA, March 24, 2007.
2. Invited Speaker, “Red Cell Transfusion in the Critically Ill,” Medicine Grand Rounds. Department of Medicine, University of Pittsburgh, February 11, 2011.
3. Invited Speaker, “Transfusion and Lung Injury: Dissecting the Association,” University of Pittsburgh Division of Pulmonary and Critical Care Medicine Grand Rounds, Pittsburgh, PA, November 10, 2012.
4. Invited Speaker, “Regulatory Mechanisms Employed by Mononuclear Phagocytes Following Lung Injury”, Basic and Translational Research in Lung Disease Conference, University of Pittsburgh, Pittsburgh, PA, February 26, 2013.
5. Invited Speaker, “Resolution versus Immunosuppression: The Double-Edged Sword in Lung Injury,” University of Pittsburgh, Graduate School of Public Health, Department of Occupational and Environmental Health, Pittsburgh, PA, April 4, 2013.
6. Invited Speaker, Children’s Hospital of Pittsburgh Pulmonary, Allergy and Immunology Conference, “Neutrophils and Macrophages: Bridging Phagocytes to Resolve Inflammation in the Lungs”, Pittsburgh, PA, September 16, 2014.
7. Keynote speaker, Sixth Annual University of Pittsburgh School of Medicine Physician Scientist Training Program Symposium, “Neutrophils and Macrophages: Bridging Phagocytes to Resolve Inflammation in the Lungs”, Pittsburgh, PA, September 19th, 2014.
8. Invited Speaker, “Probing Host-Pathogen Interactions in Lung Injury: Revisiting Protease-Antiprotease Interplay”, Department of Microbiology and Molecular Genetics Spring Seminar Series, University of Pittsburgh, Pittsburgh, PA, May 25, 2016.
9. Speaker, “A Biometrics Core to Facilitate Translational Research in *P. aeruginosa* Lower Respiratory Tract Infections”, Cystic Fibrosis Seminar, Pittsburgh, PA, October 11th, 2016.

10. Invited Speaker, "A Targeting Strategy to Combat Infection-Induced Injury", Cystic Fibrosis 2nd Annual Research Retreat, Rangos Research Center, Pittsburgh, PA, November 11, 2016.
11. Invited Speaker, Bench to Bedside series topic "The Red Cell Storage Lesion: From Bench to Bedside" with talk on "*Red Cell Transfusion: How Old is Too Old? From Biology to Controversy*", Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA, November 22, 2016.
12. Invited Speaker, "Host Impairments in MDR *K. pneumoniae* Killing", Molecular Medicine Research Seminar Series, Children's Hospital of Pittsburgh, Pittsburgh, PA, January 17, 2017.
13. Invited Speaker, "Host Defense Against Multi-Drug Resistant *K. pneumoniae*", Pulmonary Grand Rounds, Division of Pulmonary, Allergy, and Critical Care Medicine, Pittsburgh, PA January 27, 2017.
14. Invited Speaker, "Host Defense Against Multi-Drug Resistant *K. pneumoniae*", Department of Microbiology and Molecular Genetics and Immunology Research Retreat, Pittsburgh, PA, March 1, 2017.
15. Invited Speaker, "Deconstructing Lung Injury Using Animal Models", Department of Critical Care Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA, August 2, 2017.
16. Invited Speaker, "Host Defense and ARDS in the ICU: Two Sides of the Same Coin", Medicine Grand Rounds Sachs Lectureship, University of Pittsburgh Medical Center Shadyside Hospital, April 4, 2019.
17. Invited Speaker, "Translational Science Research Track Pathway", Division of Pediatric Hematology Oncology Seminar, Children's Hospital of Pittsburgh, Pittsburgh, PA, January 14, 2020.
18. Invited Speaker, "Heme-mediated STAT1 dysregulation during *K. pneumoniae* infection", Simmons Surgical Research Conference, Department of Surgery, University of Pittsburgh, March 25, 2021.

National and International:

19. Invited Speaker, Western Society for Clinical Investigation Regional Meetings 2003: "Duffy Antigen Participates in Chemokine Movement across an Endothelial Monolayer and Enhances Neutrophil Transmigration," Carmel, CA, January 2003.
20. Invited Speaker, VanSeaPort Conference 2003: "Duffy Antigen Facilitates Movement of Chemokine Across the Endothelium *In Vitro* and Promotes Neutrophil Transmigration *In Vitro* and *In Vivo*," Timberline, Oregon, April 2003.
21. Invited Speaker, Institute for Environmental Medicine, University of Pennsylvania. "The Storage Lesion and Augmentation of Lung Inflammatory Responses Following Red Cell Transfusion," Philadelphia, PA, October 3, 2008.

22. Invited Speaker, University of Washington, Division of Pulmonary/Critical Care Medicine, "The Storage Lesion and Augmentation of Lung Inflammatory Responses Following Red Cell Transfusion," Seattle, WA, March 16, 2009.
23. Invited Guest, NHLBI Meeting on RBC Storage Lesion, RFA HL08-005 "Stored RBC Lesion" Grantees Meeting, NIH/NHLBI, Bethesda, MD, September 14, 2010.
24. Invited Speaker, "Red Cell Transfusion in Lung Inflammatory Injury" at the 8th Annual International Symposium on Transfusion Immunology and Related topics: Red Blood Cell Storage Lesions and Related Transfusion Issues. Presented by Canadian Blood Services, University of Toronto, September 25, 2010.
25. Invited Speaker, "RBC Transfusion in Lung and Systemic Inflammatory Responses," American Association for Blood Banks Annual Meeting, Boston, MA, October 24, 2011.
26. Invited Speaker, "Resolution versus Immunosuppression: The Double-Edged Sword in Lung Injury," University of North Carolina, Division of Pulmonary and Critical Care Medicine, Chapel Hill, NC, August 6, 2012.
27. Invited Guest, NHLBI Working Group on Strategies to Optimize Blood Products 2012, NIH/NHLBI, Bethesda, MD, August 28-29, 2012.
28. Invited Speaker, "Clinical Implications of the Blood Storage Defect," Society for the Advancement of Blood Management Annual Meeting, Pittsburgh, PA, September 22, 2012.
29. Invited Speaker, "Transfusion and Lung Injury: Dissecting the Association," University of Alabama Division of Pulmonary and Critical Care Medicine Grand Rounds, Birmingham, AL, November 8, 2012.
30. Invited Speaker, "Regulatory Mechanisms Employed by Mononuclear Phagocytes Following Lung Injury", Pulmonary Conference, Medical College of Wisconsin, Milwaukee, Wisconsin, March 11, 2013.
31. Invited Speaker, "Resolution versus Immunosuppression: The Double-Edged Sword in Lung Injury," Ohio State University, Wexner Medical Center, Division of Pulmonary and Critical Care Medicine, Columbus, OH, October 26, 2013.
32. Invited Speaker, The Robert E. Forster Lecture, University of Pennsylvania 20th Annual Respiration Research Retreat, "Neutrophils and Macrophages: Bridging Phagocytes to Resolve Inflammation in the Lungs", Philadelphia, PA, June 13, 2014.
33. Invited Speaker, "Neutrophils and Macrophages: Bridging Phagocytes to Resolve Inflammation in the Lungs", Division of Pulmonary and Critical Care Medicine, Medical University of South Carolina, Charleston, South Carolina, November 13, 2014.
34. Invited Speaker, "Host Resilience Mechanisms in Lung Injury: Revisiting Protease-AntiProtease Interplay", Division of Pulmonary and Critical Care Medicine, University of North Carolina, Chapel Hill, North Carolina, July 17, 2015.
35. Invited Speaker, "Host Resilience Mechanisms in Lung Injury: Revisiting Protease-AntiProtease Interplay", Division of Pulmonary and Critical Care Medicine and

CardioPulmonary Vascular Biology Center for Research Excellence COBRE, Warren Alpert Medical School of Brown University, Providence, Rhode Island, October 26, 2015.

36. Invited Speaker, "Probing Host-Pathogen Interactions in Lung Injury: Revisiting Protease-Antiprotease Interplay", Division of Pulmonary and Critical Care Medicine, University of Michigan School of Medicine, Ann Arbor, Michigan, November 17, 2015.
37. Invited Speaker, "Probing Host-Pathogen Interactions in Lung Injury: Revisiting Protease-Antiprotease Interplay", Department of Microbiology and Immunology Seminar Speaker Series, Rosalind Franklin University of Medicine and Science, Waukegan, Illinois, March 8, 2016.
38. Invited Speaker, "Enhancing Host Defenses to counter MDR Gram-negative Bacterial Pneumonias", on Lung Immune Responses and Inflammation in Health and Disease, Pittsburgh-Munich International Lung Conference, Pittsburgh, PA, October 6-7, 2016.
39. Invited Speaker, "Mechanisms of Host Control: the Macrophage Response during Infection-Triggered Lung Injury", Comparative Biomedical Sciences Seminar, LSU School of Veterinary Medicine, Baton Rouge, LA, April 13, 2017.
40. Invited Speaker, "Mechanisms of Host Protection Against Pathogen-Triggered Proteolytic Injury in the Lungs", ARDS 4th International Conference, Amphi Buffon, Batiment Buffon University de Paris Diderot, 15 rue Helene Brion, Paris, France, June 28-29, 2017.
41. Invited Speaker, "Modeling Host-Pathogen Interplay in the Critically Ill", Department of Molecular Microbiology and Immunology Seminar, Brown University, Providence, RI, November 16, 2017.
42. Invited Co-Leader and Speaker, Career Development Session, Howard Hughes Medical Institute Medical Fellows Kick-Off Meeting, Joseph B. Martin Conference Center, Harvard Medical School, Boston, MA, September 15, 2018.
43. Invited Speaker, "Host-pathogen interplay in ARDS: a tale of cleavage and cell death", Department of Medicine, University of California at San Francisco VA HealthCare System Research Seminar, San Francisco, CA, September 25, 2018.
44. Invited Speaker, "Host-pathogen interplay in lung injury: a tale of cleavage and cell death", University of Toledo College of Medicine and Life Sciences, Medical Microbiology & Immunology Research Seminar, Toledo, OH, December 12, 2018.
45. Invited Speaker, "Host Defense and ARDS in the ICU: Two Sides of the Same Coin", SUNY Downstate Medical Center, Medicine Grand Rounds, March 21, 2019.
46. Invited Speaker, "Host Defense and ARDS: Two Sides of the Same Coin", Ohio State University Pulmonary Research Seminar, September 6, 2019.
47. Invited Speaker, "Pathogen-Triggered Proteolytic Lung Injury in ARDS", Cedars-Sinai Medical Center Pulmonary Research Seminar, September 17, 2019.

48. Invited Speaker, The John Butler Endowed Lectureship on “Host Defense and ARDS: Two Sides of the Same Coin”, University of Washington Medicine Grand Rounds, October 31, 2019.
49. Invited Speaker, "Host Defense and ARDS in the ICU: Targeting Pathogen-Triggered Proteolytic Lung Injury", International Workshop on Translational Research for Precision Respiratory Medicine, Hospital Clinic, Barcelona, Spain, November 12, 2019.
50. Invited Speaker, “Heme-metabolism and host defense: cross-signals during macrophage activation”, Microbial Infection and Immunity Research Seminar Series, Department of Microbial Infection and Immunity, Ohio State University, Columbus, Ohio, February 26, 2020.
51. Invited Speaker, “Host-pathogen interplay in ARDS: A Tale of Cleavage and Cell Death”, Robert Wood Johnson Medical School Research Seminar (virtual), New Brunswick, NJ, March 24, 2020.
52. Invited speaker, “ARDS Pathogenesis through the Prism of Host-Pathogen Interactions”, Pulmonary, Allergy and Critical Care Grand Rounds series (virtual), Division of Pulmonary, Allergy and Critical Care, Department of Medicine, Stanford University, December 4, 2020.
53. Invited speaker, “Alternative complement pathway function and host resilience during critical illness”, International Complement Society virtual symposium on “Complement and Inflammation” June 30, 2021.
54. Invited speaker, “Acute injury across the spectrum of lung diseases”, Korean American Medical Association 46th Annual Scientific Convention “2021 Vision for Diversity, Innovation, Cure”, The Shilla Seoul, Seoul, South Korea, December 8-10, 2021 (virtual presentation December 8, 11:30 AM KST).
55. Invited Speaker, “Thrombospondin-1 and protection against pathogen-triggered proteolytic lung injury” at FASEB Catalyst on Matricellular Proteins in Respiratory Tract Immunomodulation and Infection. virtual zoom conference, January 19, 2022 (virtual presentation January 19, 1:00-1:35 PM EST).

SERVICE

University and Medical School:

1. **Above & Beyond, University Pittsburgh Medical Center**, recognized by Samuel Laciak RN CNSN OPC for stabilizing organ donor patient in the ICU, June 21, 2005.
2. **Panelist**, “Being Successful and Striving for Sanity: Balancing Your Career and Your Life”, Health Sciences 2008 Course in Scientific Management and Leadership, University of Pittsburgh, April 2008.
3. **Moderator**, “Recharging Your Personal Battery Pack”, Health Sciences 2009 Course in Scientific Management and Leadership, University of Pittsburgh, April 2009.
4. **Member, Fellowship Committee**, Division of Pulmonary, Allergy and Critical Care Medicine, University of Pittsburgh, 2005-current.
5. **Interviewer**, Medical School Applicants, University of Pittsburgh School of Medicine, 2009-2013.

6. **Member, Grant Review Committee**, Department of Medicine Junior Scholar Award, 2011-2013. VMI Research Award, 2018.
7. **Member, School of Medicine Admissions Committee**, University of Pittsburgh School of Medicine, 2012-2015.
8. **Member and Career Advisor, Steering Committee for PSTP/MSTP**, University of Pittsburgh School of Medicine 2014-present.
9. **Faculty Member**, Cellular and Molecular Pathology Graduate Training Program, University of Pittsburgh.
10. **Faculty Judge and Facilitator**, Department of Medicine Research Day, University of Pittsburgh School of Medicine, 2014-2019.
11. **Senior Advisor, Career Mentoring Program (CaMP) for Junior Faculty**, Office of the Dean, School of Medicine 2014-2017.
12. **Mentor, Department of Medicine Mentoring Program**, Mentor to Dr. Kathleen Dorritie, Assistant Professor of Medicine, Division of Hematology/Oncology, 2015-2016.
13. **Faculty Facilitator**, "Mentoring Matters" Workshop, Institute for Clinical Research Education, University of Pittsburgh, August 28, 2014.
14. **Ad Hoc Grant Reviewer**, CTSI, University of Pittsburgh, 2014-2015, 2019.
15. **Co-Director**, PACCM Awards Committee, 2017-2019.
16. **Faculty Interviewer**, Physician Scientist Training Program applicants, University of Pittsburgh School of Medicine 2015-current.
17. **Faculty Interviewer**, Medical Scientist Training Program applicants, University of Pittsburgh School of Medicine 2017-2018.
18. **Member, Curriculum and Career Development Committee, Burroughs Wellcome Fund Incubator Program**, UPMC and University of Pittsburgh, 2018-current.
19. **Member, Search Committee for Division Chief of Pulmonary, Allergy, Critical Care Medicine**, UPMC and University of Pittsburgh, 2019.
20. **Co-Chair, MSTP and Burroughs Wellcome Fund Strategic Planning Committee**, University of Pittsburgh School of Medicine, 2021.
21. **Member, Pediatric Scientist Development Program (PedSDP) Steering Committee**, University of Pittsburgh Children's Hospital, 2022.