CURRICULUM VITAE FORMAT

University of Pittsburgh School of Medicine

BIOGRAPHICAL

Name:	Luis Alberto Ortiz	
Citizenship: USA		
Business Address:	Division of Occupational Environmental Medicine Department of Environme Graduate School of Public University of Pittsburgh 130 De Soto Street Room 4125 Pittsburgh, PA 15261	and E- Mail Address: lao1@pitt.edu ental and Occupational Health e Health
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	EDUCATION a	nd TRAINING
UNDERGRADUAT	ſE:	
1976	Instituto Jorge Robledo. Medellin, Colombia	B.S./1976
GRADUATE:		

June 1977- July 1983 Universidad Pontificia Bolivariana M.D. Medicine Medellin, Colombia

POSTGRADUATE:

1983-1984	Compulsory Social Services Dispensario Beato Pampuri. La Esmeralda, Arauca, Colombia	
1984-1987	Department of Internal Medicine Universidad Pontificia Bolivariana. Medellin, Colombia	Mentor/Position Ivan Molina Velez, MD Resident/Internal Medicine

1987-1990	Department of Internal Medicine Tulane Medical Center New Orleans, Louisiana	John Salvagio, MD Resident/Internal Medicine
1990-1993	Pulmonary and Critical Care Medicine University of Texas Health Science Center M.D. Anderson Cancer Center Houston, Texas	Guillermo Gutierrez, MD Fellow/Pulmonary and Critical Care Medicine
1991-1993	Department of Biochemistry Rice University Houston, Texas	John Steven Olson, PhD Research Fellow
	APPOINTMENTS AND POSITI	IONS:
ACADEMIC: 1993-1999 Assistant Professor of Medicine Section of Pulmonary, Critical Care, and Environmental M Department of Medicine Tulane University Medical Center, New Orleans, Louisian		vironmental Medicine eans, Louisiana
1999-2002	Associate Professor (Tenure conferred 1999) Section of Pulmonary, Critical Care, and Environmental Medicine Department of Medicine Tulane University Medical Center, New Orleans, Louisiana	
2002-2016	Associate Professor and Director (Tenure conferred 2005) Division of Occupational and Environmental Medicine Department of Environmental and Occupational Health Graduate School of Public Health at University of Pittsburgh Pittsburgh, Pennsylvania	
2016-Date	Professor and Director (Tenure conferred 2005) Division of Occupational and Environmental Medicine Department of Environmental and Occupational Health Graduate School of Public Health at University of Pittsburgh Pittsburgh, Pennsylvania	
2003-2017	Associate Professor Division of Pulmonary, Allergy, and Critica Department of Medicine at University of Pit Pittsburgh, Pennsylvania	l Care Medicine tsburgh
2017-Date	Professor Division of Pulmonary, Allergy, and Critica Department of Medicine at University of Pit Pittsburgh, Pennsylvania	l Care Medicine tsburgh

2017-Date	Professor
	Clinical and Translational Science Institute
	University of Pittsburgh

NON – ACADEMIC:

2002-Date	Simmons Center for Interstitial Lung Diseases Division Pulmonary Medicine Department of Medicine University of Pittsburgh Pittsburgh, Pennsylvania	Professor
1993-2002	Tulane University Medical Center New Orleans, Louisiana	Co-Director Interstitial Lung Disease Clinic
1996-2002	Lakeside Hospital New Orleans, Louisiana	Co-Director Intensive Care Unit And Respiratory Therapy
1999-2002	VA Medical Center New Orleans, Louisiana	Director Intensive Care Unit
2001-2002	Charity Hospital New Orleans, Louisiana	Co-Director Respiratory Therapy

CERTIFICATION and LICENSURE

SPECIALTY CERTIFICATION:

Certifying Board	Year
Educational Commission for Foreign Medical Graduates	1982
Federation Licensing Examination	1989
Diplomat, American Board of Internal Medicine	1990
-	Recertified 2001, 2016
Diplomat, American Board of Internal Medicine	
Subspecialty in Pulmonary Diseases	1994
	Recertified 2001, 2015
Diplomat, American Board of Internal Medicine,	
Subspecialty in Critical Care Medicine	1995
	Recertified 2001
MEDICAL AN OTHED DROFESSIONAL LINCENSU	DE.

MEDICAL or OTHER PROFESSIONAL LINCENSURE: Licensing Board/State

Licensing Board/State	Year
State Board of Medicine/ Pennsylvania	2002
Composite State Board of Medical Examiners/ Georgia	1987

State Board of Medical Examiners/Texas	1990
State Board of Medicine/Louisiana	1994

MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

American College of Chest Physicians: Elected Fellow in 1995. Chairman of the Investigation sessions: "Pulmonary Immunology" and "Asthma Pharmacotherapy" 1998.

American Heart Association Member of the council in Pulmonary Circulation

American Thoracic Society Member of the Respiratory Cell and Molecular Biology Assembly

American Association for the Advancement of Science

European Respiratory Society Member of the Assembly in Lung Injury

Musser Burch Society

International Society Extracellular Vesicles (Delegate)

International Society Cell Therapies

HONORS AND AWARDS

Fellow, American College of Chest Physicians	1995
NHLBI Clinician Scientist Development Award	1996
Finalist for the NHLBI Mentored Clinical Scientist Awardees Special Symposium celebrated at the American Thoracic Society	1998
Organizing and Scientific Committee 10th International Colloquium on Lung Fibrosis	1998
Reviewer Panel Multidisciplinary International Consensus Classification of Interstitial lung Diseases (ICC/ILD)	1998
Southern Society for Clinical Investigation	1999
Reviewer (NHLBI) Lung Biology & Pathology Study Section	2002-2003
Member Lung Injury and Repair NHLBI Study Section	2003-2007

Reviewer (NHLBI) Scleroderma Lung Disease Study Group	2007 & 2008
ATS, Respiratory Cell Molecular Biology Assembly Elected, Nomination Committee	2007-2009
Organizing and Scientific Committee (NHLBI) Stem Cells and Cellular Therapies in Lung Biology and Disease	2007
Reviewer (NHLBI) Lung Cellular Molecular Immunology Study Section	2008
Reviewer NIEHS Outstanding New Environmental Scientist (ONES)	2008
United States Environmental Protection Agency Advisory Board on Asbestos	2008-2011
Reviewer (NIEHS) Beryllium: Exposure, Immune and Genetic Mechanisms	2008
Chair ZRG1 CVRS G (02) M Conflict Application LIRR Study Section	2010-2012
American Thoracic Society Scientific Advisory Committee	2010-2012
American Thoracic Society RCMB Assembly Planning Committee	2012-2012
Best Oral Presentation International Society for Extracellular Vesicles Second ISEV Meeting, Boston, Massachusetts	2013
Member NHLBI Mentored Clinician and Basic Science Review Committee	2014-2018
Chair Drug Safety Monitoring Board Fibrogen FG-3019 in Idiopathic Pulmonary Fibrosis	2014-2018
External Advisor Aspen Lung Conference	2017-
California Tobacco-Related Disease Research Program Pulmonary Biology and Lung Disease Review Committee.	2017-

Chair NHLBI Mentored Clinician and Basic Science Review Committee 2018-2019

International Society Cell Therapies Committee on Extracellular vesicles	2018-
Maynooth University Visitor Programme for Distinguished Scholars Award	2019
Associate Editor Cytotherapy	2019-
External Advisor Research Center of Excellence in Arsenicals (NIEHS U54) University of Alabama Birmingham (UAB)	2019-

Research Statement

My interest encompasses all aspects of the academic life including patient care, research, education, and University services. My NIH sponsored research focuses on mechanisms that mediate the development of fibrotic lung disease. In particular, my laboratory has contributed to this field with the development of mouse models of pulmonary fibrosis and the concept that bone marrow derived mesenchymal stem cells (MSCs) are fundamental contributors to the repair of the injured lung. Our research initiatives identified the capacity of MSCs to home to the injured lung and regulate innate immunity by producing the anti-inflammatory cytokine IL1 Receptor antagonist. We are currently exploring the clinical use of MSC derived extracellular vesicles to protect right ventricular function during pulmonary hypertension in lung fibrosis.

My patient care activities are intimately related to my basic science research and concentrate in the management (including lung transplantation) of patients afflicted with acute lung injury (ALI) and Interstitial Lung Disease (ILD). I conduct these activities at the Simmons' Center for ILD at the Division of Pulmonary Medicine at the University of Pittsburgh. The center, which is the result of a generous gift from the Simmons Family, provides me, as a founding member, with a well-staffed infrastructure where I exert my leadership in research on lung inflammation and fibrosis, into promoting the translation of my basic science discoveries to new treatments for patients with these lung disorders. Consequently, my current clinical efforts are oriented at translating the safety and efficacy of MSCs in patients experiencing ALI or subjects afflicted by idiopathic pulmonary fibrosis (IPF) whose course is complicated by arterial hypertension and right ventricular dysfunction and for whom lung transplantation is not an option.

My research focuses on mechanisms of lung injury that lead to the development of lung fibrosis. In particular, my laboratory has contributed to this field with the development of mouse models of pulmonary fibrosis (silica and bleomycin) and most recently with the concept that bone marrow derived Mesenchymal stem cells (MSCs) are fundamental contributors to the repair of the injured lung. Similarly, my laboratory has characterized the epidemiology of environmentally induced lung disease. Since my arrival to Pittsburgh, I established alliances with grass root organizations to initiate registries and form cohort of subjects exposed to dust (mostly miners) to characterize the impact of pneumoconiosis in the communities of Western Pennsylvania. Subsequently, I contributed to the literature with studies of the prevalence and outcome of silica exposed individuals, and their response to lung transplantation.

Most recent efforts have concentrated in translating these preclinical observations. To that effect I have interacted with Dr. Michael Matthay, an eminent clinical investigator in the field of acute

lung injury, to test the efficacy of MSC in subjects afflicted by Adult Respiratory Distress Syndrome (ARDS). These interactions lead Dr. Matthay to designate the University of Pittsburgh as one of the four sites for his START clinical trial, in which we conducted a phase 2a randomized clinical trial to test the safety of well characterized primary human MSCs, manufactured by Dr. David McKenna at the NHLBI-sponsored PACT program at the University of Minnesota, in subjects with ARDS requiring mechanical ventilation in whom a 40 percent mortality was expected. We reported that the administration of these cells in such population of subjects was safe (PMID:30455077).

Taking advantage of the experienced we gained during the development of the START trial and in response to the NHLBI Early Phase Clinical Trials for Therapeutics and Diagnostics we assembled a multidisciplinary team of researchers from five U.S. academic centers with expertise in MSC biology, translational research, lung disease, epidemiology, Current Good Manufacturing Practice (cGMP) regulations and manufacturing, and human clinical trial design to establish a Progenitor Cell Translational Consortium to test the safety, tolerability, and potential benefit of non-HLA-matched allogeneic bone marrow derived mesenchymal stem cells (MSCs) in subjects afflicted by IPF. The Overall hypothesis to be tested by the consortium is that the repeated intravenous administration (two doses separated by a month) of MSC can be accomplished safely in subjects afflicted by IPF. This intervention will modify the gene expression and inflammatory activity of alveolar macrophages (AM) and epithelial cells in the distal lung, and mononuclear cells in peripheral circulation slowing the rate of decline of the forced vital capacity (FVC) and preventing the development of acute exacerbation in IPF.

PUBLICATIONS:

Original Peer-Reviewed Publications

- Banks, W.A., Ortiz, L.A, Plotkin, A., and Kastin, A.J. Human interleukin 1 alpha (IL-1α), murine IL-1α, and murine IL-1β are transported from blood to brain in the mouse by a shared saturable mechanism. J Pharmacol and Exp Ther. 259: 988-996, 1991. PMID:1762091
- 2. Yang, K., and **Ortiz, L.A**. Multifocal granular cell myoblastoma. <u>South Med J</u>. 86: 478-479, 1993.
- 3. Hargrove, M.S., Singleton, E.W., Quillin, M.L., **Ortiz, L.A**, Phillips, G.N., Olson, J.S., and Mathews, A.J. His64 (E7) to TYR Apomyoglobin is a reagent for measuring rates of hemin disassociation. J Biol Chem. 269: 4207-4214, 1994. PMID:8307983
- 4. Gutierrez, G., Clark, C., Brown, S., Price, K., **Ortiz, L.A**., and Grover. C. The effect of dobutamine on O2 consumption and gastric mucosal pH in septic patients. <u>Am J Respir</u> <u>Crit Care Med</u>. 150: 305-310, 1994.
- Anaya, J. M., Diethelm, L., Ortiz, L.A., Gutierrez, M., Citera, G., Welsh, R., and Espinoza, L. Pulmonary involvement in rheumatoid arthritis. <u>Seminars Arthritis Rheum</u>. 24: 242-254, 1995. PMID:7740304
- 6. **Ortiz, L.A**., Moroz, K., Liu, J-Y., Hoyle, G.W., Hammond, T., Banks, W., Hamilton, R.F., Holian, A., Brody, A.R., and Friedman, M. Alveolar macrophage apoptosis and

TNF-α, but not p53 expression, correlate with murine strain response to bleomycin. <u>Am</u> <u>J Physiol: Lung Cellular and Molecular physiology</u>. 275 (19): L1208-L1218, 1998. PMID:9843859

- Ortiz, L.A., Lasky, J.A., Hamilton, R.F., Holian, A., Hoyle, G.W., Banks, W., Peschon, J., Brody, A.R. and Friedman, M. Expression of TNF and the necessity for TNF receptors in bleomycin-induced lung injury in mice. <u>Exp Lung Research</u> 24: 721-743, 1998. PMID:9839161
- Lasky, J.A., Ortiz, L.A, Tonthat, B., Hoyle, G.W., Corti, M., Athas, G., Lungarella, G., Brody, A.R., and Friedman, M. Connective tissue growth factor (CTGF) mRNA expression is upregulated in bleomycin-induced lung fibrosis. <u>Am J Physiol: Lung</u> <u>Cellular and Molecular Physiology.</u> 275 (19): L365-L371, 1998. PMID:9700098
- Ortiz, L.A, Lasky, J.A., Lungarella, G., Cavarra, E., Martorana, P., Banks, W., Peschon, J., Brody, A.R., and Friedman, M. Upregulation of the p75 but not the p55 mRNA during silica and bleomycin-induced lung injury in mice. <u>Am J Respir Cell Mol Biol.</u> 20: 825-833, 1999. PMID:10101016
- Ortiz, L.A., Lasky, J.A., Reyes, M., Lungarella, G., Safah, H., Miller, A., and Friedman, M. Exacerbation of bleomycin-induced lung injury in mice by amifostine. <u>Am J Physiol:</u> <u>Lung Cellular and Molecular Physiology</u>. 277(21):L1239-L1244, 1999. PMID:10600896
- 11. Champion, H.C., Bivalacqua, T.J., D'Souza, F.M., **Ortiz, L.A**., Jeter, J.R., Toyoda, K., Heistad, D.D., Hyman, A.L, and Kadowitz, P.J. Gene-transfer of endothelial nitric oxide synthase to the lung of the mouse in vivo: Effect on agonist-induced and flow-mediated responses. <u>Circulation Research</u>. 84(12): 1422-1432, 1999. PMID:10381895
- 12. **Ortiz, L.A**, Lasky, J.A., Gozal, E., Ruiz, V., Lungarella, G., Cavarra, E., Brody, A.R., Friedman, M., Pardo, A., and Selman, M. Tumor necrosis factor receptor deficiency alters metalloproteinase 13/tissue inhibitor of metalloproteinase 1 expression in murine silicosis. <u>Am J Respir Crit Care Med.</u> 163: 244-252, 2001. PMID:11208652
- Cavarra, E., Martorana, P., Bartelesi, B., Fineschi, S., Lucatelli, M., Ortiz, L.A., and Lungarella, G. Genetic deficiency of α1-PI influences lung responses to bleomycin in terms of fibrosis and emphysema. A study in two congenic mouse strains. <u>European</u> <u>Resp J.</u> 17(3): 474-480, 2001.
- 14. **Ortiz, L.A**., Friedman, M., and Banks, W. Role of LPS and receptor subtype in the uptake of TNF by the murine lung. <u>Life Sciences</u>. 69(7): 791-802, 2001. PMID: 11487091
- 15. Lasky, J.A., and **Ortiz, L.A.** Antifibrotic modalities for the treatment of pulmonary fibrosis. <u>Am J Med Sci.</u> 322(4): 213-221, 2001. PMID:11678519

- 16. Cavarra, E., Bartelesi, B., Lucatelli, M., Fineschi, S., Gambelli, F., Ortiz, L.A., Martorana, P., and Lungarella, G. Effects of cigarette smoke in mice with different levels of α1 PI and sensitivity to oxidants. <u>Am J Respir Crit Care Med.</u> 164: 886-890, 2001. PMID:11549550
- 17. American Thoracic Society/European Respiratory Society. International multidisciplinary consensus classification of idiopathic interstitial pneumonias. <u>Am J Respir Crit Care Med.</u> 165: 277-304, 2002.
- Ortiz, L.A. Champion, H., Lasky, J.A., Gozal, E., Hoyle G, Friedman, M., Hyman, A.L, and Kadowitz, P.J. Enalapril protects mice from pulmonary hypertension by inhibiting TNF-mediated activation of NF-κB and AP-1. <u>Am J Physiol: Lung Cellular and</u> <u>Molecular Physiology</u>. 282: L1209-L1221, 2002. PMID:12003776
- Gozal, E., Ortiz, L.A., Zou, X., Burow, M., Lasky, J.A., and Friedman, M. Silicainduced apoptosis in murine macrophage: involvement of TNF-α and NF-κB activation. <u>Am J Respir Cell Mol Biol.</u> 27(1): 91-98, 2002. PMID:12091251
- Li, J., Ortiz, L.A., and Hoyle, G. Lung pathology in platelet-derived growth factor transgenic mice: effects of genetic background and fibrogenic agents. <u>Exp Lung</u> <u>Research</u>. 28: 507-522, 2002. PMID:12217216
- Gosh, S., Mendoza, T., Ortiz, L.A., Hoyle, G.W., Fermin, C.D., Brody, A.R., Friedman, M., and Morris, G.F. Enhanced bleomycin sensitivity in mice expressing dominant negative p53 from the surfactant protein C promoter. <u>Am J Respir Crit Care Med</u>. 2002 Sep 15;166(6):890-7. PMID:12231503
- Ortiz, L.A., Gambelli, F., McBride, C., Gaupp, D., Baddov, M., Kaminski, N., and Phinney, D. Mesenchymal Stem Cell Engraftment in Lung is Enhanced in Response to Bleomycin Exposure and Ameliorates its Fibrotic Effects. <u>Proc Natl Acad Sci U S A</u>. 2003 Jul 8;100(14):8407-11. Epub 2003 Jun 18. PMID:12815096
- 23. Gambelli, F., Friedman, M., Hammond, T., Riches, D., and **Ortiz, L.A.** Phosphorylation of Tumor Necrosis Factor Receptor 1 (p55) protects macrophages from silica-induced apoptosis. J Biol Chem. 2004 Jan 16;279(3):2020-9. Epub 2003 Oct 21. PMID:14570868
- 24. Pitt, B., and L.A. Ortiz. Stem cells in lung biology. <u>Am J Physiol: Lung Cellular and</u> <u>Molecular Physiology</u>. 286(4):L621-3, 2004.
- 25. Reynolds, S., Giangreco, A., Hong, K., McGrath, K., Ortiz, L.A., and Stripp, B. Airway injury in the pathophysiology of lung disease: Selective depletion of airway stem and progenitor cells potentates inflammation and alveolar dysfunction. <u>Am J Physiol Lung Cell Mol Physiol</u>. 2004 Dec;287(6):L1256-65. Epub 2004 Aug 06. PMID: 15298853 [PubMed indexed for MEDLINE]

- Serinkan, B.F., Gambelli, F., Potapovich, A.I., Babu, H., DiGiuseppe, M., Ortiz, L.A., Fabisiak, J.P., and Kagan V.E. Apoptotic cells quench production of reactive oxygen and nitrogen species by activated macrophages: differential role of phosphatidylserine signaling. <u>Cell Death Differ</u>. 2005 Aug;12(8):1141-4. No abstract available. PMID:15861193
- Hagood, J.S., Salazar, L., Prabhakaran, P., MacEwen, M., Barker, T., Ortiz, L.A., Schoeb, T., Siegel, G.P., Alexander, B.C., Pardo, A., and M. Selman. Loss of fibroblast Thy-1 expression correlates with enhanced lung fibrogenesis. <u>Am J Pathol</u>. 2005 Aug;167(2):365-79. PMID:16049324
- Reynolds, S., Shen, H., Reynolds, P., Betsuyaku, T., Pilewski, J.M., Gambelli, F, DiGiuseppe, M., Ortiz, L.A. and B. Stripp. Molecular and Functional Properties of lung side population cells. <u>Am J Physiol Lung Cell Mol Physiol</u>. 2007 Jan 12; [Epub ahead of print] PMID: 17142352 [PubMed - as supplied by publisher].
- 29. * **Ortiz, L.A.**, Fattman, C., Dutreil, M., and Phinney, D. Interleukin 1 receptor antagonist mediates the anti inflammatory and anti fibrotic effects of mesenchymal stem cells during lung injury. <u>Proc Natl Acad Sci U S A</u>. 2007 Jun 26;104(26):11002-7. Epub 2007 Jun 14. PMID:17569781

- 30. Fattman, C., Gambelli, F., Hoyle, G.W., Pitt, B., and Ortiz, L.A. Epithelial expression of TIMP1 does not alter sensitivity to bleomycin-induced lung injury in C57BL/6 mice. <u>Am</u> <u>J Physiol Lung Cell Mol Physiol</u>. 2008 Mar;294(3):L572-81. doi: 10.1152/ajplung.00291.2007. Epub 2008 Jan 4. PMID:18178676
- 31. Fattman, C., Torres, G., Brockway, B.L., Stripp, B.R., and **Ortiz, L.A.** Remodeling of the respiratory unit in silica-exposed mice. <u>Proceedings of the American Thoracic</u> <u>Society</u> 5(3): 375, 2008.
- Creel, M., Studer, S.M., Schwerha, J., Harper, J., Ortiz, L.A., Ragin, C., and Taioli, E. Gender differences in survival after lung transplantation: Implications for cancer etiology. Transplantation. 2008 Apr 27;85(8 Suppl):S64-8. doi:10.1097/TP.0b013e31816c2fae.PMID:1842504.
- 33. Weiss, D. J., Kolls, J.K., Ortiz, L.A., Panoskaltsis-Mortari, A., and Prockop, D.J. Stem cells and cell therapies in lung biology and lung diseases. <u>Proc Am Thorac Soc</u>. 2008 Jul 15;5(5):637-67. doi: 10.1513/pats.200804-037DW. Review. No abstract available. PMID:18625757
- Di Giuseppe, M., F. Gambelli, G.W. Hoyle, G. Lungarella, S.E. Studder, T. Richards, S. Yousem, K. McCurry, J. Dauber, Kaminski, N., Leikauf, G., and L.A. Ortiz. Systemic inhibition of NFκB activation protects from silicosis. <u>Plos One Journal</u> 2009 May 25;4(5):e5689. PMID: 19479048 [PubMed in process]).

^{*} these manuscripts have been featured in "Faculty of 1000".

- 35. Reed D.S., Smith L., Dunsmore T., Trichel A., **Ortiz L.A.**, Cole K.S., and E. Barry. Pneumonic tularemia in rabbits resembles the human disease as illustrated by radiographic and hematological changes after infection. PLoS One. 2011;6(9):e24654. doi: 10.1371/journal.pone.0024654. Epub 2011 Sep 13.PMID:21931798
- Martinu T, Palmer SM, Ortiz LA. Lung resident mesenchymal stromal cells. A new player in post transplant bronchiolitis obliterans syndrome? Am J Respir Crit Care Med. 2011 Apr 15;183(8):968-70. doi: 10.1164/rccm.201101-0006ED. No abstract available. PMID:21498820.
- 37. * Boregowda S., Krishnappa V., Chambers J.W, LoGrasso P.V, Lai W-T., Ortiz L.A., and D.G. Phinney. Atmospheric oxygen inhibits growth and differentiation of marrow-derived mouse MSC via a p53 dependent mechanism. <u>Stem Cells</u>. 2012 May;30(5):975-87. doi: 10.1002/stem.1069. PMID:22367737

* these manuscripts have been featured in "Faculty of 1000".

- 38. Bein, K., Di Giuseppe, M., Mischler, S.E., Ortiz, LA; and Leikauf, G.D Surfactant Protein B repression in pulmonary epithelial cells by LPS-stimulated macrophages via cytokines. <u>Am J Respir Cell Mol Biol</u>. 2013 Apr 3. [Epub ahead of print] PMID:23590297
- Michael A. Matthay, Piero Anversa, Jahar Bhattacharya, Bruce K. Burnett, Harold A. Chapman, Joshua M. Hare, Derek J. Hei, Andrew M. Hoffman, Stella Kourembanas, David H. McKenna, Luis A. Ortiz, Harald C. Ott, William Tente, Bernard Thébaud, Bruce C. Trapnell, Daniel J. Weiss, Jason X.-J. Yuan, Carol J. Blaisdell. Cell Therapy for Lung Diseases, Report from an NIH-NHLBI Workshop November 13-14, 2012. Am J Respir Crit Care Med. 2013 May 28. [Epub ahead of print] PMID:23713908
- Weiss D., and Ortiz LA. Cell Therapy Trials for Lung Diseases: Progress and Cautions. Am J Respir Crit Care Med. 2013 Jul 15;188(2):123-5. doi: 10.1164/rccm.2013020351ED. No abstract available. PMID:23855686
- 41. Mischler, S., Cauda, E., DiGiuseppe M., and **Ortiz L.A.** A multi-cyclone sampling array for the collection of size-segregated occupational aerosols. J Occup Environ Hyg. 2013 Dec;10(12):685-93. doi: 10.1080/15459624.2013.818244. PMID: 24195535
- 42. Timothy S. Blackwell, Andrew M. Tager, Zea Borok, Bethany B. Moore, David A. Schwartz, Kevin J. Anstrom, Ziv Bar-Joseph, Peter Bitterman, Michael R. Blackburn, William Bradford, Kevin K. Brown, Harold A. Chapman, Harold R Collard, Gregory P. Cosgrove, Robin Deterding, Ramona Doyle, Kevin J. Flaherty, Christine Kim Garcia, James S. Hagood, Craig A. Henke, Erica Herzog, Cory M. Hogaboam, Jeffrey C. Horowitz, Talmadge E. King, Jr., James E. Loyd, William E. Lawson, Clay B. Marsh, Paul W. Noble, Imre Noth, Dean Sheppard, Julie Olsson, Luis A. Ortiz, Thomas G.

O'Riordan, Tim D. Oury, Thomas H. Sisson, Ganesh Raghu, Jesse Roman, Patricia J. Sime, Daniel Tschumperlin, Shelia M. Violette, Timothy E. Weaver, Rebecca G. Wells, Eric S. White, Naftali Kaminski, Fernando J. Martinez, Thomas A. Wynn, Victor J. Thannickal and Jerry P. Eu. NHLBI Workshop Summary: Future Directions in Idiopathic Pulmonary Fibrosis Research An NHLBI Workshop Report. Am J Respir Crit Care Med. 2013 Oct 25. [Epub ahead of print] PMID: 24160862

- Redente E.F., Keith R.C, Janssen W., Henson P.M., Ortiz L.A., Downey G.P., Bratton D.L., and DW. Riches. TNF-α accelerates the resolution of established pulmonary fibrosis in mice by targeting alternatively programmed lung macrophages. Am J Respir Cell Mol Biol. 2013 Dec 10. [Epub ahead of print] PMID: 24325577
- Fazzi F., Winnica D.E., Di Giuseppe M., Njah J., Go K., Sala E., St Croix C.M, Watkins S.C., Tyurin V.A., Phinney D.G., Leikauf G.D., Kagan V.E., and Ortiz, LA. TNFR1/Phox Interaction and TNFR1 Mitochondrial Translocation Thwarts Silica-Induced Pulmonary Fibrosis. The Journal of Immunology. 2014 Apr 15;192(8):3837-46. doi: 10.4049/jimmunol.1103516. Epub 2014 Mar 12. PMID: 24623132.
- 45. * Phinney D.G., DiGiuseppe M., Njah J., Sala-Llinas E., DeLuliis, G., Kaminski N., Shiva S., St. Croix C.M. Stolz D.B., Watkins S.C., Di P.Y., Leikauf GD., Kolls J., Riches DWH., McKenna D., and Ortiz L.A. Mesenchymal stem cells use extracellular vesicles to outsource mitophagy and shuttle microRNAs. Nat Commun. 2015 Oct 7;6:8472. doi: 10.1038/ncomms 9472. PMID: 26442449.

* these manuscripts have been featured in "Faculty of 1000".

- Rubin J.M., Horowitz J.C., Sisson T.H., Kim K., Ortiz L.A., and Hamilton J.D.
 Ultrasound Strain Measurements for Evaluating Local Pulmonary Ventilation. IEEE
 EEE Int Ultrason Symp. 2015 Oct;2015. doi: 10.1109/ULTSYM.2015.0181.
 PMID: 26635917.
- 47. Galipeau J, Krampera M, Barrett J, Dazzi F, Deans RJ, DeBruijn J, Dominici M, Fibbe WE, Gee AP, Gimble JM, Hematti P, Koh MB, LeBlanc K, Martin I, McNiece IK, Mendicino M, Oh S, Ortiz L.A., Phinney DG, Planat V, Prockop DJ, Shi Y, Stroncek DF, Viswanathan S, Weiss DJ, Sensebe L. Cytotherapy. 2015 Dec 23. pii: S1465-3249(15)01122-6. doi:10.1016/j.jcyt.2015.11.008. [Epub ahead of print]. PMID: 2672422
- Boregowda SV., Krishnappa V., Haga CL., Ortiz L.A., and D.G. Phinney. A clinical Indications Prediction Scale based on TWIST1for Human Mesenchymal Stem Cells. EBioMedicine. 2015 Dec 24;4:62-73. doi: 10.1016/j.ebiom.2015.12.020. eCollection 2016 Feb. PMID: 26981553
- 49. Rubin JM, Horowitz JC, Sisson TH, Kim K, **Ortiz LA**, Hamilton JD. Ultrasound Strain Measurements for Evaluating Local Pulmonary Ventilation Ultrasound Med Biol. 2016 Nov;42(11):2525-2531. doi: 10.1016/j.ultrasmedbio.2016.05.020. PMID: 27520395

- 50. Mischler S.E., Cauda E.G., Di Giuseppe, M., McWilliams L.J., St. Croix, C., Su. M., Franks, J., and Ortiz LA. Differential activation of RAW 264.7 macrophages by sizesegregated crystalline silica. J Occup Med Toxicol. 2016 Dec 15;11:57. doi: 10.1186/s12995-016-0145-2. PMID: 28018477
- 51. Zhou, Y., Horowitz, J.C., Naba A., Ambalavanan N., Atabai, K., Balestrini, J., Bitterman, P., Corley, R.A., Bi-Sen Ding, B-S., Engler A.J., Hansen, K.C., Hagood, J.S., Kheradmand, F., Lin, Q.S., Neptune, E., Niklason, L., Ortiz, L.A., Parks, W.C., Tschumperlin, D.J., White, E.S., Chapman, H.A., and Thannickal, V.J. Extracellular Matrix in Lung Development, Homeostasis and Disease. Matrix Biol. 2018 Mar 8. pii: S0945-053X(17)30434-1. doi: 10.1016/j.matbio.2018.03.005. [Epub ahead of print] Review. PMID: 29524630
- 52. Bamberg A, Redente EF, Groshong SD, Tuder RM, Cool CD, Keith RC, Edelman BL, Black BP, Cosgrove GP, Wynes MW, Curran-Everett D, De Langhe S, Ortiz LA, Thorburn A, Riches DWH. Protein thyrosine phosphatase-N13 (PTPN13) promotes myofibrobalsts resistance to apoptosis in idiopathic pulmonary fibrosis. Am J Respir Crit Care Med. 2018 May 4. doi: 10.1164/rccm.201707-1497OC. [Epub ahead of print]. PMID: 29727583
- 53. Chiarchiaro, J., Tomsic, L.R., Strock, S., Veraldi, K.L., Nouraie, M., Sellares, J., Lindell, K.O., Ortiz LA, Sciurba, F.C., Kucera, R.F., Yousem, S.A., Fuhrman, C.R., Kass, D.J., and Gibson, K.F. A Case Series Describing Common Radiographic and Pathologic Patterns of Hard Metal Pneumoconiosis. Respir Med Case Rep. 2018 Aug 10;25:124-128. doi: 10.1016/j.rmcr.2018.08.006. eCollection 2018.PMID:30128271
- 54. Michael A. Matthay, MD, Carolyn S. Calfee, MD, MAS, Hanjing Zhuo, MD, MPH, B. Taylor Thompson, MD, Jenny G. Wilson, MD, Joseph E. Levitt, MD, MAS, Jeffrey E. Gotts, MD, PhD, Angela J. Rogers, MD, MPH, Jeanine P. Wiener-Kronish, MD, Ednan Bajwa, MD, Michael P. Donahoe, MD, Bryan McVerry, MD, Luis A. Ortiz, MD, Matthew Exline, MD, John W. Christman, MD, Dave Mckenna, MD, and Kathleen D. Liu, MD, PhD. Allogeneic Mesenchymal Stromal Cells for Treatment of Moderate to Severe ARDS (START): A Randomized Phase 2a Safety Trial. Lancet Respir Med. 2019 Nov 16. pii: S2213-2600(18)30418-1. doi: 10.1016/S2213-2600(18)30418-1. [Epub ahead of print] PMID:30455077
- 55. Liu Q, Dwyer GK, Zhao Y, Li H, Mathews LR, Chakka AB, Chandran UR, Demetris JA, Alcorn JF, Robinson KM, Ortiz LA, Pitt B, Thomson AW, Fan MH, Billiar TR, Turnquist HR. IL-33 mediated IL-13 secretion by ST2+ Treg controls inflammation after lung injury. JCI Insight. 2019 Feb 19. pii: 123919. doi: 10.1172/jci.insight.123919. [Epub ahead of print]. PMID:30779711
- 56. Minimal Information for Studies of Extracellular Vesicles 2018 (MISEV2018): a position statement of the International Society for Extracellular Vesicles and update of the

MISEV2014 guidelines. Position Paper. Journal Extracellular Vesicles 7:1, DOI:10..1080/2013078.2018.1535750

- 57. Witwer, K., van Balkom, Bas W.M., Bruno, S., Choo, A., Dominci, M., Gimona, M., Hill, A., De Klein, D., Koh, M., Lai, R.C., Mitsialis, A.S., Ortiz, L.A., Rhode, E., Tasada, A., Toh, W.S., Weiss, D., Zheng, L., Giebel, B., and Sai Kiang Lim. Defining human MSC small Extracellular Vesicles. J Extracell Vesicles. 2019 Apr 29;8(1):1609206. doi: 10.1080/20013078.2019.1609206. eCollection 2019. PMID:31069028
- 58. Gimona, M., Brizzi, M.F., Choo Hwa, A.B., Dominici, M., Davidson, S.M., Grillari, J., Hermann, D. M., Hill, A.F., de Kleijn, D., Lai Chai, R., Lai, C., Lim, R., Monguió-Tortajada, M., Muraca, M., Ochiya, T., Ortiz, L.A., Toh, W.S., Yi, Y.W., Witwer, K.W., Giebel, B., Lim, S.K. Critical considerations for the development of potency tests for therapeutic applications of mesenchymal stromal cell (MSC)-derived small extracellular vesicles. Cytotherapy. 2021 May;23(5):373-380. doi: 10.1016/j.jcyt.2021.01.001. Epub 2021 Apr 10.PMID: 33934807
- 59. Verena Börger, Daniel J. Weiss, Johnathon D. Anderson, Francesc E. Borràs, Benedetta Bussolati, David R.F. Carter, Massimo Dominici, Juan M. Falcón-Pérez, Mario Gimona, Andrew F. Hill, Andrew M. Hoffman, Dominique de Kleijn, Bruce L. Levine, Rebecca Lim, Jan Lötvall, S. Alex Mitsialis, Marta Monguió-Tortajada, Maurizio Muraca, Rienk Nieuwland, Anna Nowocin, Lorraine O'Driscoll, Luis A. Ortiz, Donald G Phinney, Ilona Reischl, Eva Rohde, Ralf Sanzenbacher, Clotilde Théry, Wei Seong Toh, Kenneth W. Witwer, Sai Kiang Lim, Bernd Giebel. International Society for Extracellular Vesicles and International Society for Cell and Gene Therapy statement on extracellular vesicles from mesenchymal stromal cells and other cells: considerations for potential therapeutic agents to suppress corona virus disease-19. Cytotherapy. 2020 May 16 doi: 10.1016/j.jcyt.2020.05.002 [Epub ahead of print] PMCID: PMC7229942
- 60. Marrocco, A., Frawley, K., Pearce, L. L., Peterson, J., O'Brian, J, Mullet, S, Wendell, S. L., St Croix, C, and **Ortiz, L.A**. Metabolic adaptation of macrophages as mechanism of defense against crystalline silica. In Press Journal of Immunology.
- 61. Yanarelli, G. et al. A survey of in vitro immunomodulatory activities of mesenchymal stromal cell-derived extracellular vesicles: towards the development of functional assays. In Press Cytotherapy.
- * these manuscripts have been featured in "Faculty of 1000".

Book Chapters and Invited Manuscripts and Reviews

62. **Ortiz, L.A**. The pulmonary fibrosis in the paracoccidioidomycosis (South American Blastomycosis). Universidad Pontificia Bolivariana. Thesis, 1987.

- 63. **Ortiz, L.A**, and Gutierrez, G. The Adult Respiratory Distress Syndrome. In: <u>Oxygen</u> <u>Transport. Principles and Practice</u>. Edwards, J.D., Shoemaker, W.C., and Vincent, J.L. (eds.). W. B. Saunders. P.P: 294-321, 1993.
- 64. Anaya, J.M., **Ortiz, L.A**., Polonia, E.F., and Espinoza, L.R. Compromiso pulmonar en la artritis reumatoidea. <u>Rev Colomb Neumol</u>. 6: 30-39, 1994.
- 65. **Ortiz, L.A.**, Lasky, J.A., and Raghu, G. Basic Mechanisms and Pathogenesis of Pulmonary Fibrosis. <u>Up Todate</u>. Vol. 7 (2): 1999.
- 66. Lasky, J.A., and **Ortiz, L.A**. Mechanisms of bleomycin-induced lung injury. <u>Up Todate</u>. Vol 7 (2): 1999.
- 67. **Ortiz, L.A**, Lasky, J.A., Gozal, E., Lungarella, G., Cavarra, E., Martorana, P., Ruiz, V., Pardo, A., Brody, A.R., Friedman, M., and Selman, M. Individual TNF receptor deficient mice are protected from the fibrogenic, but not the inflammatory, effects of silica by altering lung MMP-13/TIMP-1 RNA expression. <u>Chest.</u> 120: 2-3, 2001.
- 68. Hartz, R., Daroca, P., **Ortiz, L.A.,** Campeau, R., Boh, E., Millikan, L., and Lottinger, R. Cutaneous paraneoplastic pemphigus associated with benign encapsulated thymoma. Renee S. Hartz, MD, Associate Editor, Philip J. Daroca, MD, Associate Editor. Clinical-pathologic conference, <u>J of Thoracic and Cardiovascular Surgery</u> 125: 400-6, 2003.
- 69. Lasky, J.A., **Ortiz, L.A.**, and A.R. Brody. Mechanisms of chronic lung injury and fibrosis: potential role for TNF α , PDGF, and TGF β . Claude Lenfant Editor. In: Lung Biology in Health and Disease. Taylor and Francis. Vol 196. PP:175-227, 2005.
- 70. Fattman, C., Torres, G., Brockway, B.L., Stripp, B.R., and **Ortiz, L.A.** Remodeling of the respiratory unit in silica-exposed mice. Proceedings of the American Thoracic Society 5(3): 375, 2008.
- Martinu T, Palmer SM, Ortiz LA. Lung resident mesenchymal stromal cells. A new player in post transplant bronchiolitis obliterans syndrome? Am J Respir Crit Care Med. 2011 Apr 15;183(8):968-70. doi: 10.1164/rccm.201101-0006ED. No abstract available. PMID:21498820
- Weiss D., and Ortiz LA. Cell Therapy Trials for Lung Diseases: Progress and Cautions. Am J Respir Crit Care Med. 2013 Jul 15;188(2):123-5. doi: 10.1164/rccm.2013020351ED. No abstract available. PMID:23855686
- 73. Njah, J., Di Giuseppe M., Marrocco A., Fabisiak, J.P., Leikauf G.D, and Ortiz. L.A. Mesenchymal Stem (Stromal) Cell Communications in their Niche and Beyond: The role of extra cellular vesicles and organelle transfer in lung regeneration. In Press. Encyclopedia of Tissue Engineering and Regenerative Medicine.

Manuscripts Submitted and in Revision

Marroco. A., Fattman C.L., Di Giussepe M., Sala E., Fazzi F., Torres GM., Njah J., Snyder JC., Latoche J.D., Kaminski, N., Yousem S., Leikauf G.D., Stripp BR, and L.A. Ortiz. Club Cell Secretory Protein (CC16) Regulates the Innate Immune Response in Silicosis. In revision

Of vesicles and right ventricles: How Bone Marrow derived Mesenchymal Stromal Cells use Extracellular Vesicles to Restore VEGF signal, Couple RV/PA, Reduce TGF beta activation, and Enhance Macrophage Clearance of Collagen. In review

Tunno, B., Holguin, F., Jane E. Clougherty J.E., Lynda Glagola, L., and Ortiz L.A. Coal workers' Pneumoconiosis and Lung Function Impairment Among Southwestern Pennsylvania miners. Submitted

Manuscripts in Preparation

Njah, J., Di Giuseppe, Winnica, D., Fazzi, F., and **Ortiz, L.A.** Differences in telomerase activity and sheltering expression characterize the mouse strain difference in response to bleomycin.

Abstracts

- 1. Ortiz, L.A, Duque, M., and Mesa, A. Electrocardiographic characteristics of ventricular tachycardia in patients with coronary artery disease. International Congress of Internal Medicine. Bogota, Colombia. July 29, 1986.
- **2. Ortiz, L.A**, Duque, M., and Mesa, A. Disturbances of cardiac rhythm in idiopathic dilated cardiomyopathy: Electrocardiographic and electrophysiological characterization. International congress of Internal Medicine. Bogota, Colombia. July 29, 1986.
- **3.** Ortiz, L.A., Banks, W.A., and Kastin, A.J. Interleukin 1-α is transported into the brain by a saturable system but does not disrupt the blood-brain barrier. <u>Clin Res</u>. 38:13A, 1990.
- 4. Ortiz, L.A., Saunders, J.L., Hamilton, R.F., Scheule, R.K., and Holian, A. Acute effects of in vivo and in vitro bleomycin on murine alveolar macrophages. <u>Am Rev</u> <u>Respir Dis</u>. 145: A40, 1992.
- **5.** Ortiz, L.A., Heck, R., Hamilton, R.F., and Holian, A. Bleomycin induction of lung inflammation and TNF-α m-RNA expression in mice. <u>Chest</u>. 102: A107S, 1992.
- 6. Ortiz, L.A, Hamilton, R.F., Heck, K., Scheule, R.K., and Holian, A. Alveolar macrophages and stress proteins may account for the difference in murine strain response to bleomycin. <u>Am Rev Respir Dis</u>. 147: A74, 1993.
- **7.** Ortiz, L.A., Hamilton, R.F., Kelley, K., and Holian, A. Bleomycin-induced lung injury in the murine model is associated with alveolar macrophage accumulation, induction of stress proteins and TNF-α m-RNA expression. <u>Am Rev Respir Dis</u>. 147: A74, 1993.

- **8.** Felder, T., **Ortiz, L.**A., Hamilton, R.F., Kelley, K., and Holian, A. Murine alveolar macrophages express stress protein 72 (SP72) in vivo in response to bleomycin at doses that do not stimulate alveolar macrophages. <u>Am Rev Respir Dis</u>. 147: A74, 1993.
- **9.** Ortiz, L.A, Li, Y., Moroz, U., Moroz, K., and Friedman, M. A differential induction of apoptosis and p53 in Alveolar Macrophages (AM) characterizes the difference in murine strain response to bleomycin (BLM). <u>Am J Respir Crit Care Med</u>. 151: A546, 1995.
- **10. Ortiz, L.A.**, Moroz, K., and Friedman, M. Tumor necrosis factor mediates bleomycin induced apoptosis in alveolar macrophages. <u>Am J Respir Crit Care Med</u>. 153:A638, 1996.
- **11. Ortiz, L.A**, Lasky, J.A, Lungarella G., and Friedman, M. TNF receptor knockout mice in the study of pulmonary fibrosis. Sixth Annual Lung Cell Biology Symposium at Wood Hole. <u>The Molecular Biology of Fibrotic Lung Disease</u>. 10, 1996.
- **12.** Lasky, J.A, **Ortiz, L.A**, Tonthat, B., Martorana, P., Cavarra, E., and Friedman, M. Connective tissue growth factor (CTGF) expression in a murine models of bleomycininduced lung fibrosis. <u>Am J Respir Crit Care Med.</u> 15: A317, 1997.
- **13. Ortiz, L.A**., Lasky, J.A., Lungarella, G., Martorana, P., Cavarra, E., and Friedman, M. TNF receptor knockout mice are resistant to silica-induced lung fibrosis. <u>Am J Respir</u> <u>Crit Care Med</u>. 15: A331, 1997.
- **14. Ortiz, L.A.**, Lasky, J.A., Lungarella, G., Martorana, P., Cavarra, E., Brody, A.R., and Friedman, M. Individual tumor necrosis factor (TNFR) knockout mice are resistant to silica-induced lung fibrosis but not to inflammation. <u>Am J Respir Crit Care Med</u>. 157: A265, 1998.
- **15.** Gozal, E., **Ortiz, L.A.**, Lasky J.A, and Friedman, M. The importance of NF-κB activation in the pathogenesis of bleomycin-induced lung injury. <u>Am J Respir Crit Care</u> <u>Med.</u> 157: A265, 1998.
- 16. Lasky, J.A., Ortiz, L.A., Sime, P., Liu, J-Y, lungarella, G., Grotendorst, G., Gauldie, J., Brody, A.R., and Friedman, M. In vitro and In vivo support of a role for connective tissue growth factor (CTGF) in lung fibrogenesis. <u>Am J Respir Crit Care Med</u>. 157: A247, 1998.
- 17. Lungarella, G., Cavarra, E., Bartalesi, S., Gambelli, F., Lucattelli, M., Ortiz, L.A., and Martorana, P. Bleomycin results in pulmonary fibrosis as well as emphysema in α-1PI deficient mice. <u>Am J Respir Crit Care Med</u>. 157: A495, 1998.
- **18.** Ortiz, L.A, Lasky, J.A., Reyes, M., Peschon, J., Brody, A.R., and Friedman, M. Single tumor necrosis factor receptor-deficient mice are protected from the fibrogenic but not the inflammatory effects of silica. <u>European Respir Journal</u>. 28: 106S, 1998.

- **19.** Champion, H.C., Reyes, M., Hyman, A.L., Kadowitz, P.J., and **Ortiz, L.A**. Bleomycininduced pulmonary hypertension and right-ventricular hypertrophy in C57BL/6, but not BALB/c or TNF-α knockout mice. <u>Am J Respir Crit Care Med</u>. 159: A167, 1999.
- 20. Morris, G.F., Gosh, S., Ortiz, L., Mendoza, T., Nelson, G., Hoyle, G.W., Brody, A.R., and Friedman, M. Enhance sensitivity to bleomycin in mice expressing dominant negative mutant form of the p53 tumor suppressor protein in the lung. <u>Am J Respir Crit</u> <u>Care Med</u>. 159: A73, 1999.
- **21.** Gozal, E., Friedman, M., Zou, X., Reyes, M., and **Ortiz, L.A**. Absence of both p55 and p75 TNF-α receptors is required to prevent NF-κB activation in bleomycin (BLM)-induced lung fibrosis. <u>Am J Respir Crit Care Med</u>. 159: A928, 1999.
- **22. Ortiz, L.A.**, Lasky. J.A, Reyes, M., Lungarella, G., Martorana, P., Cavarra, E., Brody, A.R., Pardo, A., Selman, M., and Friedman, M. Enhanced expression of interstitial collagenase in the lung of individual tumor necrosis factor (TNF) receptor deficient mice exposed to silica. <u>Am J Respir Crit Care Med</u>. 159: A71, 1999.
- **23.** Ortiz, L.A., Gozal, E., Zou, X., Reyes, M., Lungarella, G., and Friedman, M.Individual (p55 or p75) TNF receptors activate IκBα kinase and promote NF-κB activation in bleomycin (BLM)-induced lung fibrosis. <u>European Respir Journal</u>. 14: A660, 1999.
- **24.** Gozal, E., **Ortiz, L.A.**, Zou, X., Reyes, M., Lasky, J.A., and Friedman, M. Role of TNFα and NF-κB in silica-induced apoptosis of RAW 264.7 an I-21 murine macrophage cell lines. <u>Am J Respir Crit Care Med.</u> 161: A666, 2000.
- **25.** Morris, G.F., Gosh, S., Nelson, A., Mendoza, T., Hoyle, G.W., **Ortiz, L.A.**, Friedman, M., and Brody, A.R. Disparate outcomes mediated by p53 in mouse models of fibrogensis induced by inhaled asbestos or by intratracheal instillation of bleomycin. <u>Am</u> <u>J Respir Crit Care Med</u>. 161: A828, 2000.
- 26. Ortiz, L.A, Lasky, J.A., Gozal, E., Lungarella, G., Cavarra, E., Martorana, P., Ruiz, V., Pardo, A., Brody, A.R., Friedman, M., and Selman, M. Individual TNF receptor deficient mice are protected from the fibrogenic, but not the inflammatory, effects of silica by altering lung MMP-13/TIMP-1 RNA expression. <u>Am J Respir Crit Care Med</u>. 161: A481, 2000.
- **27.** Bartelesi, B., Lunghi, B., Fineschi, S., Lucattelli, M., Gambelli, F., Cavarra, E., Martorana, P., **Ortiz, L.A.**, and Lungarella, G. Study on the role of CD4+ and CD8+ T-cells on the development of fibrosis and emphysema after bleomycin. 11th International Colloquium on Lung Fibrosis. Stockholm, Sweden. October, 2000.
- **28.** Morris, G.F., Gosh, S., Mendoza, T., Nelson, A., Shan, B., **Ortiz, L.A.**, Friedman, M., and Brody, A.R A p53-mediated response to bleomycin-induced lung injury. <u>Am J Respir Crit Care Med</u>. 163: A707, 2001.

- **29.** Hagood, J.S., Ortiz, L.A., Reyes, M., and MacEwen, M.W. THY-1 -/- mice are predisposed to lung remodeling and fibrosis. <u>Am J Respir Crit Care Med</u>. 163: A709, 2001.
- Lungarella, G., Lunghi, B., Bartelesi, B., Fineschi, S., Lucattelli, M., Gambelli, F., Ortiz, L.A., Cavarra, E., and Martorana, P. Role of CD4+ and CD8+ T-cells on the development of fibrosis and emphysema after bleomycin. <u>Am J Respir Crit Care Med</u>. 163: A709, 2001.
- **31. Ortiz, L.A**. Champion, Lasky, J.A., Gambelli, F., Gozal, E., Friedman, M., Hyman, A.L., and Kadowitz, P.J. Enalapril inhibition of AP-1 and NF-κB, collagen and TNF mRNA expression, and pulmonary hypertension in bleomycin-treated mice. <u>Am J Respir Crit</u> <u>Care Med</u>. 163: A710, 2001.
- 32. Gambelli, F., Friedman, M., Zou, X., and Ortiz, L.A. Differences in AP-1 and MAP kinases activation characterize the differential response to silica in silica-sensitive (RAW 264.7) and silica-resistant (IC-21) cell lines. <u>Am J Respir Crit Care Med</u>. 163: A794,2001.
- **33.** Li, J., Ortiz, L.A., and Hoyle, G.W. Lung pathology in platelet-derived growth factor transgenic mice: effects of genetic background and fibrogenic agents. <u>Am J Respir Crit</u> <u>Care Med.</u> 165; A167, 2002.
- **34.** Zhuo, Y., Pham, D., **Ortiz, L.A.**, Zhang, J., Hoyle, G., and lasky, J.A. PDGF-C and –D expression is differentially regulated during bleomycin-induced lung fibrosis. <u>Am</u> <u>JRespir Crit Care Med</u>. 165; A169, 2002.
- **35. Ortiz, L.A.**, Gambelli, F., and Phinney, D. Murine mesenchymal stem cells in the treatment of bleomycin (BLM)-induced pulmonary fibrosis. <u>Am J Respir Crit Care Med</u>. 165; A465, 2002.
- **36.** Gambelli; F., Friedman; M. Zou; X. Niu X., and **Ortiz, L.A**. ERK1/2-mediated phosphorylation of TNFα receptor 1 (p55) protects macrophages from silica-inducedapoptosis. <u>Am J Respir Crit Care Med</u>. 165; A426, 2002.
- **37. Ortiz, L.A.,** Gambelli, F., and Phinney, D. Murine mesenchymal stem cells (MSCs) engraft as epithelial type II cell in the injured, but not in normal, mouse lung and alter metalloproteinase (MMP) expression. <u>Am J Respir Crit Care Med</u>. 167; A464, 2003.
- **38.** Gambelli, F., Niu, X., Lungarella, G., Friedman, M., and **Ortiz, L.A.**, Systemic administration of NF-κB inhibitor BAY 11-7085 ameliorates silica-induced lung inflammation and fibrosis in mice. <u>Am J Respir Crit Care Med</u>. 167; A257, 2003.
- **39.** Phinney, D.G., **Ortiz, L.A.**, Gambelli, F., McBride, C., Baddoo, B., and Gaupp[,] D. Engraftment of murine mesenchymal stem cells in lung is increased in response to bleomycin exposure and results in a decrease in lung fibrosis leading to a generalized

improvement in the health status of mice. 9th International Meeting of the International Society of Cell Therapy (ISCT), Phoenix, AZ. May, 2003.

- 40. Phinney, D.G., Baddoo, M., Gambelli, F., and L.A. Ortiz . FGF2 Regulates Cellular Differentiation of Murine Mesenchymal Stem Cells. <u>Am J Respir Crit Care Med</u>. 169: A212, 2004.
- **41. Ortiz, L.A.**, Gambelli, F., Phinney, D.G., Reynold, P., Reynolds, S. and B. Stripp Sequencial expression of BMP receptors and suppression of FGF2 characterize the differentiation of embryonic stem cells to alveolar epithelium. <u>Am J Respir Crit Care Med.</u> 169: A462, 2004.
- **42. Ortiz, L.A.**, Di Giuseppe, M., Fatman, C., and Phinney. Sequencial expression of BMP receptors and suppression of FGF2 characterize the differentiation of mesenchymal stem cells to alveolar epithelium. <u>Proceedings American Thoracic Society</u>. 3: A558, 2006.
- **43. Ortiz, L.A.**, Fattman, C., M.F. Dutreil, and D.G. Phinney. Murine mesenchymal stem cells block T-cell proliferation via production of Interleukin 1 receptor antagonist. 14th International Colloquium on Lung Fibrosis. Frankfurt, Germany. September 2006.
- **44.** Fattman, C., Torres, G., Brockway, B.L., Stripp, B.R., and **L.A. Ortiz.** Remodeling of the respiratory unit in silica-exposed mice. Thomas L. Petty Aspen Lung Conference 50th annual meeting. Aspen, Colorado. June 2007.
- **45. Ortiz, L.A.**, Di Giuseppe, M., and D.G. Phinney. Interleukin 1 receptor antagonist mediates the anti-inflammatory effects of bone marrow derived mesenchymal stem cells. <u>Am J Respir Crit Care Med.</u> 177: A723, 2008.
- **46.** Di Giuseppe, M., Njah, J.M., Fazzi, F., Phinney, D.G., and **Ortiz, L.A.** Osteopontin and Hyaluronate regulate mesenchymal stem cells migration. <u>Am J Respir Crit Care Med.</u> 177: A511, 2008.
- **47. Ortiz, L.A.**, Di Giuseppe, M., Fazzi, F., and D.G. Phinney. S1P receptors mediate mesenchymal stem cell migration. <u>Am J Respir Crit Care Med.</u> 179: A3684, 2009.
- **48. Ortiz, L.A.**, Winnica, D., Di Giuseppe, M., Fazzi, F., Sala, E., St. Croix, C., Watkins S., and Phinney, D.G. Regulation of macrophage biology by mesenchymal stem cells (MSC) involves mitochondrial transfer. <u>Am J Respir Crit Care Med.</u> 179: A5281, 2010.
- **49. Ortiz, L.A.**, Winnica, D., Di Giuseppe, M., Fazzi, F., E. Sala., C. St. Croix., S. Watkins., and D.G. Phinney. Regulation of macrophage biology by mesenchymal stem cells (MSC) involve mitochondrial transfer". 16th International Colloquium on Lung and Airway Fibrosis. Busselton, Western Australia, Australia, October, 2010.

- **50. Ortiz, L.A.**, D. Winnica., Di Giuseppe, M., Fazzi, F., E. Sala., C. St. Croix., S. Watkins., and D.G. Phinney. The Mesenchymal stem cell (MSC) secretome involves mitochondrial transfer. <u>Am J Respir Crit Care Med</u>. A3768, 2011.
- 51. G. Deluliis, Di Giuseppe, M., Phinney, D.G., E. Sala., Kamisnki, N., and Ortiz, L.A. Differential expression of microRNA in mesenchymal stem cell derived exosomes. <u>Am J</u> <u>Respir Crit Care Med.</u> A3769, 2011.
- **52. Ortiz, L.A.**, G. Deluliis, M. Di Giuseppe, E. Sala, D. Phinney, N. Kaminski. Micro RNA (miR) in mesenchymal stem cells (MSC) derived exosomes ameliorate pulmonary fibrosis. Keystone meeting 2012.
- **53.** Njah, J, M. Di Giuseppe, E. Sala, D. Phinney, N. Kaminski, and **Ortiz, L.A.** Mesenchymal Stem Cells Use Extracellular Vesicles To Transfer Mitochondria And Micro RNAs To Modulate Macrophages In Lung Fibrosis. International Society for Extracellular Vesicles (ISEV) 2013.
- **54.** Ortiz, L.A., M. Di Giuseppe, D. Winnica, J. Njah, N. Kamisnki, E.Sala, and D. Phinney. Mesenchymal Stem Cells Extrude mitochondria and Shuttle micro RNAs to Modulate Macrophages in Lung Fibrosis. <u>Am J Respir Crit Care Med</u>. A5427, 2013.
- **55.** Ortiz, L.A., Njah, J., Di Giuseppe, M., and Champion H. Harnessing the Mesenchymal Stem Cells (hMSC) Secretome to Couple the RV/PA during Pulmonary fibrosis (PF). National Institute of Health, National Heart, Lung, and Blood Institute Symposium on Cardiovascular Regenerative Medicine. Natcher Conference Center. Bethesda, Maryland. September 2013.
- **56. Ortiz, LA.** Mesenchymal Stem Cells use extracellular vesicles to outsource mitophagy. International Society for Extracellular Vesicles (ISEV) 2014. 07A-257.
- 57. Ortiz, L.A., Njah, J., Di Giuseppe, M., Rivera-Lebron B.N, Champion, H., and McKenna D. Harnessing the Mesenchymal Stem Cells (hMSC) Secretome to Couple the RV/PA during Pulmonary fibrosis (PF). Am J Respir Crit Care Med. A5284, 2014.
- **58.** Rios C, Jahn A., Marti P., Iglesias A., Fueyo L., Gigirey O., Torrecilla J.A., Carvajal A., Balaguer C., Noguera A., Peralta A. **Ortiz, L.A.**, and Sala-Llinas E. Functional and molecular disparities between mesenchymal stem cells from various pulmonary disorders. European Respiratory Society, A4265, 2014.
- **59. Ortiz, L.A.**, Leikauf, G., Di Giuseppe M., Fabisiak J.P., Njah, J., and Brockway B. Mesenchymal stem cells exosomes are enriched in complement and coagulation cascade proteins. International Society for Extracellular Vesicles (ISEV) 2015. ABSSUB-498.
- **60. Ortiz, L.A.** Cellular microparticles and exosomes in stress responses and inhaled toxicant-induced pulmonary diseases. Society of Toxicology (SOT). Abstract 3134, 2017.

- **61.** Njah J; Marrocco A; Detwiler A; Milosevic J: Beckman, T.; Simon, M; Rojas, M; Mora, A; Riches D; and **Ortiz, LA**. Mesenchymal Stem Cells (hMSC) exosomes Couple the RV/PA during Pulmonary fibrosis (PF). 2019 Aspen Lung Conference.
- 62. Marrocco A, K. Frawley, Pearce L, Peterson J, Detwiler A, and Ortiz, LA. Macrophages Metabolic Reprogramming after Silica Exposure. In: 2019 (58th) Annual Meeting Abstract Supplement, Society of Toxicology, 2019. Abstract no. 1656. This abstract was awarded the A-E SOT Graduate Student Travel Award 2019
- **63.** Marrocco A, K. Frawley, Pearce L, Peterson J, Detwiler A, and **Ortiz, LA**. Adaptation in Macrophages as Mechanism of Defense Against Crystalline Silica Dust" APHA's 2019 Annual Meeting and Expo, Philadelphia, Nov 2019 Abstract N.450075
- **64.** Marrocco A, K. Frawley, Mullett S, Pearce L, Peterson J, Detwiler A, Wendell S, and **Ortiz, LA**. "Metabolic reprogramming of macrophages after silica exposure" 104th American Occupational Health Conference, Anaheim CA; April 2019
- **65.** Antonella Marrocco, Kristin Frawley, Steven Mullett, Linda Pearce, James Peterson, Stacy Wendell, and Luis Ortiz "Metabolic Adaptation in Macrophages as Mechanism of Defense Against Crystalline Silica Dust" Dean's Day Pitt Public Health; April 2019 (not published)
- 66. Marrocco A, K. Frawley, Mullett S, Pearce L, Peterson J, Detwiler A, Wendell S, and Ortiz, LA."Metabolic Adaptation in Macrophages as Mechanism of Defense Against Crystalline Silica Dust" American Public Health Association; Abstract N.450075, November 2019
- **67.** Mesenchymal Stem Cells (hMSC) exosomes modulate VEGF signal to couple the RV/PA during Pulmonary fibrosis (PF). Abstract 3392987 Cytotherapy 2020. Selected for presentation at the 26th Annual Meeting of the ISCT, International Society for Cell & Gene Therapy, in Paris, France
- 68. Metabolic Adaptation in Macrophages as Mechanism of Defense against Crystalline Silica Dust, Society of Toxicology 59th Annual Meeting 2020 Abstract #2550 (canceled)
- **69. Pittsburgh LUNG FORCE Expo on May 27, 2020**. Session "Occupational and Environmental Factors that Affect Lung Health." (canceled)

PROFESSIONAL ACTIVITIES

Invited Lectures and Symposia

"Interleukin-1 α is transported into the brain by a saturable system but does not disrupt the blood-brain barrier". Federation for Clinical Research. New Orleans, Louisiana. February 1990.

"Acute effects of in vivo and in vitro bleomycin on murine alveolar macrophages". Texas Thoracic Society. Austin, Texas. April 1992.

"Bleomycin induction of lung inflammation and TNF-*a* m-RNA expression in mice". 58th Annual Scientific Assembly. American College of Chest Physician's. Chicago, Illinois. October 1992.

"Lupus Pneumonitis: A role for Stress Proteins and Alveolar Macrophages". Research Conference, Division of Pulmonary Medicine at Louisiana State University. New Orleans, Louisiana. June 1994.

"Bleomycin-induction of lung injury in mice". Research conference, Department of Internal Medicine. Tulane University. New Orleans, Louisiana. September, 1994.

"A differential induction of apoptosis and p53 in Alveolar Macrophages (AM) characterizes the difference in murine strain response to bleomycin". 1995 International Conference. American Thoracic Society. Seattle, Washington. May 1995.

"Sjogren's syndrome complicated by usual interstitial pneumonitis". Department of Pathology & Laboratory Medicine Grand Rounds. Tulane University Medical Center. New Orleans, Louisiana. June 1995.

"Animal models of pulmonary fibrosis". U.S.-Colombian Medical Association annual Meeting. New Orleans, Louisiana. July 1995.

"An update in Interstitial Lung Diseases". VIII National congress of Internal Medicine. Asociacion Hondurena de Medicina Interna. Tegucigalpa, Honduras. December 1995.

"New Insights in the Pathophysiology of Asthma". Asociacion Colombiana de Pneumologia. Barranquilla, Bogota, Cali y. Medellin, Colombia. March 1996.

"Update in the Pathophysiology of Asthma". Department of Obstetrics and Gynecology Grand Rounds. Tulane University Medical Center. New Orleans, Louisiana. April 1996.

"TNF receptor knockout mice in the study of silicosis". 9th. International colloquium on pulmonary fibrosis. Oaxaca, Mexico. November 1996.

"TNF receptor knockout mice in the study of pulmonary fibrosis". Tulane-LSU clinical immunology seminar series. New Orleans, Louisiana. December 1996.

"ARDS". Department of Medicine Grand Rounds. Tulane Medical Center. New Orleans, Louisiana. March 1997.

"Collagen Vascular Diseases and the Lung". Louisiana/Mississippi ACP Regional Meeting. New Orleans, Louisiana. March 1997.

"Lupus Pneumonitis". Department of Medicine Grand Rounds. Tulane Medical Center. April 1997.

"Asthma and its Pathophysiology". VII Congreso Colombiano de Neumologia y Cirugia del Torax. Medellin, Colombia. October 1997.

"Enfermedad Pulmonar Intersticial Difusa y Enfermedades del Colageno". VII Congreso Colombiano de Neumologia y Cirugia del Torax. Medellin, Colombia. October 1997.

"The importance of NF- κ B activation in the pathogenesis of bleomycin-induced lung injury". 1998 International Conference. American Thoracic Society. Chicago, Illinois. April 1998.

"Individual tumor necrosis factor (TNFR) knockout mice are resistant to silica-induced lung fibrosis but not to inflammation". 1998 International Conference. American Thoracic Society. Chicago, Illinois. April 1998.

"Mechanisms of bleomycin-induced lung injury". Tulane Cancer Center. Tulane University Medical Center. New Orleans, Louisiana. July 1998.

"Cytokine role in pulmonary fibrosis". I congress of the Latin American Thoracic Society. Sao Paulo, Brasil. August 1998.

"Single tumor necrosis factor receptor-deficient mice are protected from the fibrogenic but not the inflammatory effects of silica". European Respiratory Society. Geneva, Switzerland. September 1998.

"Bleomycin-induced pulmonary fibrosis: A story for TNF". Research Conference, Division of Pulmonary Medicine. Department of Pediatrics. Tulane Medical Center. New Orleans, Louisiana. September 1998.

"Single tumor necrosis factor receptor-deficient mice are protected from fibrogenesis but not the inflammatory effects of silica". 10th International Colloquium on Lung Fibrosis. Universita di Siena. Siena, Italy. October 1998. "The importance of Tumor Necrosis Factor in the pathogenesis of fibrotic lung diseases". Department of Pharmacology, Tulane University Medical Center. New Orleans, Louisiana. November 1998.

"Individual (p55 or p75) TNF receptors activate $I\kappa Ba$ kinase and promote NF- κB activation in bleomycin (BLM)-induced lung fibrosis". Workshop: "Apoptosis, growth factors and signal transduction pathways: Basic biology and toxicology". National Institute of Environmental Health Sciences. Research Triangle Park, North Carolina. April 1999.

"TNF signal transduction pathways in pulmonary silicosis". Research conference, Department of Internal Medicine. Tulane University. New Orleans, Louisiana. June 1999.

"Basic aspects of the pathogenesis of pulmonary fibrosis". VIII Congreso Colombiano de Neumologia y Cirugia del Torax. Bucaramanga, Colombia. November 1999.

"TNF receptor deficient mice are protected from silica-induced lung fibrosis by inhibiting AP-1 activation and altering MMP-13/TIMP-1 expression". Thomas L. Petty Aspen Conference in Pulmonary Fibrosis. 43rd annual Meeting. Aspen, Colorado. May-June 2000.

"The importance of TNF-mediated signal transduction in lung fibrogenesis". Department of Allergy and Immunology Harbor-UCLA Medical Center. Los Angeles, California. June 2000.

"The significance of TNF receptors in pulmonary fibrosis". Grand Rounds. Department of Pulmonary and Critical care Medicine. UCLA School of Medicine. Los Angeles, California. August 2000.

"The role of cytokines in the pathogenesis of fibrotic lung injury". Annual Actualization Symposyum in Allergy and immunology. Organized by the University of Chile at Concepcion. Concepcion, Chile. November 2000.

"Role of TNF and TNF receptors in pulmonary fibrosis". RIP conference. National Jewish Medical Center. Denver, Colorado. December 2000.

"The importance of TNF signal transduction in pulmonary fibrosis". PACCM Join collaborative research conference. University of Pittsburgh. Pittsburgh, Pennsylvania. September 2001.

"TNF receptor deficient mice as a model to study fibrogenesis". Regulation of fibrogenesis by intestinal and hepatic inflammation. University of North Carolina at Chapel Hill, North Carolina. April 2002.

"Murine mesenchymal stem cells in the treatment of bleomycin (BLM)-induced pulmonary fibrosis'. 2002 International Conference. American Thoracic Society. Atlanta, Georgia. May 2002.

"TNF and its contribution to the difference in murine strain response during lung fibrogenesis". NIOSH. Morgantown, West Virginia. May 2002.

"Mesenchymal stem cells in pulmonary fibrosis". 1st Pittsburgh international lung conference. Nemacolin resort Pittsburgh, Pennsylvania. October 2002

"The use of recombinant TNF receptors to treat Rheumatoid-arthritis-induced interstitial lung Diseases". Rheumatology Grand Rounds, University of Pittsburgh, Department of Medicine, School of Medicine. Pittsburgh, Pennsylvania. November 2002.

"Mesenchymal stem cells in pulmonary fibrosis: Presentation at the Pittsburgh Development Center 2002-2003 Seminar Series. Magee-Womens Research Institute, University of Pittsburgh. Pittsburgh, Pennsylvania. December 2002.

"Stem cells and lung injury". Department of Allergy and Immunology Lecture Series. Children's Hospital of Pittsburgh. Pittsburgh, Pennsylvania. February 2003.

"Mesenchymal stem cells in the treatment of lung injury". Research Lab Conference. Department of Radiation Oncology at the University of Pittsburgh, School of Medicine. Pittsburgh, Pennsylvania. March 2003.

"Injury enhances engraftment of bone marrow-derived mesenchymal stem cells into the alveolar epithelium". 2003 International Conference. American Thoracic Society. Seattle, Washington. May 2003.

"From bone marrow to alveolar epithelium: the role for the mesenchymal stem cell" . grand rounds. Department of Pulmonary Medicine. USC. Los Angeles, California. January 2004.

"Sequencial expression of BMP receptors and suppression of FGF2 characterize the differentiation of embryonic stem ells o alveolar epithelium". 2004 International Conference. American Thoracic Society. Orlando, Florida. May 2004.

"From bone marrow mesenchyma to alveolar epithelium". Program of the ASGT 7th Annual Meeting. Minneapolis, Minnesota. June 2004.

"From bone marrow to alveolar epithelium: The role for the mesenchymal stem cell in lung injury". University of Louisville Department of Medicine. Louisville, Kentucky. August 2004.

"Silicosis: An old disease". Program of the Semana Nacional de neumologia (Contaminacion atmosferica e impacto sobre sere humanos). Instituto Nacional de Enfermedades Respiratorias (INER). Mexico City. Mexico, D.F. September 2004.

"Stem cells and the lung: an overview". Workshop II in Regenerative Medicine at Emory University. Emory University Conference Center. Atlanta, Georgia. September 2004.

"Bone marrow derived mesenchymal stem cells and the lung". 13th International Colloquium on Lung Fibrosis. Banff, Canada. October 2004.

"Silicosis: An unresolved problem". Grand Rounds at the University of Louisville Department of Medicine. Louisville, Kentucky. April 2005.

"Mechanisms of pulmonary fibrosis". Invited as facilitator of this thematic poster section. 2005 International Conference. American Thoracic Society. San Diego, California. May 2005.

"Stem cell recruitment in lung remodeling: Is there a downside?" 2005 International Conference. American Thoracic Society. San Diego, California. May 2005.

"Adult stem cells, lung biology, and lung disease". Workshop sponsored by Cystic fibrosis foundation, the National Hearth, Lung, and Blood Institute, and the University of Vermont. Burlington, Vermont. July 2005.

"The role of Stem cells in lung injury and repair". Third Siena International Conference on Animal Models if Chronic Obstructive Pulmonary Disease. Siena, Italy, October 2005.

"Silicosis: and old disease and unresolved problem". State Chest Conference. Division of Pulmonary Medicine at Yale University. New Haven, Connecticut, December 2005.

"A perspective in the stem cells of the lung". Division of Pulmonary and Critical Care Medicine at Yale University. New Haven, Connecticut, December 2005.

"Do circulating mesenchymal cells affect the lung in pulmonary fibrosis: Evidence from mice and humans" 2006 International Conference. American Thoracic Society. San Diego, California. May 2006.

"Murine mesenchymal stem cells block T-cell proliferation via production of Interleukin1 receptor antagonist". 14th International Colloquium on Lung Fibrosis. Schloss Rheinhartshausen Kempinski, Germany. September 2006.

"Silicosis: lessons from an old disease and unresolved problem". National Jewish Research and Medical Center. Denver, Colorado. December 2006.

"Silicosis: Academic experience at the University of Pittsburgh". Department of Medicine at the University of Alabama at Birmingham. January 2007.

"The contribution of bone marrow mesenchyma during lung injury and repair". Division of Pulmonary Medicine at Vanderbilt University. Nashville, Tennessee. February 2007.

"Section Chair: Stem Cells: Are we close to cell therapy?" 2007 International Conference. American Thoracic Society. San Francisco, California. May 2007.

"Murine Mesenchymal Stem Cells (MSCs) block T-cell proliferation via production of Interleukin 1 receptor antagonist". 2007 International Conference. American Thoracic Society. San Francisco, California. May 2007.

"Interleukin 1 Receptor Antagonist mediates the anti-inflammatory effects of bone marrow derived mesenchymal stem cells during lung injury". Thomas L. Petty Aspen Lung Conference 50th annual meeting. Aspen, Colorado. June 2007.

"Use of bone marrow stroma in the treatment of pulmonary fibrosis". Division of Pulmonary Medicine at the University of Miami. Miami, Florida. August 2007.

"Silicosis". 2007 National Conference of the National Coalition of Black Lung and Respiratory Disease Clinics. Oglebay State Park, West Virginia. September 2007.

"An Update in the stem cells of the lung". Division of Pulmonary, Critical Care and Environmental Medicine at the University of Utah. Salt Lake City, UT. December 2007.

"Osteopontin and Hyaluronate regulate mesenchymal stem cells migration". 2008 International Conference. American Thoracic Society. Toronto, Canada. May 2008.

"Bone marrow mesenchyma and pulmonary fibrosis". Division of Pulmonary Medicine at the University of Michigan Ann Arbor. Ann Arbor, Michigan. August 2008.

"CD44 regulation of mesenchymal stem cell engraftment in fibrotic lung". 15th International Colloquium on Lung and Airway Fibrosis. Sunset Beach, North Carolina. October 2008.

"Anti-inflammatory properties of bone marrow derived mesenchymal stem cells in pulmonary fibrosis". Division of Pulmonary and Critical Care Medicine at the University of California San Francisco. San Francisco, California. November 2008

"Modulation of bleomycin induced lung injury by bone marrow derived mesenchymal stem cells" American Physiological Society. Annual meeting experimental biology FASEB 2009. New Orleans, Louisiana. February 2009.

"Novel treatments for pulmonary fibrosis: Stem cells and all the Jazz". American Thoracic Society. San Diego, California. May 2009.

"S1P receptors mediate mesenchymal stem cells (MSCs) migration". American Thoracic Society. San Diego, California. May 2009.

"TNF protects macrophages from silica induced apoptosis". Society of Toxicology. Salt Lake City, Utah. February 2010.

"The role of stem cells in the pathogenesis and treatment of silicosis". Division Pulmonary Medicine Tulane Health Science Center. New Orleans, Louisiana. May 2010.

"Regulation of the Innate Immunity by Bone Marrow Derived Mesenchyma as Potential Treatment for Environmentally Induced Lung Injury". Division Pulmonary Medicine University of Iowa. Iowa City, Iowa. September 2010.

"Regulation of macrophage biology by mesenchymal stem cells (MSC) involve mitochondrial transfer". 16th International Colloquium on Lung and Airway Fibrosis. Busselton, Western Australia, Australia, October 2010.

"Mesenchymal stem cell secretome in pulmonary fibrosis". Division of Pulmonary, Critical Care, and Environmental Medicine at the University of Rochester. Rochester, New York. December 2010.

"Mesenchymal stem cell secretome: mitochondrial transfer and microRNA shuttle". Institute for Regenerative Medicine at Texas A&M Health Science Center at Scott & White, Temple, Texas. March 2011.

"Mesenchymal Stem Cells" Postgraduae course (PG27) Functional analysis of stem cells: getting ready to translate. American Thoracic Society. Denver, Colorado. May 2011.

"Mesenchymal stem cell transfer of mitochondria via the secretome" Featured speaker of the mini symposium (B18) Mitochondrial function in pulmonary health and disease. American Thoracic Society. Denver, Colorado. May 2011.

"The mesenchymal stem cell (MSC) secretome involves mitochondrial transfer. American Thoracic Society. Denver, Colorado. May 2011.

"Effects of mesenchymal stem cell (MSC) transfer of micro RNA's and mitochondria as mechanisms of immune regulation in models of lung fibrosis". Hospital Clinic de la Universidad de Barcelona. Barcelona, Spain. September 2011.

"Mesenchymal Stem Cells use their exosome to transfer mitochondrial and micro RNAs, and promote homeostasis during fibrotic lung injury" Comprehensive Pneumology Center Ludwig-Maximilians-Universität. Munich, Germany. October 2011.

"Use of bone marrow mesenchyme to reprogram lung immunity in response to inhalation injuries". Center for Vaccine Research At the University of Pittsburgh. Aerobiology Mini-Symposium. Pittsburgh, Pennsylvania. November 2011.

"The use of Bone Marrow Derived Mesenchyme to reprogram Lung Immunity in response to inhalation injuries". Institute for environmental medicine. Perelman School of Medicine at the University of Pennsylvania. Philadelphia, Pennsylvania. January 2012.

"Mesenchymal Stem Cells Utilize the Secretome to Reprogram Innate Immunity and Ameliorate Silica-Induced Lung Injury". Department of Environmental Health, Molecular and Integrative Physiological Sciences. Harvard School of Public Health. Boston, Massachusetts. March, 2012.

"The use of Mesenchymal Stem Cells and their secretome in the treatment of Lung Fibrosis". Department of Medicine at the Medical College of Wisconsin. Milwaukee, Wisconsin. May, 2012.

"Mesenchymal Stem Cells (MSC) use their secretome to Outsource mitophagy and reprogram innate immunity". Department of Medicine at the University of California San Diego. San Diego, California. June 2012.

"The Use of Mesenchymal Stem Cell Secretorme (mitochondrial transfer and micro RNA shuttle) to Treat Pulmonary Fibrosis. Division of Pulmonary, Allergy and Critical Care at Duke University. Raleigh-Durham, North Carolina. August 2012.

"micro RNA in mesenchymal stem cells derived exosomes ameliorate pulmonary fibrosis" The 17th International Colloquium on Lung and Airway Fibrosis. Modena, Italy. October 2012.

"Mesenchymal Stem Cells and Lung Fibrosis". NHLBI-Division of Lung Disease: Cell Therapy of Lung Diseases Workshop. Rockledge, Maryland. November 2012.

"Macrophage mediated inflammation in pulmonary fibrosis". NHLBI-Division of Lung Disease: IPF Workshop. Rockledge, Maryland. November 2012.

"Mesenchymal stem cells transfer mitochondria and micro RNAs to modulate macrophages in lung fibrosis". 5th LACI satellite Meeting in Immunology. EMBO Workshop program: Dr. Jekyll and Mr Hyde: The Macrophage in inflammation and immunity. Marseille, France. January 2013.

"Progress on the utilization of bone marrow derived mesenchymal stem cells to treat fibrotic lung injuries". Basic and translational research conference. Division of Pulmonary, Allergy, and Critical Care Medicine at the University of Pittsburgh. Pittsburgh, Pennsylvania. March 2013.

"Mesenchymal Stem Cells Use Extracellular Vesicles To Transfer Mitochondria And Micro RNAs To Modulate Macrophages In Lung Fibrosis". International Society for Extracellular Vesicles. Boston, Massachusetts. April 2013. "Mesenchymal Stem Cells Secretome: A New Paradigm In the Treatment of Environmental Lung Injury". Environmental Pulmonary Health Research Program: Getting Into Fundamentals. Sponsored by the National Institute of Environmental Health Sciences/NIH. American Thoracic Society. Philadelphia, Pennsylvania. May 2013.

"Harnessing the Mesenchymal Stem Cell Secretome to couple RV and PA Pressure During Lung Fibrosis". Center for Regenerative Medicine at Harvard University. Brigham and Women's Hospital. Boston, Massachusetts. July 2013.

"MSC use ARMMS to Mediate the Transfer Mitochondria in Ectosomes and Shuttle Micro RNAs in Exosomes to Program the Innate Immunity in Lung Fibrosis". NIH-University of Vermont Sponsored Stem Cells and Cell Therapies in Lung Biology and Lung Diseases. Burlington, Vermont. August 2013.

"Stromal cell-derived microvesicles as modulators of tissue inflammation and remodeling". 2013 Gordon Research Conference in Lung Development, Injury and Repair. Proctor Academy, Andover, New Hampshire. August 2013.

"Mesenchymal stem cell secretome in pulmonary fibrosis". Department of Medicine at the University of Louisville Medical School. Louisville, Kentucky. December 2013.

"Harnessing the Mesenchymal stem cell secretome to treat lung diseases". Research in Progress (RIP) conference at National Jewish Health. Denver, Colorado. January 2014.

"Stem cell treatment of Lung Disease". Chest World congress 2014. Madrid, Spain. March 2014.

"Beyond the Nucleus: Mesenchymal Stem Cells use extracellular vesicles to outsource mitophagy". International Society for Cellular Therapy. Le Pale de Congress de Paris. Paris, France. April 2014.

"Bench to Bedside: MSCs for ARDS". Quality and Operations Track, International Society for Cellular Therapy. Le Pale de Congress de Paris. Paris, France. April 2014.

"Mesenchymal Stem Cells use extracellular vesicles to outsource mitophagy". International Society for Extracellular Vesicles (ISEV). Rotterdam, Netherlands. May 2014

"Mesenchymal Stem Cells use Exosomes and extracellular vesicles to shuttle RNA between cells". American Thoracic Society. San Diego, California. May 2014.

"Mesenchymal Stem Cells preserve the RV/PA coupling during pulmonary arterial hypertension in pulmonar fibrosis". Pulmonary Vascular-Right Ventricular Axis Research Program. National Heart Lung and Blood Institute. Bethesda, Maryland. September 2014.

"The role of mesenchymal stem cells in the maintenance of the stem cell niche". National Heart Lung and Blood Institute Workshop in Extracellular Matrix in Lung Health and Disease. Bethesda, Maryland. September 2014.

"The role of lung transplantation in coal mining pneumoconiosis". Annual Meeting of the National Coalition of Black Lung and respiratory Disease Clinics. Pittsburgh, Pennsylvania. September 2014.

"Bone marrow derived Mesenchymal Stem Cells use extracellular vesicles to outsource mitophagy and modulate immune responses during lung inflammation". 2nd SOCRATES Scientific meeting: Clinical and Translation of Stem Cells Extracellular Vesicles. Aspiration Theatre, Matrix. Star Biomedical Research Council (Biopolis) in Singapore. Singapore. November 2014.

"Mesenchymal Stem Cells use their ARMMS to outsource mitophagy". Division of Pulmonary Critical Care and Sleep Medicine at Yale University. New Haven, Connecticut. January 2015.

"Mesenchymal stem cells exosomes are enriched in complement and coagulation cascade proteins". International Society for Extracellular Vesicles (ISEV) 2015. Baltimore, Maryland, April 2015.

"The rational for the use of bone marrow derived Mesenchymal Stem Cells in Pulmonary Fibrosis". Hospital Son Espases. Palma De Majorca, Spain. November 2015.

"A vision for the Development of a Regenerative Center in a Pulmonary Division in the Current Century". Search for the Chief of the Pulmonary Division at the University of Colorado. Denver, Colorado. January 2016.

"Cell Based translational initiatives for the development of an Interstitial Lung Disease Center". Baylor College of Medicine. Houston, Texas. May 2016.

"Brothers in ARMMs: Mitochondrial transfer, microRNA shuttle, and Toll like receptor silencing mediate the mesenchymal stem cell-macrophage symbiosis". 2016 Annual Meeting of the International Society for Cellular Therapy. Singapore, Singapore. May 2016.

"Bone Marrow Derived Stem Cells in Pulmonary Fibrosis: extracellular vesicles to modulate matrix and couple the right ventricle". The Lung Institute at the Brigham and Women Hospital. Harvard Medical School. Boston, Massachusetts, July 2016.

"Brothers in ARMMs: Mitochondrial transfer, microRNA shuttle, and Toll like receptor silencing mediate the mesenchymal stem-cell macrophage symbiosis". Department of Medicine Grand Rounds at the Department of Medicine at the University of Florida. Gainesville, Florida. July 2016.

"Cellular microparticles and exosomes in stress responses and inhaled toxicant-induced

pulmonary diseases". Society of Toxicology (SOT) Workshop Session: Microparticles and Exosomes in Cardiopulmonary System-Stem Cell and Microenvironment Regulation by Toxicants". Baltimore, Maryland, February 2017.

"Focusing on Cell Based Therapies for the Treatment of Idiopathic Pulmonary Fibrosis (IPF)". Gran Rounds for the Division of Pulmonary, Allergy, and Critical Care Medicine at the University of Pittsburgh. Pittsburgh, Pennsylvania. April, 2017.

"Cell Based Therapeutic Considerations in the Treatment of Idiopathic Pulmonary Fibrosis (IPF)". Three Lakes Partners IPF Catalyst Symposium. Chicago, Illinois. April, 2017.

"From Exosomes and Right Ventricles to Matrix Regulation: The Rational for the Use of Bone Marrow derived Mesenchymal Stem Cells in the Treatment of Pulmonary Fibrosis". Mesenchymal Stem Cell Conference 2017. National Center for Regenerative Medicine at the Case Western Reserve University. Cleveland, Ohio. August 2017.

"Extracellular vesicles: The therapeutic paradigm of MSCs". Department of Pathobiology at the Lerner Institute at the Cleveland Clinic. Cleveland, Ohio. August 2017.

"The potential benefit of cell based intervention to improve right ventricles and macrophage immunity ahead of lung transplantation". Division of Pulmonary Medicine at the Brigham and Women Hospital. Harvard Medical School. Boston, Massachusetts, February 2018.

"To develop a standardized Defining criteria for human MSC small EVs: Pulmonary ECM modulation". Society for Clinical Research and Translation of Extracellular Vesicles Singapore. Sponsored by the International Society for Extracellular Vesicles and the International Society for Cell Therapies. Singapore, Singapore March 2018.

"Células madre en el tratamiento de las enfermedades respiratorias: Realidad o ficción". Conferencia de clausura de las XII jornadas de neumología de Ibiza. Ibiza, Spain, May 2018.

"PACT –Supported Cell Based Intervention to Improve RV/PA Coupling in IPF". PACT investigators steering committe meeting at the NHLBI. Bethesda, Maryland. May 2018.

"Dissecting the molecular mechanisms by which bone marrow mesenchyma helps environmentally induced lung injury: MSCs Use their ARRMS to throw vesicles". Keynote talk of the 32nd Annual Meeting of the Allegheny-Erie Society of Toxicology. Erikson Allumni Center at the University of West Virginia. Morgantown, West Virginia. May 2018.

"Dissecting the molecular mechanisms of bone marrow mesenchymal stem cells: MSCs Use their ARRMS to throw vesicles and improve fibrotic lung injury". Pulmonary Medicine Grand Rounds at the University of Alabama. Finley Conference Center. Birmingham, Alabama. June 2018.

"Cell Based Translational Initiatives for the Development of an Academically Oriented Interstitial Lung Disease Center". Department of Medicine, Baylor College of Medicine. Houston, Texas. October 2018.

"The Irony of Lung Fibrosis: a Fibroblast to Treat IPF". Inagural Lecture for the Maynooth Research Institute. The Irish Lung Fibrosis Association. Corrigan Hall, Royal College of Physicians. Dublin, Ireland. March 2019.

"Cell therapy for pulmonary fibrosis". Medical Cell Conference at the Mater Missericordiae Hospital. Catherine Mcaulley Lecture Teather. University College Dublin. Dublin, Ireland. March 2019.

"Supporting the lung innate immunity responses with bone marrow derived mesenchymal stromal cells during lung injury". Department of Immunology, Maynooth University. Maynooth, Ireland. March 2019.

"The Characterization and Rational of the use of mesenchymal stem cells (MSC) on the Treatment of Fibrotic Lung Diseases: Improving Pulmonary Hypertension and the Removal of Collagen". MSC Clinical Trial update. The 2019 ISCT Pre conference worshop organized by the ISCT MSC Scientific Committee. Melbourne, Australia May 2019.

"Mesenchymal Stem Cells (hMSC) Exosomes Couple the RV/PA During Pulmonary Fibrosis (PF)". Challenges in Translating MSC EVs into the Clinic. Plenary 6 of the 2019 meeting of the International Society for Cell Therapies. Melbourne, Australia May 2019.

"Human MSC small EVs for pre clinical Pulmonary and Cardiovascular Therapeutics". Society for Clinical Research and Translation of Extracellular Vesicles Singapore. Singapore, Singapore August 2019.

"The Therapeutic Use of Extracellular Vesicles by MSC: Improving Right Ventricular Function and Pulmonary Fibrosis with MSC Derived Exosomes". Plenary Section of the Manufacturing Challenges in Implementing Cellular Therapy Services. 2019 AABB. San Antonio, Texas Ocotober 2019.

"How Mesenchaymal Stem Cells usetheir ARMMs to extrude vesicles and rescue the right ventricule during pulmonary fiboris". 2019. Aula Meneghello, Fondazione Istituto di Ricerca Pediatrica Citta della Speranza. University Degli Studi Padova. Padova, Italy, November 2019.

"Of vesicles and Right Ventricles: How MSCs improve Pulmonary Fibrosis". Grand Rounds and Clinical Pathology Conference, Department of Laboratory Medicine and Pathology. University of Minnesota. Minneapolis, MN, March 2020.

"Single cell deconvolution of the fibrotic lung: How a fibroblast improves the outcome of Idiopathic Pulmonary Fibrosis (IPF)". Division of Pulmonary Medicine, Brigham and Women's Hospital. Boston, MA, November 2020.

"Cell Based Interventions in Advanced Lung Diseases". Advanced Lung Disease Conference: Novel therapies and controversis. Division of Pulmonary Allergy and Critical Care at Baylor College of Medicine. Webcast Live. Houston, TX, December 2020. "Landscape on regulatory requirements for potency testing". Regulatory Workshop on EVs with Therapeutics Goods Administration. Center for commercialization of Regenerative Medicine Australia. Melburne, July 2021.

Visiting Professorships:

Division of Pulmonary and Critical Care Medicine University of Texas Health Science Center at Houston Houston, Texas. June, 1995.

Division of Thoracic Surgery University of Rome (La sapienzzia) Rome, Italy. November, 1995.

Department of Pathology Istituto de Patologia Generale de la Universidad de Siena Siena, Italy. November 1995.

Division of Pulmonary and Critical Care Medicine Yale University New Haven, Connecticut. December 2005.

Division of Pulmonary and Critical Care Medicine University of California San Francisco San Francisco, CA. November 2008.

Division of Pulmonary, Allergy and Critical Care Medicine Duke University: External reviewer of the T32 Training Grant in Pulmonary Medicine Raleigh-Durham, North Carolina. August 2012.

Division of Pulmonary, Allergy and Critical Care Medicine Tulane Health Science Center, New Orleans, Louisiana. October 2015.

Department of Biology Maynooth University, Dublin, Ireland. March-April 2019.

Teaching Activities:

Introduction to Occupational Medicine (**EOH 2510**). I contributed with several lectures (6-10 hours) that constitute the core regarding epidemiology, pathophysiology, and clinical aspect of environmental lung diseases of this 3 credit course.

Molecular Pathobiology (**MSCMP 2740**). I conducted the Lung module (3 hours) for this 2 credit course in the Department of Pathology.

Principles of Toxicology (EOH 2176). Dr. Ortiz facilitated the review of papers.

Annual Workshop in Research Methodology. This is a School of Medicine initiative designed to bring residents and fellows from the medical school into the up to date aspects of research in the medical school. My participation is broad discussion of the animal models used to study the mechanisms of injury and repair leading to lung fibrosis.

The Lung Stem Cells. Two-hour lecture to the Multidisciplinary training program in the School of Medicine. This course is offered twice a year.

Sponsorship of Pre, and Postdoctoral Fellows:

1995-1997	Ursula Moroz, M.D. (Medical University of Bialystok, Poland, 1986) Fellow, Section of Pulmonary, Critical Care, and Environmental Medicine Funding: Tulane University Health Science Center Present Position: Staff at the VA Medical Center in New Orleans.
1995-1998	Medel Reyes, M.D. (Fellow, Section of Pulmonary, Critical Care, and Environmental Medicine) Funding: US Biosciences. "Exacerbation of bleomycin-induced lung injury in mice by amifostine" Present Position: Private Practice in Atlanta.
1996-1997	David Pham, M.D. (Tulane University Medical School, 1996) Resident, Department of Medicine at Tulane Medical Center Funding: American Lung Association (Louisiana Chapter) "Anti-Inflammatory Cytokines in Bleomycin-Induced Pulmonary Fibrosis". Principal Investigator: David Pham, M.D. (Luis A. Ortiz, M.D. Mentor) Present Position: Private Practice in San Diego.
2000-2002	Francesco Simeone, M.D. (University of Perugia, Italy, 1984) Fellow, Section of Pulmonary, Critical Care, and Environmental Medicine Funding: Tulane-LSU GCRC "A Study of the Safety and Efficacy of Subcutaneous P75:FC Fusion Protein (Etanercept) in Patients with Interstitial Lung Disease secondary to Rheumatoid Arthritis". Present Position: Associate Professor of Medicine at Tulane University Health Science Center.
2000-2004	 Federica Gambelli, Ph.D. (University of Siena, Italy, 2001). Post Doctorate Tulane University Health Science Center and Graduate School of Public Health at the University of Pittsburgh Funding: AHA of Pennsylvania Post Doctoral Fellowship Award. "Mesenchymal Stem Cells in Pulmonary Fibrosis: Engraftment and Epithelial Differentiation in the Injured Lung". Principal Investigator: Federica Gambelli, Ph.D. (Luis A. Ortiz, M.D. Mentor) Present Position: University of Siena and Novartis, Siena, Italy.

2005-2009	German Torres, M.D. (Universidad Javeriana, Colombia. 1999)		
	Post Doctoral Student		
	Graduate School of Public Health at the University of Pittsburgh		
	Funding: 1 RO1 HL071953 Luis A. Ortiz (PI) 07/01/05-06/30/09		
	"Mesenchymal Stem Cells (MSCs) in the Treatment of Lung Fibrosis"		
	Present Position: Practice in Chile.		

2007-2009 Kristina Go, MD
 Post Doctoral Student Graduate School of Public Health University of Pittsburgh
 Funding: 1 R01 ES010859 Luis A. Ortiz (PI) 12/01/01-06/30/2013
 "TNF alpha Signaling in Silica-Induced Lung Fibrosis".
 Present Position: Chief Resident, Department Surgery at University of Florida.

- 2007-2011 Cheryl Fattman, PhD Senior Post Doctoral Present Position: Assistant Professor Department of Occupational and Environmental Health Graduate School of Public Health University of Pittsburgh. Funding: NIEHS ONES award 2007-2011 Present Position: Genentech; Medical Science Liason.
- 2009-2010 Ernest Salas Linas, M.D. (University of Mallorca, Spain)
 Post Doctoral Student
 Graduate School of Public Health at the University of Pittsburgh
 Funding: Bolsa de ampliacion de studios Instituto de Salud Carlos III
 Scholarship from the Spanish Government
 Present Position: Chief Division of Pulmonary Medicine Hospital Son Espas,
 University of Mallorca, Mallorca, Islas Baleares in Spain.
- 2007-2012 Fabrizio Fazzi B.S. (University of Siena, Italy, 2005) Pre doctoral Student received PhD in Molecular Medicine 2012 Present Position: Post Doctoral Student University of Heidelberg, Germany.
- 2006-2011 Michelangelo Di Giuseppe, B.S. (University of Siena, Italy, 2003)
 Pre doctoral Student received PhD in Molecular Medicine 2011
 Funding: 1 R01 ES010859 Luis A. Ortiz (PI) 12/01/01-06/30/2013
 "TNF alpha Signaling in Silica-Induced Lung Fibrosis".
 Present Position: Research and Design Analyst at National Institute for Occupational Safety and Health.
- Joel Njah, M.D. (Universite de Yaounde I, Faculte des Sciences Biomedicales, Cameroon)
 PhD awarded by the Clinical Translational Multidisciplinary Program at the University of Pittsburgh in July 2018.
 Funding: 3R01ES010859-08S1. Minority Supplement

Present Position: Post Doctoral Student, Global HIV Implementation research at Columbia University, NY.

- 2011-2014 Steven Mischler.
 PhD Student Department of Environmental and Occupational Health Graduate School of Public Health at the University of Pittsburgh.
 Thesis awarded the Delta Omega Omicron Chapter as the best doctoral dissertation at the Department of Environmental and Occupational Health at the University of Pittsburgh Graduate School of Public Health.
 Present Position: Supervisory Research Scientist at National Institute for Occupational Safety and Health.
- 2016-2020 Antonella Marocco.
 PhD Student Department of Environmental and Occupational Health Graduate School of Public Health at the University of Pittsburgh.
 PhD awarded by the Department of Environmental and Occupational Medicine at the University of Pittsburgh in July 2020.
 Present Position: Post Doctoral Student in the Center for nanotechnology and nanotoxicology at the T.H. Chan School of Public Health at Harvard.
- 2002-2012 I supervised and mentor all the residents (Michael Creel, Andrew Greenwood, Huwaida Mansour, John Petrisko, Zilue Tangin) that received training at our Occupational and Environmental Medicine Residency Program from 2002 to 2012. Funding: CDC/NIOSH training grant (2 T01 OH008616).

RESEARCH: Current Grant Support:

- 07/15/18-04/31/22 1R01HL144089-01. A Clinical Indications Prediction (CLIP) Scale for Human Mesenchymal Stem Cells. Donald Phinney is PI, Luis A. Ortiz Co-Investigator (10% effort).
 07/01/20-06/30/21 University of Pittsburgh CTSI Covid-19 Pilot Grant Award: MSC derived
- 07/01/20-06/30/21 University of Pittsburgh CTSI Covid-19 Pilot Grant Award: MSC derived exosomes for Covid-19 induced ARDS. \$50,000. Luis A. Ortiz PI.

Pending Grant Support:

1R61HL158855-01. Mesenchymal Stromal Cells (MSC) for Idiopathic Pulmonary Fibrosis (IPF)-A single center phase 1 trial examining effect of multiple doses of MSC on IPF macrophage and epithelial transcriptome. Not discussed

1R01ES033439-01. VICTERING the Black Lung Epidemic in the Allegheny Region of Pennsylvania. Not discussed

R01HL162819. A novel FGR inhibitor to treat the Senescent cell mediated -induction of pulmonary fibrosis. Scientific review on October 2021

1 RO1 ES033613-1. Understanding how Gene Environment (G X E) Interactions determine the cell circuits in the lung of Western Pennsylvania miners during the current black lung epidemic.

A Clinical Indications Predictions (CLIP) Scale for Human Mesenchymal Stem Cells. Application written in response to PA-18-935: Urgent Competitive Revision to Existing NIH Grants (NOT-HL-20-757). Luis A. Ortiz Direct Budget \$158,458 with a 3-calendar month effort budgeted.

The Safety and Efficacy of Multiple Doses of Mesenchymal Stromal Cells in Patients with Severe COVID-19 Related Acute Respiratory Distress Syndrome, has been submitted to DOD via eBrap. Full application expected June 22, 2020. This is a multicenter (University of Minnesota, Tulane Medical School, University of Pittsburgh) clinical trial in response to PRMPR funding opportunity **W81XWH** destined to support COVID 19 related clinical trials. Luis A. Ortiz is PI. Effort is 40% (4 calendar months). Received a score of 2 by DOD study section.

1 R61/R33 HL147851-01 Mesenchymal Stromal Cells for Idiopathic Pulmonary Fibrosis -Phase I trial. Luis A. Ortiz is PI. Priority score of 20. Considering resubmission

1 R01 ES030047-01 Improving animal models to implement Stem Cell-Based Regenerative Medicine in environmentally induced lung fibrosis (silicosis). Received a 40% priority. Considering resubmission.

Past Grant Support:

09/01/12 -06/30/18	NHLBI 1R01HL114795-01: RV/PA recoupling by bone marrow derived mesenchymal stem cells. Luis A. Ortiz, Principal Investigator.
07/01/13-06/30/18	NHLBI RO1 HL110344-01A1: Mesenchymal stem cell secretome in lung fibrosis: mitochondrial transfer and micro RNA shuttle. Luis A. Ortiz, Principal Investigator.
11/01/11-06/30/16	NHLBI 5UO1 HL108713: Allogeneic human mesenchymal stem cells for the treatment of acute lung injury. Michael Matthay is Principal Investigator. Luis A. Ortiz is Co-Investigator (0.6 cal 5% effort) at the University of Pittsburgh Site.
08/28/14-08/28/15	3R01HL114795-03S1: RV/PA recoupling by bone marrow derived mesenchymal stem cells. Luis A. Ortiz, Principal Investigator.

- 07/01/01-06/30/13 National Institutes of Environmental Sciences R01ES010859, Silicainduced TNF-alpha signal transduction. Luis A. Ortiz Principal Investigator.
- 04/21/09-02/28/13 3R01ES010859-08S1. Minority Supplement on support of Dr. Joel Njah. Luis A. Ortiz sponsor.
- 07/01/05-06/30/09 National Institutes of Health RO1 HL071953. Mesenchymal stem cells in the treatment of lung injury. Luis A. Ortiz, Principal Investigator.
- 07/01/05-06/30/09 National Institutes of Health 5R01OH008282. Lung Oxidative Stress/Inflammation By Carbon Nanotubes. Valerian E. Kagan Principal Investigator.
- 07/01/04-06/30/06 American Hearth Association of PA (grant # is 0425536U). Mesenchymal Stem Cells in Pulmonary Fibrosis. Post-Doctoral training grant. \$37,000/year. Federica Gambelli is Principal Investigator. Luis A. Ortiz is Dr. Gambelli's mentor.
- 07/1/02-06/30/07 National Institutes of Health RO1. TFG-β in interstitial lung disease. Arnold, R. Brody Principal Investigator. Luis A. Ortiz is Co-Investigator (10% effort). Grant participation concluded after moving to University of Pittsburgh (July, 2002).
- 12/1/01-11/30/06 Louisiana State Board of Reagents. Environmental respiratory research center. \$660,000/year 1 direct cost. Luis A. Ortiz is principal Investigator for project 3 (20% effort). Grant participation concluded after moving to University of Pittsburgh (July, 2002)
- 12/1/01-06/30/02 General Clinical Research Center Tulane-LSU, New Orleans, Louisiana. The Effects of TNF Inhibitor on Rheumatoid Arthritis-Induced Pulmonary Fibrosis. Luis A. Ortiz Principal Investigator.
- 7/1/96-6/30/01 National Institutes of Health. 1 KO8, Apoptosis in Pulmonary fibrosis \$427,100 direct costs (Principal Investigator, Luis A. Ortiz)
- 7/1/97-6/30/98 American Lung Association/ Louisiana chapter.
 Anti inflammatory cytokines in bleomycin induced pulmonary fibrosis
 \$4,500 direct costs. Luis A. Ortiz mentor for Principal Investigator, David Pham.
- 7/1/96-6/30/98 U.S. Bioscience. Effect of Ethyol on Bleomycin Induced Lung Injury in Mice. \$5,000 direct costs, Luis A. Ortiz Principal Investigator.

7/1/96-6/30/98 General Clinical Research Center Tulane-LSU, New Orleans, Louisiana Lupus Pneumonitis: A Role for Alveolar Macrophages and Stress Proteins. Luis A. Ortiz Principal Investigator

Current and Past Affiliations with Industry

Chair, Data Monitoring Committee (DMC). Fibrogen, placebo-controlled Phase 2 of FG-3019 (anti-CTGF) in Idiopathic Pulmonary Fibrosis (ClinicalTrials.gov Identifier: NCT01890265)

Editorial Positions:

Editorial Boards

Cytotheraphy. Associate Editor 2019-Present American Journal of Physiology: Lung Cell Molecular Physiology Editorial Board, Tenure concluded in 2014 ISRN Pulmonology Tenure concluded 2016

Manuscript Reviewer:

American Journal of Pathology American Journal of Physiology: Lung Cell Molecular Physiology American Journal of Respiratory and Critical Care Medicine American Journal of Respiratory Cell and Molecular Biology **Biochemical Pharmacology** Cell Stem Cell Chest Experimental Lung Research European Respiratory Journal Genetherapy Journal of Clinical Investigation Journal of Pharmacology and Experimental Therapeutics International Archives of Allergy and Immunology Peptide Proceedings National Academy of Sciences USA The Journal of Immunology Toxicology and Applied Pharmacology

Grant Reviewer for:

Member NHLBI Mentored Clinician and Basic Science Review Committee Member of the NIH Lung Injury and Repair Study Section (2003-2007) California Tobacco Related Disease Research Program Louisiana Thoracic Society Colciencias (Colombia NIH) Burroughs Welcome Trust Fund (England) American Thoracic Society Raine Medical Research Foundation, Western Australia Agence Nationale De La Recherche (France) Pulmonary Fibrosis Foundation (standing member)

Service on the Committees:

University of Pittsburgh

Graduate School of Public Health Council	2010-2012	
Promotion and Appointment Committee, University of Pittsburgh	2002-2017	
Residency Advisory Committee, Occupational and Environmental	2002-2010	
Medicine Residency Program, University of Pittsburgh		
MPH/MS Committee, Department of Environmental and	2003-2010	
Occupational Health, Graduate School of Public Health,		
University of Pittsburgh		

Tulane University

Department of Biochemistry: Internal review committee	1994-1996
Sub-committee on Molecular Biology course first year students	1995-1996
Radiation Safety committee. Tulane University Medical Center	1996-2002
Transfusion committee. Tulane Medical Center	1997-2000
Continuing Medical Education Committee. Lakeside Hospital	1997-2000
Grievance committee. Tulane University Medical Center	1998-2002
Institutional Review Board (IRB). Tulane University Medical Cen	ter 2000-2002
Personnel and Honors Committee. Tulane University Medical Cen	nter 2001-2002