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EDUCATION

1991-1995 Tufts University, B.S., *magna cum laude*
1995-1999 Tufts University, M.D.

PROFESSIONAL APPOINTMENTS

1999-2000 Intern in Pediatrics, Stanford University, Stanford, CA
2000-2002 Resident in Pediatrics, Stanford University, Stanford, CA
2002-2005 Fellow in Pediatric Critical Care Medicine, Stanford University
2005-2009 Instructor of Pediatrics, Stanford University
2009-2010 Acting Assistant Professor of Pediatrics, Stanford University
2010-2019 Assistant Professor of Pediatrics, Stanford University
2019-present Associate Professor of Pediatrics, Stanford University

HONORS AND AWARDS

1998 Alpha Omega Alpha National Honor Society
1998 AMWA Janet M. Glasgow Memorial Achievement Citation
1999 Louise Weinstein Prize for Excellence in Clinical Medicine
2004 Western Society for Clinical Investigation Travel Award
2004 Society for Pediatric Research Travel Award
2007 Pediatric Clerkship Honor Roll for Teaching
2008 AHA Fellow to Faculty Transition Award
2012 Society for Pediatric Research Young Investigator Coaching Program
2013 American Journal of Physiology-Lung: Outstanding Junior Investigator Award
2015-2020 Tashia and John Morgridge Faculty Scholar Award
2016 ATS International Conference: Neonatal and Developing Lung Abstract Award
2018-2021 Election to National Council, Society for Pediatric Research
2018 ATS International Conference: Neonatal and Developing Lung Abstract Award
2018 American Journal of Physiology-Lung: Star Reviewer
2019-present Crandall Endowed Faculty Scholar in Pediatric Pulmonary Medicine

ADMINISTRATIVE APPOINTMENTS

2006-2011 Blood Transfusion Committee Member, Lucile Packard Children's Hospital
2007-2010 Member, Pediatric Pulmonary Fellowship Search Committee

ADMINISTRATIVE APPOINTMENTS

2014-2016	Member, Department of Pediatrics Search Committee -Pulmonary
2015-2016	Member, Department of Pediatrics Search Committee –Medical Genetics
2015	Leland Scholars Program Faculty Mentor
2016-2017	Member, Department of Pediatrics Search Committee - Critical Care Medicine
2016-2017	Member, Department of Pediatrics-Transparency/Decision Making Task Force
2017-present	Member, Department of Pediatrics Selection Committee for MD/PhD Residents
2018-2019	Member, Department of Pediatrics Search Committee – Cardiology
2021-present	Member, Department of Pediatrics-Appointment and Promotions Committee

PROFESSIONAL MEMBERSHIPS

2007-present	American Thoracic Society
2007-2011	American Heart Association
2012-present	Society for Pediatric Research
2016-present	American Physiological Society
2016-present	American Health Council

BOARD CERTIFICATION

American Board of Pediatrics

American Board of Pediatrics, Sub-board of Pediatric Critical Care Medicine

LOCAL LEADERSHIP POSITIONS

2007-2009	Associate Fellowship Director, Pediatric Critical Care Medicine
2015-2016	Associate Fellowship Director-Research, Pediatric Critical Care Medicine
2016-present	Associate Director of Basic Research-Center for Excellence in Pulmonary Biology
2017	Organizing Committee Member, Stanford Symposium to Celebrate the 50 th Anniversary of the original description of BPD.
2018-2021	Member, Society for Pediatric Research National Council
2019-present	Director, Department of Pediatrics Physician Scientist Bridge to K Program
2020-present	Co-Director, Stanford CRIB Program (Cardiac and Respiratory Care for Infants with Bronchopulmonary Dysplasia)
2021-present	Mentor for the Stanford University School of Medicine Under Represented Minority in Health Mentorship Circle

NATIONAL LEADERSHIP POSITIONS

2018-2021	Member, Society for Pediatric Research National Council
2018-present	Advisory Committee Member, FASEB Science Research Conferences
2018-2020	Chair, Society for Pediatric Research Young Investigator Coaching Program
2018-present	Selection Committee Member, Society for Pediatric Research Grant Writing 101 Program
2018-present	Cohort Leader, Society for Pediatric Research Grant Writing 101 Program

NATIONAL LEADERSHIP POSITIONS	
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2020-present	Member, Society for Pediatric Research Nominating Committee
2021	Cohort Leader, American Pediatric Society and Society for Pediatric Research Journeys and Frontiers in Pediatric Research

PEER REVIEW AND EDITORIAL SERVICE	
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Member, Editorial Board, American Journal of Physiology- Lung Cellular and Molecular Physiology
Member, Editorial Board, Frontiers in Pulmonary Medicine
Reviewer, American Journal of Respiratory and Critical Care Medicine
Reviewer, American Journal of Respiratory Cell and Molecular Biology
Reviewer, PLOS One
Reviewer, Journal of Translational Medicine
Reviewer, Pediatric Research
Reviewer, American Journal of Physiology- Heart and Circulatory Physiology
Invited Abstract Reviewer-Society for Pediatric Research-Pulmonary Circulation, 2012
Invited Abstract Reviewer-Society for Pediatric Research-Cardiac and Pulmonary Development, 2014
Invited Abstract Reviewer-Society for Pediatric Research- Critical Care Medicine-Basic Science, 2014
Invited Abstract Reviewer-Society for Pediatric Research- Pulmonary Circulation, 2015
Invited Abstract Reviewer-Society for Pediatric Research- Pulmonary Circulation, 2016
Invited Abstract Reviewer-Society for Pediatric Research- Pulmonary Circulation, Critical Medicine, and Neonatology 2017
Invited Abstract Reviewer-Society for Pediatric Research- Pulmonary Circulation, Critical Medicine and Neonatology 2018

GRANT REVIEW COMMITTEES	
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October 2012	Early Career Reviewer, National Institutes of Health NHLBI-Respiratory Integrative Biology and Translational Research (RIBT) Study Section Member
June 2013	Early Career Reviewer, National Institutes of Health-NHLBI-Lung Injury, Repair, Remodeling (LIRR) Study Section Member
2012-present	Grant Reviewer, Postdoctoral Fellowship Awards- Stanford Maternal Child Health Research Institute
2012-present	Grant Reviewer, Clinical Fellow Awards- Stanford Maternal Child Health Research Institute
October 2016	Ad Hoc Grant Reviewer, National Institutes of Health-NHLBI-Respiratory Integrative Biology and Translational Research (RIBT) Study Section
October 2017	Ad Hoc Grant Reviewer, National Institutes of Health-Grant Review for NHLBI K Award Recipients (ZHL1 CSR-R)
November 2018	Ad Hoc Grant Reviewer, National Institutes of Health-Special Emphasis Panel/Scientific Review Group (ZHL1 CSR-M)

GRANT REVIEW COMMITTEES	
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July 2019	Ad Hoc Grant Reviewer, National Institutes of Health-Special Emphasis Panel/Scientific Review Group (ZRG1 SBIB Z-90)
October 2019	Ad Hoc Grant Reviewer, National Institutes of Health-Special Emphasis Panel/Scientific Review Group (ZHL1 CSR-M)
October 2020	Ad Hoc Grant Reviewer, National Institutes of Health-Special Emphasis Panel/Scientific Review Group (ZHL1 CSR-M (F1))

LEADERSHIP ROLES AT SCIENTIFIC CONFERENCES	
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May 2013	Moderator, Pulmonary Vascular Biology Platform Session, Pediatric Academic Society Annual Meeting, Washington D. C.
May 2015	Moderator, Cardiac and Pulmonary Development Platform Session, Pediatric Academic Society Annual Meeting, San Diego, CA
May 2015	Moderator, Critical Care Medicine Platform Session, Pediatric Academic Society Annual Meeting, San Diego, CA
May 2016	Moderator, Neonatal Cardiac Physiology Poster Discussion Session, Pediatric Academic Society Annual Meeting, Baltimore, MD
November 2016	Retreat Faculty, Pediatric Critical Care and Trauma Scientist Development Program, NICHD K12 Annual Retreat, Deer Valley, UT
May 2017	Moderator, Pulmonary Vascular Biology Poster Session, Pediatric Academic Society Annual Meeting, Washington D. C.
September 2017	Invited Faculty, Fourth Annual Neonatal Cardiopulmonary Biology Young Investigators Forum, Chicago, IL
November 2017	Retreat Faculty, Pediatric Critical Care and Trauma Scientist Development Program, NICHD K12 Annual Retreat, Deer Valley, UT
May 2018	Moderator, Critical Care Medicine Basic Science Platform Session, Pediatric Academic Society Annual Meeting, Toronto, Canada
November 2018	Retreat Faculty, Pediatric Critical Care and Trauma Scientist Development Program, NICHD K12 Annual Retreat, Deer Valley, UT
September 2019	Moderator, Session V: Novel Therapeutic Strategies for Pulmonary Vascular Disease, American Thoracic Society Grover Conference, Sedalia, Colorado
November 2019	Retreat Faculty, Pediatric Critical Care and Trauma Scientist Development Program, NICHD K12 Annual Retreat, Deer Valley, UT
November 2020	Retreat Faculty, Pediatric Critical Care and Trauma Scientist Development Program, NICHD K12 Annual Retreat, Deer Valley, UT

RESEARCH SUPPORT	
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ACTIVE

04/2018 - 03/2023	National Institutes of Health, 1R01HD092316-01 <i>"Novel Pathways Regulating Calcium Mediated Contractility and Inflammation in the Pregnant Uterus"</i> Role: Principal Investigator (MPI)
07/2019-07/2024	Stanford University School of Medicine <i>Crandall Endowed Faculty Scholar in Pediatric Pulmonary Medicine</i> Role: Endowed Faculty Scholar

RESEARCH SUPPORT

ACTIVE

- 07/2020 -12/2021 Stanford Maternal Child Health Research Institute, Pilot/New Idea Award
"Diverse Homeostatic Roles for Distinct Macrophage Populations in the Developing Pulmonary Vasculature"
 Role: Principal Investigator (PI)
- 07/2020- 06/2022 Stanford Maternal Child Health Research Institute/Clinical Trainee Support
"Developmental Heterogeneity of Pulmonary Mesenchymal Cell Phenotype at Single Cell Resolution"
 Role: Research Mentor
- 03/2021 – 02/2025 National Institutes of Health, Grant 1 R01HL158828-01 A0
"Diverse Homeostatic Roles for Distinct Macrophages in the Developing Lung Vasculature"
 Role: Principal Investigator (PI)
- 04/2021 - 03/2025 National Institutes of Health, Grant 1 R01HL154002-01 A1
"Developmental Heterogeneity of Pulmonary Endothelial Phenotype at Single Cell Resolution."
 Role: Principal Investigator (PI)

PENDING

- 03/2022 – 04/2024 National Institutes of Health, Grant 1R01 HL160018-01 A1
"Pericytes and Postnatal Alveolarization: Role of Hypoxia Inducible Factors"
 Role: Co-Investigator (Co-I)
 Scientific Review: 11/2021

COMPLETED

- 07/2008 - 06/2013 American Heart Association, Fellow to Faculty Transition Award
"The Role of TGF- β in Inflammatory Aneurysm Formation"
 Award #: 0875001N
 Role: Principal Investigator (PI)
- 10/2009 - 09/2011 National Institutes of Health: Supporting New Faculty Recruitment to Enhance Research Resources through Biomedical Research Core Centers
"Postnatal Lung Development: Mechanisms of Molecular and Vascular Development."
 Award #: 1P30HL101315-01
 Role: Newly Independent Investigator (NII)
- 07/2013 - 06/2016 Stanford Child Health Research Institute: Euphrat Fellowship
"Secreted Factors in the Lung Microenvironment Promote Pulmonary Angiogenesis"
 Role: Faculty Research Mentor
- 01/2014 - 05/2014 American Heart Association, Beginning Grant in Aid
"A Role for Nuclear Factor Kappa B in Promoting Pulmonary Angiogenesis"
 Award #: 1BGIA18980070
 Role: Principal Investigator (PI)
Note: Grant was relinquished early by the PI secondary to overlap with the awarded NHLBI-R01HL122918-01
- 03/2014 - 02/2016 Stanford Child Health Research Institute: Transdisciplinary Initiative Program Grant
"Transforming Growth Factor Beta Induced Protein Promotes Pulmonary Angiogenesis in the Developing Lung by Activating NF κ B and Wnt Signaling in the Pulmonary Endothelium"
 Role: Principal Investigator (PI)

RESEARCH SUPPORT

COMPLETED

- 01/2016 - 01/2017 Stanford Child Health Research Institute: Postdoctoral Award
"Endothelial-Specific Loss of IKK β Impairs Pulmonary Endothelial Angiogenesis and Alveolarization"
 Role: Faculty Research Mentor
- 07/2014 - 06/2018 Burroughs Wellcome Fund, Preterm Birth Initiative Program
"Myometrial Smooth Muscle Cell TRPV Channel Activity Modulates Contractility"
 Role: Co-Investigator (Co-I)
- 05/2014 - 03/2020 National Institutes of Health, NHLBI- R01HL122918-01
"Novel Molecular Mechanisms Regulating Postnatal Pulmonary Angiogenesis"
 Role: Principal Investigator (PI)
- 09/2015 - 08/2020 Stanford Maternal Child Health Research Institute
 Tashia and John Morgridge Endowed Faculty Scholar Award
"Essential Physiologic Roles for Nuclear Factor Kappa-B During Lung Development"
 Role: Faculty Scholar (PI)

PEER REVIEWED PUBLICATIONS

1. **Alvira CM**, Abate A, Yang G, Dennery PA, and Rabinovitch M. "Nuclear factor kappa B activation in neonatal mouse lung protects against lipopolysaccharide-induced inflammation." *Am J Respir Crit Care Med* 2007; 175:805-815. PMID: 17255561
2. Bland RD, Ertsey R, Mokres LM, Xu L, Jacobson BE, Jiang S, **Alvira CM***, Rabinovitch M, Shinwell ES, and Dixit A. "Mechanical ventilation uncouples synthesis and assembly of elastin and increases apoptosis in lungs of newborn mice. Prelude to defective alveolar septation during lung development?" *Am J Physiol Lung Cell Mol Physiol*. 2008 Jan;294(1):L3-14 PMID: 17934062. *Designed and performed experiments to evaluate apoptosis and proliferation in situ, performed statistical analysis, drafted relevant methods and results portions of the manuscript.
3. Spiekerkoetter E, **Alvira CM***, Kim YM, Bruneau A, Pricola KL, Wang L, Ambarsumian N, and Rabinovitch M. 2008. "Reactivation of gammaHV68 induces neointimal lesions in pulmonary arteries of S100A4/Mts1-overexpressing mice in association with degradation of elastin." *Am J Physiol Lung Cell Mol Physiol* 2008; 294:L76-289. PMID: 18083765. *Designed and performed experiments to detect elastin breakdown and leukocyte infiltration in situ, performed statistical analysis, drafted relevant methods and results portions of the manuscript.
4. Hansmann G, de Jesus Perez VA, Alastalo TP, **Alvira, CM***, Guignabert C, Bekke, JM, Schellong S, Urashima T, Wang L, Morrell NW, and Rabinovitch M. 2008. "An antiproliferative BMP-2/PPARgamma/apoE axis in human and murine SMCs and its role in pulmonary hypertension." *J Clin Invest* 2008; 118:1846-1857. PMID: 18382765. *Designed and performed experiments to determine arterial muscularization and differences in proliferation in situ, performed statistical analysis, drafted relevant methods and results portions of the manuscript.
5. Ying L, Lau A, **Alvira CM***, West R, Cann GM, Zhou B, Kinnear C, Jan E, Sarnow P, Va de Rijn M, Rabinovitch M. "LC3 Mediated fibronectin mRNA translation Induces fibrosarcoma growth by increasing connective tissue growth factor." *J Cell Sci* 2009; April 14. PMID: 19366727. *Designed and performed RNA-binding assays, performed statistical analysis, drafted relevant methods and results portions of the manuscript.
6. Guignabert C, **Alvira CM***, Alastalo TP, Sawada H, Hansmann G, Zhao M, Wang L, El-Bizri N, Rabinovitch M. "Tie2-mediated loss of peroxisome proliferator-activated receptor- γ in mice causes PDGF-receptor β -dependent pulmonary arterial muscularization. *Am J Physiol Lung Cell Mol Physiol* 2009; Oct 2. PMID: 19801450. *Designed and performed gene expression assays on primary endothelial cells and drafted significant portions of the original manuscript.

PEER REVIEWED PUBLICATIONS

7. Mokres LM, Parai K, Hilgendorff A, Ertsey R, **Alvira CM***, Rabinovitch M, Bland RD. "Prolonged mechanical ventilation with air induces apoptosis and causes failure of alveolar septation and angiogenesis in lungs of newborn mice." *Am J Physiol Lung Cell Mol Physiol* 2010 Jan;298(1):L23-35. Epub 2009 Oct 23. PMID: 19854954. *Designed and performed experiments to evaluate apoptosis and proliferation in situ, performed statistical analysis, drafted relevant methods and results portions of the manuscript.
8. **Alvira CM**, Sukovich DJ, Lyu SC, Umesh A, Cornfield DN. "Rho kinase activity modulates postnatal adaptation of the pulmonary circulation through separate effect on pulmonary artery endothelial and smooth muscle cells." *Am J Physiol Lung Cell Mol Physiol*. 2010 Dec;299(6):L872-8. Epub 2010 Aug 13. PMID: 20709731.
Faculty of 1000 Recommended
9. **Alvira CM**, Guignabert C, Kim YM, Wang L, Duong TT, Yeung RS, Li D, Rabinovitch M. "Transforming growth factor beta inhibition increases matrix metalloproteinase-9 activity and enhances elastin degradation in a murine model of kawasaki disease." *Am J Pathol*. 2011 Mar; 178(3):1210-20. PMID: 2135637
10. Kim YM, Haghghat L, Spiekerkoetter E, Sawada H, **Alvira CM***, Wang L, Acharya S, Rodriguez-Colon G, Orton A, Zhao M, and Rabinovitch M. "Neutrophil elastase is produced by pulmonary artery smooth muscle cells and is linked to neointimal lesions." *Am J Pathol*. 2011 Sep;179(3):1560-72. Jul 19. PMID: 21763677. *Designed and performed experiments to detect elastin breakdown and leukocyte infiltration in situ, performed statistical analysis, drafted relevant methods and results portions of the manuscript.
11. Ahn YT, Kim YM, Adams ES, Lyu SC, **Alvira CM***, and Cornfield DN. "Hypoxia inducible factor 1a regulates KCNMB1 expression in human pulmonary artery smooth muscle cells." *Am J Physiol Lung Cell Mol Physiol*. 2012 Feb 1;302(3):L352-9. PMID 22114151. *Participated extensively in the design of experiments, supervised the technical execution of experiments, participated extensively in data analysis and interpretation, edited significant portions of original manuscript and contributed significant intellectual content during manuscript revision.
12. Merk DR, Chin JT, Dake BA, Maegdefessel L, Miller MO, Kimura N, Tsao PS, Iosef C, Berry GJ, Mohr FW, Spin JM, **Alvira CM***, Robbins RC, and Fischbein MP. "miR-29b participates in early aneurysm development in Marfan syndrome." *Circ Res* 2012; Jan 20;110(2)312-24. PMID 22116819. *Designed all experiments related to NFκB signaling, supervised the technical execution of experiments, participated extensively in data analysis and interpretation, and contributed significant intellectual content during manuscript revision.
13. Iosef C, Alastalo TP, Iosef C, Hou Y, Chen C, Ahn Y, Chen C, Lyu SC, Adams ES, Cornfield DN, and **Alvira CM**. "Inhibiting nuclear factor kappa-B (NFκB) in the developing lung disrupts angiogenesis and alveolarization." *Am J Physiol Lung Cell Mol Physiol* 2012 May 15;302(10):L1023-36 PMID: 22367785.
Faculty of 1000 Recommended
14. **Alvira CM**, Umesh A, Iosef C, Hou Y, Nowak J, Lyu SC, and Cornfield DN. "Voltage-dependent anion channel-2 interaction with NOS enhances pulmonary artery endothelial cell NO production." *Am J Respir Cell Mol Biol* 2012 Nov;47(5):669-78 PMID: 22842492
15. Kim YM, Barnes EA, **Alvira CM***, Ying L, Reddy S, Cornfield DN. Hypoxia-inducible factor-1alpha in pulmonary artery smooth muscle cells lowers vascular tone by decreasing myosin light chain phosphorylation. *Circ Res* 2013 Apr 26;112(9):1230-1233. PMID: 23513056.
* Designed and supervised the creation of the knock out mice, supervised the technical execution of experiments, participated extensively in data analysis and interpretation, and contributed significant intellectual content during manuscript revision. ***Faculty of 1000 Recommended***

PEER REVIEWED PUBLICATIONS

16. Hilgendorff A, Reiss I, Ehrhardt H, Eickelberg O, **Alvira CM**. "Chronic lung disease in the preterm infant: Lessons learned from animal models." *Am J Respir Cell Mol Biol* 2014 Feb;50(2):233-45. PMID 24024524
17. Ramsi M, **Alvira C**, Purohit P, Cornfield D. "Haemophagocytic lymphohistiocytosis associated with coccidiomycosis." *BMJ Case Rep*. 2014 Aug 19;2014. PMID 25139924
18. Emrich FC, Okamura H, Dalal AR, Merk DM, Raaz U, Hennings JK, Chin JT, Miller MO, Blankenberg FG, Connolly AJ, Rabinovitch R, **Alvira CM***, Mohr FW, Robbins RC, and Fischbein MP. "Enhanced caspase activity contributes to ECM remodeling and early aneurysm development in a murine model of Marfan disease." *Arterioscler Thromb Vasc Biol*. 2015 Jan;35(1):146-54 *Contributed to experimental design, data analysis and interpretation, and significant intellectual content during original draft or manuscript and the subsequent revision.
19. Kim FY, Barnes EA, Ying L, Chen C, Lee L, **Alvira CM***, and Cornfield DN. "Pulmonary artery smooth muscle cell endothelin-1 expression modulates the pulmonary vascular response to chronic hypoxia". *Am J Physiol Lung Cell Mol Physiol* 2015 Feb 15;308(4):L368-77. PMID: 25399435. *Participated in the design of in vitro experiments assessing proliferation and apoptosis, supervised the technical execution of experiments, data analysis and interpretation, drafted portions of original manuscript and contributed significant intellectual content during manuscript revision.
20. Hou Y, Liu M, Husted C, Chen C, Thiagarajan K, Rao SP, and **Alvira CM**. "Activation of the nuclear factor kappa-B pathway during postnatal lung inflammation preserves alveolarization by suppressing macrophage inflammatory protein-2." *Am J Physiol Lung Cell Mol Physiol*. 2015 Sep 15;309(6):L593-604. Epub 2015 Jul 10. PMID: 26163511
21. Ying L, Becard M, Lyell D, Han X, Shortliffe L, Iosef-Husted C, **Alvira CM***, and Cornfield DN*. "The transient receptor potential vanilloid-4 channel modulates uterine tone during pregnancy." *Sci Transl Med*. 2015 Dec 23;7(319):319ra204. PMID: 26702092
*Co-senior authors
22. Vattulainen-Collanus S, Akinrinade O, Li M, Koskenvuo M, Li CG, de Jesus Perez V, Yuan K, Sawada H, Koskenvuo JW, **Alvira C***, Rabinovitch M, and Alastalo TP. "Loss of PPAR γ deficiency in endothelial cells leads to impaired angiogenesis." *J of Cell Sci* 2016 Feb 15;129(4):693-705. PMID: 26743080 *Designed and analyzed in vitro experiments using primary murine endothelial cells, and contributed significant intellectual content during manuscript revision.
23. Ehrhardt H, Pritzke T, Oak P, Kossert M, Biebach L, Förster K, Koschlig M, **Alvira CM***, and Hilgendorff A. "Absence of TNF- α Results in Imbalanced Inflammatory Response in the Newborn Lung Undergoing Ventilation." *Am J Physiol Lung Cell Mol Physiol*. 2016 May 15;310(10):L909-18. PMID: 27016588 *Designed and analyzed experiments to detect NF κ B activation in lung tissue, and contributed significant intellectual content during manuscript revision.
24. Okamura H, Emrich F, Trojan J, Chiu P, Dalal AR, Arakawa M, Sato T, Penov K, Koyano T, Pedroza A, Connolly AJ, Rabinovitch M, **Alvira C***, and Fischbein MP. "Long-term miR-29b suppression reduces aneurysm formation in a Marfan mouse model." *Physiol Rep*. 2017 Epub 2017 Apr 28. PMID: 28455451. *Participated in the design of experiments, data analysis and interpretation, and contributed significant intellectual content during original draft or manuscript and the subsequent revision.
25. Ying L, **Alvira CM***, and Cornfield DN. "Developmental Differences in Focal Adhesion Kinase Expression Modulates Pulmonary Endothelial Barrier Function in Response to Inflammation" *Am J Physiol Lung Cell Mol Physiol*, 2018 Jul 1;315(1):L66-L77. PMID: 29597831. *Participated in the design of in vivo and in vitro experiments, supervised the technical execution of experiments, data analysis and interpretation, drafted portions of original manuscript and contributed significant intellectual content during manuscript revision.

PEER REVIEWED PUBLICATIONS

26. Barnes EA, Lee L, Barnes SL, Brenner R, **Alvira CM***, and Cornfield DN. "β1 Subunit of the Calcium-Sensitive Potassium Channel Modulates the Pulmonary Vascular Smooth Muscle Cell Response to Hypoxia". *Am J Physiol Lung Cell Mol Physiol*. 2018 Aug 1; 315(2):L265-275. PMID: 29644895 *Participated in data analysis and interpretation, drafted portions of the original manuscript and contributed significant intellectual content during manuscript editing.
27. **Alvira CM**, Steinhorn RH, Balistreri WF, Fineman JR, Oishi PE, Padbury JF, Kinsella JP, and Abman SH. "Enhancing the Development and Retention of Physician-Scientists in Academic Pediatrics: Strategies for Success". *J Pediatr*, 2018 Sep;200:277-284. PMID: 30055815
28. Iosef C, Liu M, Rao SP, Concepcion K, Chan W, Oman A, and **Alvira CM**. "Distinct roles for IκB kinase alpha and -beta in regulating pulmonary endothelial angiogenic function during late lung development". *J Cell Mol Med*, 2018 Sep;22(9):4410-4422. PMID: 29993183.
29. Dodson RB, Powers KN, Gien J, Rozance PJ, Seedorf GJ, Astling D, Jones KL, Crombleholme TM, Abman SH, and **Alvira CM**. "Intrauterine growth restriction decreases nuclear factor-kappa B signaling in fetal pulmonary artery endothelial cells of fetal sheep". *Am J Physiol Lung Cell Mol Physiol*. 2018 Sep 1;315(3):L348-L359. PMID: 29722560
30. Wang CC, Ying L, Barnes EA, Adams ES, Kim FY, Engel KW, **Alvira CM***, and Cornfield DN. Pulmonary artery smooth muscle cell HIF-1α regulates endothelin expression via microRNA-543". *Am J Physiol Lung Cell Mol Physiol*, 2018 Sep 1;315(3):L422-L431. PMID: 29745253. *Participated in the design of in vivo and in vitro experiments, supervised the technical execution of experiments, data analysis and interpretation, drafted portions of original manuscript and contributed significant intellectual content during manuscript revision.
31. Duan S, Chan WK, Oman A, Basile DP, **Alvira CM***, Buxton ILO, and Iosef C. "NF-κB/NKIL signaling modulates the anti-cancerous effect of EZHZ inhibition." *J Cell Mol Med*, 2019, Sep;23(9):6182-6192. PMID: 31282094
*Contributed significant intellectual content during manuscript revision.
32. Domingo-Gonzalez R, Zanini F, Che X, Liu M, Jones RC, Swift MA, Quake SR, and **Alvira CM**. Diverse homeostatic and immunomodulatory roles of immune cells in the developing mouse lung at single cell resolution. *eLife*. 2020 Jun 2;9:e56890. Doi: 10.7554/eLife56890. PMID: 32484158
33. Liu M, Iosef C, Rao S, Domingo-Gonzalez R, Fu S, Snider P, Conway SJ, Umbach GS, Heilshorn SC, Dewi RE, Dahl MJ, Null DM, Albertine KH, and **Alvira CM**. "Transforming growth factor induced protein promotes nuclear factor kappa-B mediated pulmonary angiogenesis during postnatal lung development." *Am J Respir Cell Mol Biol*. 2020 Dec 2. Online ahead of print. PMID: 33264084
34. Hirani D, **Alvira CM***, Danopoulos S, Mill C, Donato M, Tian L, Mohr J, Dinger, K, Vohlen C, v. Koningsbruggen-Rietschel S, Rose-John S, Odenthal M, Pryhuber G, Khatri P, Al Alam D, Dotch J, and Alejandre-Alcazar MA. "Macrophage-derived IL-6 trans-signaling as a novel target in the pathogenesis of bronchopulmonary dysplasia." Submitted to *ERJ*. In revision.
*Performed RNA-seq and contributed significant intellectual content during manuscript revision.

INVITED PEER REVIEWED PUBLICATIONS

1. **Alvira CM**. "Nuclear factor-kappa-B signaling in lung development and disease: one pathway, numerous functions." *Birth Defects Res A Clin Mol Teratol* 2014 Mar;100(3):202-16. PMID: 24639404
2. Baker CD and **Alvira CM**. "Disrupted lung development and bronchopulmonary dysplasia: opportunities for lung repair and regeneration." *Curr Opin Pediatr*. 2014 Jun;26(3):306-14.

INVITED PEER REVIEWED PUBLICATIONS

3. **Alvira CM.** "Aberrant Pulmonary Vascular Growth and Remodeling in Bronchopulmonary Dysplasia. *Front Med (Lausanne)*. 2016 May 20;3:21 PMID: 27243014
4. **Alvira CM** and Morty RE. "BPD at 50 years: Can We Define the Pathobiology of BPD?" *J Pediatr*, November, 2017. PMID: 29144252
5. **Alvira CM**, Steinhorn RH, Balistreri WF, Fineman JR, Oishi PE, Padbury JF, Kinsella JP, Abman SH. "Enhancing the Development and Retention of Physician-Scientists in Academic Pediatrics: Strategies for Success. *J Pediatr*, 2018 Sep; 200:277-284.
6. Zepp JA and **Alvira CM.** "Nanoparticle Delivery of Angiogenic Gene Therapy: Save the Vessels, Save the Lung!" *Am J Respir Crit Care Med*. 2020 Jul 1;202(1):13-14. PMID: 32338996
7. **Alvira CM.** "Dynamism of the human lung proteome during alveolarization: moving beyond the transcriptome." *Am J Respir Crit Care Med*. 2021 Oct. Accepted for publication.

PEER REVIEWED BOOK CHAPTERS

1. **Alvira CM**, Bombal S, and Rabinovitch M. "Developmental Physiology of the Pulmonary Vasculature." In *Textbook of Fetal and Neonatology*; Elsevier; Amsterdam, The Netherlands; 2020; 6th Edition.

PEER REVIEWED PUBLICATIONS (Submitted)

1. Ingles JA, Rodriguez Z, Ying L, Han X, Cornfield DN and **Alvira CM.** "Loss of TRPV4 decreases NFκB-mediated myometrial inflammation and prevents preterm labor." Submitted to *Biol Reprod*.
2. Barnes BA , Ito R, Che X, **Alvira CM**, and Cornfield DN. "Constitutive hypoxia inducible factor stabilization in pulmonary artery smooth muscle cells prevents hypoxia-induced pulmonary hypertension." Submitted to *Arterioscler Thromb Vasc Biol*.
*Participated in the design of in vivo and in vitro experiments, supervised the technical execution of experiments, data analysis and interpretation, drafted portions of original manuscript and contributed significant intellectual content during manuscript revision.
3. Mohr J, Rodenberger S, Steinbuch H, Danopoulos S, **Alvira CM***, Rheindorf D, Imhoff T, Donato M, Ebert L, Muller S, Vohlen C, Hirani D, Odenthal M, Pasparakis M, Schermer B, Al Alam D, Dotsch J, Koch M, and Alejandre-Alcazar MA. "Novel Netrin1-KLF4 axis in alveolar progenitor cells during lung development and neonatal pulmonary regeneration." Submitted to *ERJ*. * Contributed significant intellectual content during manuscript preparation and revision.
4. Zanini F, Che, Knutsen C, Liu M, Suresh N, Domingo-Gonzalez R, Dou S, Jones RC, Cornfield DN, Quake SR, and **Alvira CM.** Phenotypic diversity and sensitivity to injury of the pulmonary endothelium during a period of rapid postnatal growth. Submitted to *Nature Communications*. A preprint of this manuscript is available on BioRxiv. 10.1101/2021.04.27.441649
5. Zanini F, Che X, Suresh N, Knutsen C, Klavina P, Xia Y, Domingo-Gonzalez R, Jones RC, Quake SR*, **Alvira CM***, and Cornfield DN*. Progressive increases in mesenchymal cell diversity modulate lung development and are attenuated by hyperoxia. Submitted to *eLife*. A preprint of this manuscript is available on BioRxiv. 10.1101/2021.05.19.444776
*These authors contributed equally.

INVITED NATIONAL AND INTERNATIONAL PRESENTATIONS

1. Harvey J. Cohen, MD, PhD, Endowed Lecture in Pediatrics
"The 'New' Bronchopulmonary Dysplasia: How Pulmonary Vascular Growth Directs Alveolar Development"
Stanford University, Palo Alto, CA, November, 2012

INVITED NATIONAL AND INTERNATIONAL PRESENTATIONS

2. Bay Area Lung Development, Physiology, and Cancer Symposium
"Novel Pathways Mediating Angiogenesis in the Developing Lung"
Stanford University, Palo Alto, CA, September, 2012
3. Scientific Symposium: Neonatal Lung Development and Adult Lung Homeostasis: Common Molecular Mechanisms in Lung Disease
The 'Good Side' of NFκB: Novel Angiogenic and Anti-inflammatory Functions that Promote Lung Development and Repair.
Experimental Biology, Boston, MA, April, 2015
4. ChildX Symposium: The top voices in child and maternal health. Special Presentation.
"The Search for Novel Therapies that Promote Lung Development and Regeneration."
Stanford University, Palo Alto, CA, April, 2015
5. Translational Cardiovascular Biology Conference-Special Seminar
"The Search for Novel Therapies that Promote Lung Development and Regeneration."
University of Colorado, Aurora, CO, July, 2015
6. Center for Pulmonary & Vascular Biology-Research Conference
"The 'Good Side' of NFκB: Novel Angiogenic and Anti-inflammatory Functions that Promote Lung Development and Repair.
University of Texas-Southwestern, Visiting Professorship, Dallas, TX, December, 2015
7. Stanford University Department of Pediatrics-Grand Rounds
"Lessons learned from the 'New' Bronchopulmonary Dysplasia: Opportunities for Lung Regrowth and Regeneration"
University of Texas-Southwestern, Visiting Professorship, Dallas, TX, December, 2015
8. Scientific Symposium: Highlighting elements of aberrant alveolar development
"The 'Good Side' of NFκB: Novel Angiogenic and Anti-inflammatory Functions that Promote Lung Development and Repair."
The 7th Scientific Symposium of the University of Giessen and Marburg Lung Center School Castle Waldeck, Hessen, Germany-December, 2015
9. Stanford University Department of Medicine: PCCM Grand Rounds
"The 'Good Side' of NFκB: Anti-inflammatory and Angiogenic Functions in the Immature Lung."
Stanford University School of Medicine,
Palo Alto, CA-March, 2016
10. Myometrium /Parturition Satellite Symposium
"A Novel Role for TRPV4 in Mediating Myometrial Inflammation and Contractility."
Society of Reproductive Investigation's Annual Meeting
Orlando, FL -March, 2017
11. Fourth Annual Neonatal Cardiopulmonary Biology Young Investigators Forum
"Meet the Professor Lunch"
Neonatal Cardiopulmonary Biology Young Investigators Forum
Chicago, IL-September, 2017
12. Invited Faculty Career Development Presentation
"The Development of a Pediatric Critical Care Basic Scientist: One Example."
Pediatric Critical Care and Trauma Scientist Development Program K12 Annual Retreat
Deer Valley, UT -December, 2017
13. Scientific Symposium: Bronchopulmonary Dysplasia-Then and Next
"Modifying Pulmonary Endothelial Phenotype to Promote Lung Growth"
Stanford School of Medicine Symposium to Celebrate the Original Description of BPD
Palo Alto, CA-December, 2017

INVITED NATIONAL AND INTERNATIONAL PRESENTATIONS

14. Scientific Symposium: Outcomes of Neonatal Pulmonary Disease
"Pulmonary Vascular Development: Impact of Early Injury"
 UCSF 11th International Conference of Neonatal and Childhood Pulmonary Vascular Disease
 San Francisco, CA-April, 2018
15. Faculty Research In Progress Seminar: Cardiovascular Research Institute
"Regulation of Pulmonary Vascular Angiogenic Function During Postnatal Lung Development"
 University of California San Francisco School of Medicine
 San Francisco, CA-August, 2018
16. Scientific Symposium: Maternal Child Health Research Institute Symposium
"Developmental Regulation of Pulmonary Angiogenesis by the Lung Microenvironment"
 Stanford University School of Medicine
 Palo Alto, CA- November, 2018
17. Scientific Symposium: Infant and Child Lung Disorders: Genetics, Diagnostics, and
 Tomorrow's Care
"Control of Pulmonary Vascular Growth by the Lung Microenvironment"
 Stanford University School of Medicine
 Palo Alto, CA- March, 2019
18. Scientific Symposium: Basic Mechanisms of Lung Vascular, Development, Injury, and Repair
"Pulmonary endothelial heterogeneity during postnatal lung growth at single cell resolution."
 2019 ATS Grover Conference on the Pulmonary Circulation
 Sedalia, CO-September, 2019
19. Scientific Session Including Abstract Poster Symposium
"The Year in Review: Basic Science"
 UCSF 13th International Conference on Neonatal and Childhood Pulmonary Vascular Disease
 San Francisco, CA-March 2020
20. Research in Progress Seminar
"Developmental Heterogeneity of Pulmonary Endothelial Cells at Single Cell Resolution"
 The Pediatric Heart Lung Center, University of Colorado Denver
 November 9th, 2020.
21. Research in Progress Seminar
"Developmental Mechanisms Promoting Pulmonary Vascular Growth During Early Postnatal Life"
 Newborn Medicine Research Seminar for the Harvard Program in Neonatology-Boston
 Children's Hospital
 April 9th, 2021

NATIONAL ABSTRACT PRESENTATIONS
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1. **Alvira CM**, Yang GB, Abate A, Dennery PA. *"Maturation differences in NFκB activation in response to systemic lipopolysaccharide."* **Oral Presentation**, Western Society of Pediatric Research, Carmel, CA, January 2004.
2. **Alvira CM**, Yang GB, Abate A, Rabinovitch M, Dennery PA *"Maturation differences in NFκB activity confer differential protection against lipopolysaccharide-induced acute lung injury."* **Platform Presentation**, Pediatric Academic Societies Meeting, San Francisco, CA, May 2004.
3. **Alvira CM**, Abate A, Yang GB, Dennery PA, Rabinovitch M. *"Inhibition of NFκB increases lipopolysaccharide-induced inflammation in neonatal mice."* **Platform Presentation**, Pediatric Academic Societies Meeting, Washington DC, May 2005.

NATIONAL ABSTRACT PRESENTATIONS
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4. Spiekerkoetter EF, **Alvira CM**, Bruneau A, Blackman M, Virgin IV HW, Ambartsumian N, Rabinovitch M. "A herpes virus infection (γ MHV-68) induces heightened elastase activity and elastin peptides, promoting pulmonary vascular disease (PVD) in *Mts1* mice." **Poster Discussion Session**, ATS International Conference in San Francisco, California, May 2007.
5. **Alvira CM**, Wang L, Duong TT, Yeung RS, Rabinovitch M. "TGF- β mediated regulation of tropoelastin gene expression impacts disease severity in a murine model of Kawasaki Disease." **Platform Presentation**, Pediatric Academic Societies Meeting, Toronto Canada, May 2007.
6. **Alvira CM**, Wang L, Duong TT, Li D, Yeung RS, Rabinovitch M. "Disease severity in a murine model of Kawasaki Disease is determined By dysregulation of elastin fiber assembly." **Oral Presentation**, American Heart Association Scientific Sessions, Orlando, FL, November 2007.
7. **Alvira CM**, Guignabert C, Wang L, Duong TT, Yeung RS, Rabinovitch M. "TGF- β antagonism increases vascular disruption in a murine model of Kawasaki Disease." **Platform Presentation**, Pediatric Academic Societies Meeting, Honolulu, HI, May 2008.
8. Guignabert C, **Alvira CM**, Alastalo TP, Sawada H, de Jesus Perez VA, Hansmann G, Zhao M, Rabinovitch M. "Tie2-mediated loss of peroxisome proliferator-activated receptor- γ in transgenic mice increases platelet derived growth factor-receptor β and pulmonary arterial muscularization." **Oral Presentation**, American Heart Association Scientific Sessions, New Orleans, LA, November 2008.
9. **Alvira CM**, Kim YM, Guignabert C, Wang L, Rabinovitch M. "Transforming growth factor beta inhibition increases matrix metalloproteinase-9 activity and enhances elastin degradation in a murine model of Kawasaki Disease." **Oral Presentation**, American Heart Association Scientific Sessions, New Orleans, LA, November 2008.
10. **Alvira CM**, Lyu SC, Kim F, Cornfield DN, "Nuclear factor- κ B promotes postnatal alveologenesi and prevents lipopolysaccharide-induced alveolar disruption." **Poster Discussion**, American Thoracic Society, San Diego, CA, May 2009.
11. **Alvira CM**, Alastalo TP, Chen C, Lyu SC, Ahn YT, Cornfield DN. "Nuclear factor kappa B mediates postnatal alveolarization by promoting pulmonary angiogenesis via vascular endothelial growth factor receptor-2 regulation." **Oral Presentation**, American Heart Association Scientific Sessions, Orlando, FL, November 2009.
12. **Alvira CM**, Chen C, Lyu SC, Adams ES, and Cornfield DN. "Nuclear factor kappa B activation in the neonatal lung protects against lipopolysaccharide induced alveolar disruption." **Platform Presentation**, Pediatric Academic Societies Annual Meeting, Vancouver, May 2010
13. **Alvira CM**, Alastalo TP, Chen C, Lyu SC, and Cornfield DN. "Nuclear Factor kappa B is an essential regulator of postnatal alveolarization by promoting angiogenesis." **Poster Discussion**, American Thoracic Society International Conference, New Orleans, May 2010.
14. **Alvira CM**, Alastalo TP, Iosef C, Hou Y, Chen C, Adams, ES, Lyu SC, and Cornfield DN. "Constitutive Nuclear factor kappa-B activity is essential for neonatal pulmonary endothelial proliferation, survival, and angiogenesis." **Platform Presentation**, Pediatric Academic Societies Annual Meeting, Denver, April 2011
15. **Alvira CM**, Iosef C, Chen C, Hou Y, and Cornfield DN. "Constitutive activity of nuclear factor kappa-B is unique to the pulmonary endothelium and promotes alveolarization." **Platform Presentation**, Pediatric Academic Societies Annual Meeting, Boston, April 2012

NATIONAL ABSTRACT PRESENTATIONS
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16. Hou Y, Iosef C, Chen C, and **Alvira CM**. "Nuclear factor kappa-B activation in the neonatal lung protects against lipopolysaccharide induced alveolar disruption by repressing macrophage inflammatory protein-2 expression." **Poster Discussion**, American Thoracic Society International Conference, San Francisco, May 2012.
17. Husted C, Hou Y, Chen C, and **Alvira CM**. "Temporal specific secretion of angiogenic factors from the neonatal lung promotes activation of nuclear factor kappa B in the pulmonary endothelium." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Washington D. C. May 2013
18. Barnes EA, Ying L, Chen C, **Alvira CM**, and Cornfield DN. "Loss of smooth muscle cell HIF-1 α expression compromises angiogenesis and impairs lung alveolarization." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Vancouver, May 2014
19. Kim FY, Barnes EA, **Alvira CM**, Lee L, and Cornfield DN. "In pulmonary artery smooth muscle cells, intracellular endothelin-1 modulates the proliferative response to chronic hypoxia." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Vancouver, May 2014
20. Foley E, Husted C, and **Alvira CM**. "A novel role for alpha-fetoprotein in promoting pulmonary endothelial proliferation and migration in the early alveolar lung." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Vancouver May 2014
21. Ying, L, **Alvira, CM**, Cornfield, DN. "Pulmonary artery endothelial cell barrier function is developmentally regulated by focal adhesion kinase". **Poster Symposium Presentation**, American Thoracic Society International Conference, San Diego, CA, May 2014.
22. Barnes, EA, Ying, L, **Alvira, CM**, Cornfield, DN "In Patients with pulmonary hypertension, post-translational modification of smooth muscle cell HIF-1 α modulates contractile state." **Platform Presentation**, Experimental Biology, Boston, MA, March 2015.
23. Husted C, Liu M, Foley E, and **Alvira CM**. "A novel developmental role for alpha-fetoprotein in promoting late lung development." **Poster Presentation**. Pediatric Academic Societies Annual Meeting, San Diego, April 2015
24. Ying L, Barnes EA, **Alvira CM**, and Cornfield DN. "Modulating uterine transient receptor vanilloid 4 channel activity can prevent preterm labor." **Platform Presentation**. Pediatric Academic Society Annual Meeting, San Diego, April 2015
25. Barnes EA, Ying L, Chen C, **Alvira CM**, and Cornfield DN. "Smooth muscle cell HIF-1 α expression modulates lung alveolarization." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, San Diego, April 2015
26. Oak P, Koschlig M, Windhorst A, Jain N, Reicherzer T, Erhardt H, Frankenberger M, **Alvira CM**, Eickelberg O, and Hilgendorff A. "Monocyte-centered inflammatory response characterizing early stages of BPD development in the preterm infant". **Poster Discussion Session**. American Thoracic Society International Conference, San Francisco, May 2016.
27. Rodriguez Z, Ying L, Han X, **Alvira CM**, and Cornfield DN. "The role of myometrial smooth muscle cell TRPV4 in modulating inflammation and uterine contractility." **Poster Presentation**. Pediatric Academic Societies Annual Meeting, Baltimore, May 2016
28. Rao, SP, Liu M, and **Alvira CM**. "Pulmonary endothelial angiogenic function is impaired in mice containing an inducible, endothelial-specific deletion of IKK β ." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Baltimore, May 2016

NATIONAL ABSTRACT PRESENTATIONS
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29. Dodson RB, Alvira CM, Powers KN, Gien J, Rozance PJ, Seedorf G, Astling D, Jones K, Crombleholme TM, and Abman SH. "Altered extracellular matrix-receptor interaction and NF-kappa B signaling pathways in fetal pulmonary artery endothelial cells in a sheep model of intrauterine growth restriction." **Poster Presentation.** Pediatric Academic Societies Annual Meeting, Baltimore, May 2016
30. Liu M, Rao, SP, Husted C, Umbach G, Dewi R, Heilshorn SC, and Alvira CM. "A novel role for transforming growth factor beta-induced protein in promoting pulmonary endothelial migration in the alveolar lung". **Poster Discussion Session.** American Thoracic Society International Conference, San Francisco, May 2016.
Winner: Neonatal and Developing Lung Abstract Award
31. Liu M, Rao, SP and Alvira CM. "Developmental expression of transforming growth factor-beta induced protein in the alveolar lung promotes nuclear factor kappa-B dependent pulmonary endothelial migration." **Poster Presentation.** Experimental Biology 2017. Chicago, IL, April, 2017
32. Rodriguez Z, Ying L, Cornfield DN, and Alvira CM. "TRPV4 channels modulate myometrial inflammation and contractility in a murine model of preterm labor." **Poster Presentation.** Pediatric Academic Societies Annual Meeting, San Francisco, CA, May, 2017
33. Rao SP, Liu M, and Alvira CM. "Endothelial-specific deletion of IKK β impairs VEGF-mediated angiogenic function in early alveolar pulmonary endothelial cells." **Platform Presentation.** Pediatric Academic Societies Annual Meeting, San Francisco, CA, May, 2017
34. Liu M, Rao SP, Fu S, and Alvira CM. "Unique factors present in the early alveolar lung microenvironment promote pulmonary endothelial angiogenic function." **Platform Presentation.** Pediatric Academic Societies Annual Meeting, San Francisco, CA, May, 2017
35. Rodriguez Z, Ying L, Cornfield DN, and Alvira CM. "TRPV4 promotes myometrial inflammation and contractility in preterm mice exposed to low dose lipopolysaccharide". Accepted for **Poster Presentation.** 65th Annual Scientific Meeting of the Society for Reproductive Investigation, San Diego, CA, March 2018
36. Liu M, Rao SP, Iosef C, Fu S, Umbach G, and Alvira CM. "Temporal specific expression of transforming growth factor beta-induced (TGFB1) protein in in the early alveolar lung promotes endothelial activation of nuclear factor kappa-B". **Poster Presentation.** Pediatric Academic Societies Annual Meeting, Toronto, Canada, May, 2018
37. Rao SP, Liu M, and Alvira CM. "Loss of endothelial NF κ B/IKK β signaling impairs angiogenesis and alveolarization". **Platform Presentation.** Pediatric Academic Societies Annual Meeting, Toronto, Canada, May, 2018
38. Liu M, Rao SP, Iosef C, Fu S, Umbach G, and Alvira CM. "A novel role for transforming growth factor beta-induced (TGFB1) protein in promoting nuclear factor kappa-B mediated pulmonary angiogenesis in the early alveolar lung." **Poster Presentation.** American Thoracic Society International Conference, San Diego, May 2018.
39. Rao SP, Liu M, and Alvira CM. "Endothelial specific deletion of IKK β in the early alveolar lung impairs alveolarization and VEGF-mediated angiogenesis". **Oral Presentation.** American Thoracic Society International Conference, San Diego, May 2018.
Winner: Neonatal and Developing Lung Abstract Award
40. Ingles JA, Rodriguez Z, Ying L, Cornfield DN, and Alvira CM. "Loss of TRPV4 attenuates NF κ B activation and inflammation thereby decreasing murine susceptibility to LPS-induced preterm labor." **Oral Presentation.** 66th Annual Scientific Meeting of the Society for Reproductive Investigation, Paris, France, March 2019.
Winner: SRI President's Presenter's Award

NATIONAL ABSTRACT PRESENTATIONS
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41. Liu M, Rao SP, Iosef CI, **Alvira CM**. "Transforming Growth Factor Beta-Induced Protein Promotes Pulmonary Endothelial Migration through Nuclear Factor Kappa-B Dependent Enhancement of Nitric Oxide Signaling." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Baltimore, MD, April 2019.
42. **Alvira CM**, Zanini F, Che X, Liu M, and Cornfield DN. "Single Cell Transcriptomic Profiling of Lung Immune Cells Reveals Distinct Roles for Macrophages in Immune Function and Lung Development." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Baltimore, MD, May 2020.
43. **Alvira CM**, Zanini F, Che X, Liu M, and Cornfield DN. "Developmental Heterogeneity of Pulmonary Endothelial Cells Revealed at Single Cell Resolution." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Baltimore, MD, May 2020.
44. Zanini F, **Alvira CM**, Che X, and Cornfield DN. "Marked Alterations in the Diversity and Gene Expression of Pulmonary Mesenchymal Cells After Birth Revealed at Single Cell Resolution." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, Baltimore, MD, May 2020.
45. Suresh NE, Zanini F, Che X, Knutsen C, Cornfield DN, and **Alvira CM**. "Single Cell Transcriptomic Analysis of Pulmonary Adventitial Fibroblasts Reveals Distinct Functions in the Developing Lung." **Platform Presentation**. Pediatric Academic Societies Annual Meeting, May 2021.

LOCAL PRESENTATIONS: STANFORD UNIVERSITY

1. Pediatric Critical Care Medicine Fellowship Lecture Series
"Board Review: Oxygen Delivery and Consumption", February, 2007
2. Center for Excellence in Pulmonary Biology Lecture Series
"Basic Respiratory Physiology", August, 2007
3. Pediatric Critical Care Medicine Fellowship Lecture Series
"Ventilator-Induced Lung Injury", November, 2007
4. Pediatric Intensive Care Unit RN Orientation
"Sepsis: Pathophysiology and Management", November, 2007
5. Center for Excellence in Pulmonary Biology Lecture Series
"Lung Development" March, 2008
6. Cardiopulmonary Research in Progress Seminar
"Disease Severity in a Murine Model of Kawasaki Disease is Determined by Dysregulation of Elastin Fiber Assembly", April, 2008
7. Pediatric Intensive Care Unit RN Orientation
"Sepsis: Pathophysiology and Management", June, 2008
8. Center for Excellence in Pulmonary Biology Lecture Series
"Ventilator-Induced Lung Injury", August, 2008
9. Cardiopulmonary Research in Progress Seminar
"The Role of NF kappa-B Signaling in Postnatal Lung Development", March, 2010
10. Stanford University School of Medicine: MED223
CVP Scholarly Concentration
"The Acute Respiratory Distress Syndrome", May, 2011
11. Research Conference, Pulmonary Biology Fellow Lecture Series
"The Role of Nuclear Factor Kappa-B in Lung Development", September, 2011

LOCAL PRESENTATIONS: STANFORD UNIVERSITY

12. Pediatric Resident Noon Conference
"Multiple Organ Dysfunction Syndrome", September, 2011
13. Center for Excellence in Pulmonary Biology Fellow Lecture Series
"Ventilator-Induced Lung Injury", November, 2011
14. Research Presentation, Pediatric Critical Care Fellowship Lecture Series
"Novel Mediators of Angiogenesis in the Developing Lung", October, 2012
15. Pediatric Resident Noon Conference
"Shock", January, 2013
16. Pediatric Critical Care Fellowship Lecture Series
"Ventilator-Induced Lung Injury", August, 2013
17. Stanford University School of Medicine: MED223
CVP Scholarly Concentration
"Bronchopulmonary Dysplasia", January, 2014
18. Frontiers in Pulmonary Biology Research Seminar Series
"Novel Angiogenic Mediators in the Early Alveolar Lung", January, 2014
19. Pediatric Resident Noon Conference
"Acute Respiratory Distress Syndrome", February 2014
20. Pediatric Critical Care Fellowship Lecture Series
"Ventilator-Induced Lung Injury", September, 2014
21. Pediatric Resident Noon Conference
"Acute Respiratory Distress Syndrome", February 2015
22. Pediatric Critical Care Fellowship Lecture Series
"How to Give a 10 Minute Scientific Talk", November, 2015
23. Pediatric Critical Care Fellowship Lecture Series
"Abnormal Pulmonary Vascular Development in BPD", June, 2016
24. Pediatric Critical Care Fellowship Lecture Series
"Acute Lung Injury-Molecular Mechanisms of Lung Injury and Resolution: The Biology Matters!"
December, 2016
25. Department of Pediatrics, Quarterly Fellows' College
"How to Give a 10-Minute Scientific Presentation", May, 2017
26. Pediatric Critical Care Fellowship Lecture Series
"How to Give a 10-Minute Scientific Presentation" June, 2016
27. Department of Pediatrics, Quarterly Fellows' College
"How to Give a 10-Minute Scientific Presentation", November, 2017
28. Department of Pediatrics, Quarterly Fellows' College
"How to Give a 10-Minute Scientific Presentation", August, 2018
30. Department of Pediatrics, Physician Scientist Meeting
"My Career Path and Research Interests", August 2018
31. Pediatric Resident Noon Conference
"Mechanical Ventilation", March 2019

LOCAL PRESENTATIONS: STANFORD UNIVERSITY

32. Pediatric Critical Care Fellowship Lecture Series
"Severe Bronchopulmonary Dysplasia: Management Considerations and Outcomes", June 2019
33. Pediatric Resident Noon Conference
"Mechanical Ventilation 101", August 2019
34. Department of Pediatrics, Quarterly Fellows' College
"How to Give a 10–Minute Scientific Presentation", August, 2019
35. Department of Pediatrics, Quarterly Fellows' College
"How to Give a 10–Minute Scientific Presentation", August, 2020
36. Pediatric Critical Care Fellowship Lecture Series
"Building a Successful Academic Career: One Example." September, 2020
37. Department of Pediatrics, Fellows' College
Basic Research Lead for Scholarship Round Robin, September, 2020

STANFORD PEDIATRIC RESIDENCY ADVISOR PROGRAM ADVISEES

Dates	Name of Advisee
2016-2019	Kaoru Takasaki
2017-2020	Lori Lee

PAST AND CURRENT TRAINEES

Name of Trainee	Role of Trainee	Dates	Current Position
Eloa Adams	Postdoctoral Fellow	2007-2009	Attending Physician: Kaiser Permanente-Oakland
Mihaela Damian	Postdoctoral Fellow	2009-2011	Clinical Assistant Professor: Stanford University SOM
Katie Concepcion	Undergraduate Student	2010-2011	MD/PhD Student: Loma Linda School of Medicine
Francis Kim	Postdoctoral Fellow	2011-2013	Assistant Professor: Medical College of Wisconsin
Kavitha Thiagarajan	Undergraduate Student	2012-2013	Medical Student: University of Southern California
Gray Umbach	Undergraduate Student	2015	MD/PhD Student: University of Texas-Southwestern
Elizabeth Foley	Postdoctoral Fellow	2013-2016	Attending Physician: Madeira Children's Hospital
Zahidee Rodriguez	Postdoctoral Fellow	2014-2017	Assistant Professor, Pediatric Cardiology: Emory University
Shailaja Rao	Postdoctoral Fellow	2014-2018	Research Associate, Neurosurgery: Stanford University SOM
Racquel Domingo-Gonzalez	Postdoctoral Fellow	2018-2020	Research Scientist: Genentech
Judith Ingles	Postdoctoral Fellow	2018-2020	Research Scientist: Medtronic
Nina Suresh	Postdoctoral Fellow	2020-present	

TRAINEE RESEARCH AWARDS AND ACCOMPLISHMENTS

Name of Trainee	Research Award
Gray Umbach	Stanford University ChemE VPUE Summer Research Program Awardee
Elizabeth Foley	Lucile Packard Foundation Euphrat Fellowship
Zahidee Rodriguez	Stanford Department of Pediatrics Research Retreat: "Best Basic Science Research Poster"
Shailaja Rao	Stanford MCHRI Postdoctoral Fellowship Award
Racquel Domingo-Gonzalez	Stanford MCHRI Postdoctoral Fellowship Award
Judith Ingles	Society of Reproductive Investigators President's Presenter's Award
Nina Suresh	Chan Zuckerberg Physician Scientist Fellowship Awardee
Nina Suresh	Stanford MCHRI Clinical Trainee Fellowship Award

FELLOW SCHOLARSHIP OVERSIGHT COMMITTEES (Present)

Dates	Name of Fellow
2020-present	Ali Sadati, Clinical Fellow in Pediatric Cardiology
2020-present	Aaron Phillips, Clinical Fellow in Pediatric Cardiology
2020-present	Katie Hansen, Clinical Fellow in Pediatric Cardiology
2019-present	Jessica Sanchez, Clinical Fellow in Pediatric Cardiology
2019-present	Heather Giacone, Clinical Fellow in Pediatric Cardiology
2019-present	Dana Gal, Clinical Fellow in Pediatric Cardiology
2018-present	Brain Han, Clinical Fellow in Pediatric Cardiology
2018-present	Sonny Duong, Clinical Fellow in Pediatric Cardiology

FELLOW SCHOLARSHIP OVERSIGHT COMMITTEES (Past)

Dates	Name of Fellow
2017-2020	Greg Adamson, Clinical Fellow in Pediatric Cardiology
2017-2020	Asaad Beshish, Clinical Fellow in Pediatric Cardiology
2017-2020	Marcos Mills, Clinical Fellow in Pediatric Cardiology
2017-2020	Chiu Yu Chen, Clinical Fellow in Pediatric Cardiology
2017-2020	Quynh Nguyen, Clinical Fellow in Pediatric Critical Care Medicine
2017-2020	Ali Arastu, Clinical Fellow in Pediatric Critical Care Medicine
2005-2007	Alan Schroeder, Clinical Fellow in Pediatric Critical Care Medicine
2006-2008	Michael J. Cisco, Clinical Fellow in Pediatric Critical Care Medicine
2007-2008	Douglas Balster, Clinical Fellow in Pediatric Cardiology

FELLOW SCHOLARSHIP OVERSIGHT COMMITTEES (Past)	
Dates	Name of Fellow
2007-2009	David Axelrod, Clinical Fellow in Pediatric Cardiology
2008-2010	Natalie Pageler, Clinical Fellow in Pediatric Critical Care Medicine
2008-2011	David Colvin, Clinical Fellow in Pediatric Critical Care Medicine
2008-2011	Seth Hollander, Clinical Fellow in Pediatric Cardiology
2010-2012	Preston Lavinghousez, Clinical Fellow in Pediatric Critical Care Medicine
2010-2012	Joseph May, Clinical Fellow in Pediatric Cardiology
2010-2012	Heather Sun, Clinical Fellow in Pediatric Cardiology
2011-2013	Dan Shaked, Clinical Fellow in Pediatric Critical Care Medicine
2011-2013	Rachel Hopper, Clinical Fellow in Pediatric Cardiology
2012-2013	David Peng, Clinical Fellow in Pediatric Cardiology
2011-2013	Francis Kim, Clinical Fellow in Pediatric Critical Care Medicine
2012-2014	Loren Sachs, Clinical Fellow in Pediatric Critical Care Medicine
2011-2015	James Priest, Clinical Fellow in Pediatric Cardiology
2013-2015	Sharon Chen, Clinical Fellow in Pediatric Cardiology
2013-2015	Sidharth Mahapatra, Clinical Fellow in Pediatric Critical Care Medicine
2013-2016	Bronwyn Harris, Clinical Fellow in Pediatric Cardiology
2015-2016	Katie Kruse, Clinical Fellow in Pediatric Critical Care Medicine
2015-2017	Kelly Cox, Clinical Fellow in Pediatric Cardiology
2015-2017	Anica Bulic, Clinical Fellow in Pediatric Cardiology
2015-2017	Saidie Rodriguez, Clinical Fellow in Pediatric Critical Care Medicine
2015-2017	Daniel Tawfik, Clinical Fellow in Pediatric Critical Care Medicine
2016-2017	Mais Yacoub, Clinical Fellow in Pediatric Critical Care Medicine
2016-2018	Lindsey Troy, Clinical Fellow in Pediatric Critical Care Medicine
2016-2018	Will Goodyer, Clinical Fellow in Pediatric Cardiology
2016-2018	Shawn Sen, Clinical Fellow in Pediatric Cardiology
2016-2018	Christopher Knoll, Clinical Fellow in Pediatric Cardiology
2016-2018	Andy Koth, Clinical Fellow in Pediatric Cardiology
2016-2018	Urs Naber, Clinical Fellow in Pediatric Critical Care Medicine