



## Roham Zamanian

Associate Professor of Medicine (Pulmonary and Critical Care Medicine) at the Stanford University Medical Center

Medicine - Pulmonary, Allergy & Critical Care Medicine

### CLINICAL OFFICES

- **Pulmonary and Critical Care**

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### Bio

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#### BIO

Dr. Roham Zamanian specializes in the treatment of pulmonary hypertension, right heart failure, and pulmonary embolism. He has more than 13 years of sub-specialty experience in pulmonary vascular diseases. Dr. Zamanian is considered one of the leading national experts in clinical trials and drug development for pulmonary hypertension.

#### CLINICAL FOCUS

- Pulmonary Hypertension
- pulmonary vascular diseases
- pulmonary embolism
- right heart failure
- Pulmonology (Lung) and Critical Care
- Pulmonary Disease

#### ACADEMIC APPOINTMENTS

- Associate Professor - Med Center Line, Medicine - Pulmonary, Allergy & Critical Care Medicine

#### ADMINISTRATIVE APPOINTMENTS

- Director, Adult Pulmonary Hypertension Service, Vera Moulton Wall Center for Pulmonary Vascular Disease, (2007- present)
- Clinical Director, VMWC Pulmonary Hypertension Database, Vera Moulton Wall Center for Pulmonary Vascular Disease, (2006- present)

#### HONORS AND AWARDS

- Howard Huges Summer Fellowship, Harvard School of Medicine (1992 & 1993)
- Ralph Waldo Gerard Award for Outstanding Researcher, University of California, Irvine School of Biological Sciences (1994)
- Excellence in Research Award, University of California, Irvine School of Biological Sciences (1995)
- Case Presentation Award, ACCP - Chest 2000 (2000)

- Resident Research Presentation Award, Univ of Calif, Irvine Medical Center - Dept of Medicine (2001)
- Fellow of the Year, Univ of California, Irvine Medical Center (2002-2003)
- Young Investigator Career Development Award, Entelligence Actelion Young Investigators Program (2006-2007)
- Faculty Teaching Award, Dept of Medicine, Stanford (2007)
- Fellow of the American College of Chest Physicians, American College of Chest Physicians (2008)

## **BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS**

- Scientific Advisory Board, PHaware (2016 - present)

## **PROFESSIONAL EDUCATION**

- Fellowship: Stanford University Pulmonary and Critical Care Fellowship (2006) CA
- Medical Education: UC Irvine School of Medicine (1999) CA
- Board Certification: Pulmonary Disease, American Board of Internal Medicine (2006)
- Fellowship: Stanford University School of Medicine (2005) CA
- Fellowship: University of Irvine Medical Center (2003) CA
- Residency: University of Irvine Medical Center (2002) CA
- Internship: University of Irvine Medical Center (2000) CA
- Super-Fellowship, Stanford University , Pulmonary Vascular Disease (2006)
- Fellowship, Stanford University , Pulmonary & Critical Care (2005)
- Fellowship, UCI Medical Center , Pulmonary & Critical Care (2003)
- Residency, UCI Medical Center , Internal Medicine (2002)
- MD, University of California, Irvine , Medicine (1999)
- BS, University of California, Irvine , Biological Sciences (1994)

## **COMMUNITY AND INTERNATIONAL WORK**

- Blue Lips Foundation
- PHaware
- Member PHA Scientific Leadership Council

## **PATENTS**

- Edda Spiekerkoetter, Marlene Rabinovitch, Roham Zamanian. "United States FK506 for treatment of PAH", Leland Stanford Junior University

## **LINKS**

- Wall Center for Pulmonary Vascular Disease: <http://wallcenter.stanford.edu>
- Pulmonary & Critical Care Medicine: <http://med.stanford.edu/pulmonary.html>
- PHaware Advisory Board: <http://www.phaware.global/>

## **Research & Scholarship**

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### **CURRENT RESEARCH AND SCHOLARLY INTERESTS**

1. Development and evaluation of prognostic and diagnostic integral biomarkers in PAH.
2. Prevalence and Treatment of Insulin Resistance in PAH.

3. Role of inflammation and proteomic signature in PAH
4. Development of novel therapeutics (bench to bedside) including FK506 & Elastase Inhibition in PAH.
5. Assessment of Vasoreactivity (gain and loss) in pulmonary arterial hypertension
6. Assessment of microvascular function in PAH.

## CLINICAL TRIALS

- A Study of Ubenimex in Patients With Pulmonary Arterial Hypertension (WHO Group 1), Recruiting
- Beraprost-314d Added-on to Tyvaso® (BEAT), Recruiting
- OPsumit USers Registry, Recruiting
- U.S. CTEPH Registry, Recruiting
- Rituximab for Treatment of Systemic Sclerosis-Associated Pulmonary Arterial Hypertension (SSc-PAH), Not Recruiting

## Publications

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### PUBLICATIONS

- **Discovery of Distinct Immune Phenotypes Using Machine Learning in Pulmonary Arterial Hypertension** *CIRCULATION RESEARCH*  
Sweatt, A. J., Hedlin, H. K., Balasubramanian, V., Hsi, A., Blum, L. K., Robinson, W. H., Haddad, F., Hickey, P. M., Condliffe, R., Lawrie, A., Nicolls, M. R., Rabinovitch, M., Khatri, et al  
2019; 124 (6): 904–19
- **Discovery of Distinct Immune Phenotypes Using Machine Learning in Pulmonary Arterial Hypertension.** *Circulation research*  
Sweatt, A. J., Hedlin, H. K., Balasubramanian, V., Hsi, A., Blum, L. K., Robinson, W. H., Haddad, F., Hickey, P. M., Condliffe, R. A., Lawrie, A., Nicolls, M. R., Rabinovitch, M., Khatri, et al  
2019
- **Clinical trial design and new therapies for pulmonary arterial hypertension.** *The European respiratory journal*  
Sitbon, O., Gomberg-Maitland, M., Granton, J., Lewis, M. I., Mathai, S. C., Rainisio, M., Stockbridge, N. L., Wilkins, M. R., Zamanian, R. T., Rubin, L. J.  
2018
- **Bone Morphogenetic Protein 9 is a Mechanistic Biomarker of Portopulmonary Hypertension.** *American journal of respiratory and critical care medicine*  
Nikolic, I., Yung, L., Yang, P., Malhotra, R., Paskin-Flerlage, S. D., Dinter, T., Bocobo, G. A., Tumelty, K. E., Faugno, A. J., Troncone, L., McNeil, M. E., Huang, X., Coser, et al  
2018
- **Psychometric Validation of the Pulmonary Arterial Hypertension- Symptoms and Impact (PAH-SYMPACT) Questionnaire Results of the SYMPHONY Trial** *CHEST*  
Chin, K. M., Gomberg-Maitland, M., Channick, R. N., Cuttica, M. J., Fischer, A., Frantz, R. P., Hunsche, E., Kleinman, L., McConnell, J. W., McLaughlin, V. V., Miller, C. E., Zamanian, R. T., Zastrow, et al  
2018; 154 (4): 848–61
- **Challenges in Pulmonary Hypertension: Controversies in Treating the Tip of the Iceberg A Joint National Institutes of Health Clinical Center and Pulmonary Hypertension Association Symposium Report** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Elinoff, J. M., Agarwal, R., Barnett, C. F., Benza, R. L., Cuttica, M. J., Gharib, A. M., Gray, M. P., Hassoun, P. M., Hemnes, A. R., Humbert, M., Kolb, T. M., Lahm, T., Leopold, et al  
2018; 198 (2): 166–74
- **The Role of Neutrophils and Neutrophil Elastase in Pulmonary Arterial Hypertension.** *Frontiers in medicine*  
Taylor, S., Dirir, O., Zamanian, R. T., Rabinovitch, M., Thompson, A. A.  
2018; 5: 217

- **Randomised placebo-controlled safety and tolerability trial of FK506 (tacrolimus) for pulmonary arterial hypertension** *EUROPEAN RESPIRATORY JOURNAL*  
Spiekerkoetter, E., Sung, Y. K., Sudheendra, D., Scott, V., Del Rosario, P., Bill, M., Haddad, F., Long-Boyle, J., Hedlin, H., Zamanian, R. T.  
2017; 50 (3)
- **antagonism ameliorates experimental lymphedema.** *Science translational medicine*  
Tian, W., Rockson, S. G., Jiang, X., Kim, J., Begaye, A., Shuffle, E. M., Tu, A. B., Cribb, M., Nepiyushchikh, Z., Feroze, A. H., Zamanian, R. T., Dhillon, G. S., Voelkel, et al  
2017; 9 (389)
- **Leukotriene B-4 antagonism ameliorates experimental lymphedema** *SCIENCE TRANSLATIONAL MEDICINE*  
Tian, W., Rockson, S. G., Jiang, X., Kim, J., Begaye, A., Shuffle, E. M., Tu, A. B., Cribb, M., Nepiyushchikh, Z., Feroze, A. H., Zamanian, R. T., Dhillon, G. S., Voelkel, et al  
2017; 9 (389)
- **REDUCED CARBOXYLESTERASE 1 IS ASSOCIATED WITH ENDOTHELIAL INJURY IN METHAMPHETAMINE INDUCED PULMONARY ARTERIAL HYPERTENSION.** *American journal of physiology. Lung cellular and molecular physiology*  
Orcholski, M. E., Khurshudyan, A., Shamskhov, E. A., Yuan, K., Chen, I. Y., Kodani, S. D., Morisseau, C., Hammock, B. D., Hong, E. M., Alexandrova, L., Alastalo, T., Berry, G., Zamanian, et al  
2017: ajplung 00453 2016-?
- **Features and Outcomes of Methamphetamine Associated Pulmonary Arterial Hypertension.** *American journal of respiratory and critical care medicine*  
Zamanian, R. T., Hedlin, H., Greuenwald, P., Wilson, D. M., Segal, J. I., Jordan, M., Kudelko, K., Liu, J., Hsi, A., Rupp, A., Sweatt, A. J., Tuder, R., Berry, et al  
2017
- **Utility of B-type natriuretic peptides in the assessment of patients with systemic sclerosis-associated pulmonary hypertension in the PHAROS registry.** *Clinical and experimental rheumatology*  
Chung, L., Fairchild, R. M., Furst, D. E., Li, S., Alkassab, F., Bolster, M. B., Csuka, M. E., Derk, C. T., Domsic, R. T., Fischer, A., Frech, T., Gombert-Maitland, M., Gordon, et al  
2016: -?
- **An observational study of inhaled-treprostinil respiratory-related safety in patients with pulmonary arterial hypertension.** *Pulmonary circulation*  
Zamanian, R. T., Levine, D. J., Bourge, R. C., De Souza, S. A., Rosenzweig, E. B., Alnuaimat, H., Burger, C., Mathai, S. C., Leedom, N., DeAngelis, K., Lim, A., De Marco, T.  
2016; 6 (3): 329-337
- **Association of Borderline Pulmonary Hypertension With Mortality and Hospitalization in a Large Patient Cohort: Insights From the Veterans Affairs Clinical Assessment, Reporting, and Tracking Program** *CIRCULATION*  
Maron, B. A., Hess, E., Maddox, T. M., Opotowsky, A. R., Tedford, R. J., Lahm, T., Joynt, K. E., Kass, D. J., Stephens, T., Stanislawski, M. A., Swenson, E. R., Goldstein, R. H., Leopold, et al  
2016; 133 (13): 1240-1248
- **Leukotriene B-4 Activates Pulmonary Artery Adventitial Fibroblasts in Pulmonary Hypertension** *HYPERTENSION*  
Qian, J., Tian, W., Jiang, X., Tamosiuniene, R., Sung, Y. K., Shuffle, E. M., Tu, A. B., Valenzuela, A., Jiang, S., Zamanian, R. T., Fiorentino, D. F., Voelkel, N. F., Peters-Golden, et al  
2015; 66 (6): 1227-1239
- **Ambrisentan and Tadalafil Up-front Combination Therapy in Scleroderma-associated Pulmonary Arterial Hypertension** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Hassoun, P. M., Zamanian, R. T., Damico, R., Lechtzin, N., Khair, R., Kolb, T. M., Tedford, R. J., Hulme, O. L., Houston, T., Pisanello, C., Sato, T., Pullins, E. H., Corona-Villalobos, et al  
2015; 192 (9): 1102-1110
- **RNA Sequencing Analysis Detection of a Novel Pathway of Endothelial Dysfunction in Pulmonary Arterial Hypertension** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Rhodes, C. J., Im, H., Cao, A., Hennigs, J. K., Wang, L., Sa, S., Chen, P., Nickel, N. P., Miyagawa, K., Hopper, R. K., Tojais, N. F., Li, C. G., Gu, et al  
2015; 192 (3): 356-366
- **Low-Dose FK506 (Tacrolimus) in End-Stage Pulmonary Arterial Hypertension.** *American journal of respiratory and critical care medicine*  
Spiekerkoetter, E., Sung, Y. K., Sudheendra, D., Bill, M., Aldred, M. A., van de Veerdonk, M. C., Vonk Noordegraaf, A., Long-Boyle, J., Dash, R., Yang, P. C., Lawrie, A., Swift, A. J., Rabinovitch, et al

2015; 192 (2): 254-257

- **Elafin Reverses Pulmonary Hypertension via Caveolin-1-Dependent Bone Morphogenetic Protein Signaling** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Nickel, N. P., Spiekerkoetter, E., Gu, M., Li, C. G., Li, H., Kaschwich, M., Diebold, I., Hennigs, J. K., Kim, K., Miyagawa, K., Wang, L., Cao, A., Sa, et al  
2015; 191 (11): 1273-1286
- **Right Heart Score for Predicting Outcome in Idiopathic, Familial, or Drug- and Toxin-Associated Pulmonary Arterial Hypertension** *JACC-CARDIOVASCULAR IMAGING*  
Haddad, F., Spruijt, O. A., Denault, A. Y., Mercier, O., Brunner, N., Furman, D., Fadel, E., Bogaard, H. J., Schnittger, I., Vrtovec, B., Wu, J. C., Perez, V. D., Vonk-Noordegraaf, et al  
2015; 8 (6): 627-638
- **Right Heart Score for Predicting Outcome in Idiopathic, Familial, or Drug- and Toxin-Associated Pulmonary Arterial Hypertension.** *JACC. Cardiovascular imaging*  
Haddad, F., Spruijt, O. A., Denault, A. Y., Mercier, O., Brunner, N., Furman, D., Fadel, E., Bogaard, H. J., Schnittger, I., Vrtovec, B., Wu, J. C., de Jesus Perez, V., Vonk-Noordegraaf, et al  
2015; 8 (6): 627-638
- **Single- vs double-lung transplantation in patients with chronic obstructive pulmonary disease and idiopathic pulmonary fibrosis since the implementation of lung allocation based on medical need.** *JAMA*  
Schaffer, J. M., Singh, S. K., Reitz, B. A., Zamanian, R. T., Mallidi, H. R.  
2015; 313 (9): 936-948
- **Unique predictors of mortality in patients with pulmonary arterial hypertension associated with systemic sclerosis in the REVEAL registry.** *Chest*  
Chung, L., Farber, H. W., Benza, R., Miller, D. P., Parsons, L., Hassoun, P. M., McGoon, M., Nicolls, M. R., Zamanian, R. T.  
2014; 146 (6): 1494-1504
- **Impact of insulin resistance on ventricular function in pulmonary arterial hypertension.** *journal of heart and lung transplantation*  
Brunner, N. W., Skhiri, M., Fortenko, O., Hsi, A., Haddad, F., Khazeni, N., Zamanian, R. T.  
2014; 33 (7): 721-726
- **Current Clinical Management of Pulmonary Arterial Hypertension** *CIRCULATION RESEARCH*  
Zamanian, R. T., Kudelko, K. T., Sung, Y. K., Perez, V. D., Liu, J., Spiekerkoetter, E.  
2014; 115 (1): 131-147
- **Whole-Exome Sequencing Reveals TopBP1 as a Novel Gene in Idiopathic Pulmonary Arterial Hypertension** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Perez, V. A., Yuan, K., Lyuksyutova, M. A., Dewey, F., Orcholski, M. E., Shuffle, E. M., Mathur, M., Yancy, L., Rojas, V., Li, C. G., Cao, A., Alastalo, T., Khazeni, et al  
2014; 189 (10): 1260-1272
- **Blocking Macrophage Leukotriene B-4 Prevents Endothelial Injury and Reverses Pulmonary Hypertension** *SCIENCE TRANSLATIONAL MEDICINE*  
Tian, W., Jiang, X., Tamosiuniene, R., Sung, Y. K., Qian, J., Dhillon, G., Gera, L., Farkas, L., Rabinovitch, M., Zamanian, R. T., Inayathullah, M., Fridlib, M., Rajadas, et al  
2013; 5 (200)
- **Blocking macrophage leukotriene b4 prevents endothelial injury and reverses pulmonary hypertension.** *Science translational medicine*  
Tian, W., Jiang, X., Tamosiuniene, R., Sung, Y. K., Qian, J., Dhillon, G., Gera, L., Farkas, L., Rabinovitch, M., Zamanian, R. T., Inayathullah, M., Fridlib, M., Rajadas, et al  
2013; 5 (200): 200ra117-?
- **Functional Class Improvement and 3-Year Survival Outcomes in Patients With Pulmonary Arterial Hypertension in the REVEAL Registry** *CHEST*  
Barst, R. J., Chung, L., Zamanian, R. T., Turner, M., Mcgoon, M. D.  
2013; 144 (1): 160-168
- **Transplantation for Idiopathic Pulmonary Arterial Hypertension Improvement in the Lung Allocation Score Era** *CIRCULATION*  
Schaffer, J. M., Singh, S. K., Joyce, D. L., Reitz, B. A., Robbins, R. C., Zamanian, R. T., Mallidi, H. R.  
2013; 127 (25): 2503-2513
- **Safety and Efficacy of Transition from Systemic Prostanoids to Inhaled Treprostinil in Pulmonary Arterial Hypertension** *AMERICAN JOURNAL OF CARDIOLOGY*

- Perez, V. A., Rosenzweig, E., Rubin, L. J., Poch, D., Bajwa, A., Park, M., Jain, M., Bourge, R. C., Kudelko, K., Spiekerkoetter, E., Liu, J., Hsi, A., Zamanian, et al  
2012; 110 (10): 1546-1550
- **Characteristics and Outcome After Hospitalization for Acute Right Heart Failure in Patients With Pulmonary Arterial Hypertension** *CIRCULATION-HEART FAILURE*  
Haddad, F., Peterson, T., Fuh, E., Kudelko, K. T., Perez, V. D., Skhiri, M., Vagelos, R., Schnittger, I., Denault, A. Y., Rosenthal, D. N., Doyle, R. L., Zamanian, R. T.  
2011; 4 (6): 692-699
  - **Incidence, Correlates, and Consequences of Acute Kidney Injury in Patients With Pulmonary Arterial Hypertension Hospitalized With Acute Right-Side Heart Failure** *JOURNAL OF CARDIAC FAILURE*  
Haddad, F., Fuh, E., Peterson, T., Skhiri, M., Kudelko, K. T., Perez, V. D., Winkelmayr, W. C., Doyle, R. L., Chertow, G. M., Zamanian, R. T.  
2011; 17 (7): 533-539
  - **Chronic Thromboembolic Pulmonary Hypertension** *NEW ENGLAND JOURNAL OF MEDICINE*  
Perez, V. A., Zamanian, R. T.  
2011; 364 (17): 1677-1677
  - **Characterization of Connective Tissue Disease-Associated Pulmonary Arterial Hypertension From REVEAL Identifying Systemic Sclerosis as a Unique Phenotype** *CHEST*  
Chung, L., Liu, J., Parsons, L., Hassoun, P. M., McGoon, M., Badesch, D. B., Miller, D. P., Nicolls, M. R., Zamanian, R. T.  
2010; 138 (6): 1383-1394
  - **Worldwide Physician Education and Training in Pulmonary Hypertension Pulmonary Vascular Disease: The Global Perspective** *CHEST*  
Elliott, C. G., Barst, R. J., Seeger, W., Porres-Aguilar, M., Brown, L. M., Zamanian, R. T., Rubin, L. J.  
2010; 137 (6): 85S-94S
  - **PPAR gamma Activation: A Potential Treatment for Pulmonary Hypertension** *SCIENCE TRANSLATIONAL MEDICINE*  
Hansmann, G., Zamanian, R. T.  
2009; 1 (12)
  - **Insulin resistance in pulmonary arterial hypertension** *EUROPEAN RESPIRATORY JOURNAL*  
Zamanian, R. T., Hansmann, G., Snook, S., Lilienfeld, D., Rappaport, K. M., Reaven, G. M., RABINOVITCH, M., Doyle, R. L.  
2009; 33 (2): 318-324
  - **Surrogate and combined end points in pulmonary arterial hypertension.** *Proceedings of the American Thoracic Society*  
Ventetuolo, C. E., Benza, R. L., Peacock, A. J., Zamanian, R. T., Badesch, D. B., Kawut, S. M.  
2008; 5 (5): 617-622
  - **Management strategies for patients with pulmonary hypertension in the intensive care unit** *CRITICAL CARE MEDICINE*  
Zamanian, R. T., Haddad, F., Doyle, R. L., Weinacker, A. B.  
2007; 35 (9): 2037-2050
  - **ANATOMIC, GENETIC AND FUNCTIONAL PROPERTIES OF THE RETINAL CIRCULATION IN PULMONARY HYPERTENSION** *Pulmonary Circulation*  
Nickel, N. P., Shamskhov, E. A., Razeen, M., Condon, D., Messentier, L., Dubra, A., Liao, Y., Zamanian, R. T., Yuan, K., de Jesus Perez, V. A.  
2020
  - **Low-grade albuminuria in pulmonary arterial hypertension** *PULMONARY CIRCULATION*  
Nickel, N. P., Perez, V., Zamanian, R. T., Fessel, J. P., Cogan, J. D., Hamid, R., West, J. D., de Caestecker, M. P., Yang, H., Austin, E. D.  
2019; 9 (2)
  - **Bone Morphogenetic Protein 9 Is a Mechanistic Biomarker of Portopulmonary Hypertension** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Nikolic, I., Yung, L., Yang, P., Malhotra, R., Paskin-Flerlage, S. D., Dinter, T., Bocobo, G. A., Tumelty, K. E., Faugno, A. J., Troncone, L., McNeil, M. E., Huang, X., Coser, et al  
2019; 199 (7): 891-902
  - **Methamphetamine use association with pulmonary diseases: a retrospective investigation of hospital discharges in California from 2005 to 2011** *European Respiratory Journal Open Research*  
Tsai, H., Lee, J., Hedlin, H., Zamanian, R., de Jesus Perez, V.

2019

- **Outcomes of women with primary and secondary pulmonary hypertension during pregnancy**  
Blumenfeld, Y. J., Girsan, A. I., Druzin, M. L., Lyell, D. J., Bianco, K. Y., Herrero, T., Bentley, J., Seckel, E., Zamanian, R. T., El-Sayed, Y. Y.  
MOSBY-ELSEVIER.2019: S405
- **EXPRESS: Low-Grade Albuminuria in Pulmonary Arterial Hypertension.** *Pulmonary circulation*  
Nickel, N., Perez, V. i., Fessel, J. P., Cogan, J., Hamid, R., West, J. D., de Caestecker, M., Yang, H., Zamanian, R. T., Austin, E.  
2019: 2045894018824564
- **EXPRESS: Myocardial Bridge - An Unrecognized Cause of Chest Pain in Pulmonary Arterial Hypertension.** *Pulmonary circulation*  
Rajmohan, D., Sung, Y. K., Kudelko, K., Perez, V. i., Haddad, F., Tremmel, J., Schnittger, I., Zamanian, R. T., Spiekerkoetter, E. F.  
2019: 2045894019860738
- **Prevention of Deep Vein Thrombosis and Pulmonary Embolism in High-Risk Medical Patients** *CLINICS IN CHEST MEDICINE*  
McCullough, M., Kholdani, C., Zamanian, R. T.  
2018; 39 (3): 483-+
- **Exome data clouds the pathogenicity of genetic variants in Pulmonary Arterial Hypertension** *MOLECULAR GENETICS & GENOMIC MEDICINE*  
Abbasi, Y., Jabbari, J., Jabbari, R., Glinge, C., Izadyar, S., Spiekerkoetter, E., Zamanian, R. T., Carlsen, J., Tfelt-Hansen, J.  
2018; 6 (5): 835-44
- **The Role of Neutrophils and Neutrophil Elastase in Pulmonary Arterial Hypertension** *FRONTIERS IN MEDICINE*  
Taylor, S., Dirir, O., Zamanian, R. T., Rabinovitch, M., Thompson, A.  
2018; 5
- **Reply: Can treprostinil-induced early gastrointestinal side effects serve as predictors of pulmonary arterial hypertension prognosis?** *INTERNATIONAL JOURNAL OF CARDIOLOGY*  
Leary, P. J., Kolb, T. M., Maron, B. A., Tedford, R. J., Zamanian, R. T.  
2018; 264: 188
- **H2 Receptor Antagonist Use and Mortality in Pulmonary Hypertension: Insight from the VA-CART Program** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Leary, P. J., Hess, E., Baron, A. E., Branch, K. R., Choudhary, G., Hough, C. L., Maron, B. A., Ralph, D. D., Ryan, J. J., Tedford, R. J., Weiss, N. S., Zamanian, R. T., Lahm, et al  
2018; 197 (12): 1638-41
- **Endothelial nitric oxide synthase genotype is associated with pulmonary hypertension severity in left heart failure patients** *PULMONARY CIRCULATION*  
Duarte, J. D., Kansal, M., Desai, A. A., Riden, K., Arwood, M. J., Yacob, A. A., Stamos, T. D., Cavallari, L. H., Zamanian, R. T., Shah, S. J., Machado, R. F.  
2018; 8 (2): 2045894018773049
- **Circulating plasmablasts are elevated and produce pathogenic anti-endothelial cell autoantibodies in idiopathic pulmonary arterial hypertension** *EUROPEAN JOURNAL OF IMMUNOLOGY*  
Blum, L. K., Cao, R. L., Sweatt, A. J., Bill, M., Lahey, L. J., Hsi, A. C., Lee, C. S., Kongpachith, S., Ju, C., Mao, R., Wong, H. H., Nicolls, M. R., Zamanian, et al  
2018; 48 (5): 874-84
- **The impact of ambrisentan and tadalafil upfront combination therapy on cardiac function in scleroderma associated pulmonary arterial hypertension patients: cardiac magnetic resonance feature tracking study** *PULMONARY CIRCULATION*  
Sato, T., Ambale-Venkatesh, B., Lima, J. C., Zimmerman, S. L., Tedford, R. J., Fujii, T., Hulme, O. L., Pullins, E. H., Corona-Villalobos, C. P., Zamanian, R. T., Minai, O. A., Girgis, R. E., Chin, et al  
2018; 8 (1): 2045893217748307
- **Improvement in Right Ventricular Strain with Ambrisentan and Tadalafil Upfront Therapy in Scleroderma-associated Pulmonary Arterial Hypertension** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*  
Mercurio, V., Mukherjee, M., Tedford, R. J., Zamanian, R. T., Khair, R. M., Sato, T., Minai, O. A., Torres, F., Girgis, R. E., Chin, K., Damico, R., Kolb, T. M., Mathai, et al  
2018; 197 (3): 388-91
- **EXPRESS: Non-invasive Right Ventricular Load Adaptability Indices in Patients with Scleroderma-Associated Pulmonary Arterial Hypertension.** *Pulmonary circulation*  
French, S., Amsallem, M., Ouazani, N., Li, S., Kudelko, K., Zamanian, R., Haddad, F., Chung, L.

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