

# Stanford

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## Andrew Sweatt

Clinical Assistant Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine

### CLINICAL OFFICES

- **Critical Care Medicine**

300 Pasteur Dr Rm H2143

MC 5236

Stanford, CA 94305

**Tel** (650) 723-6381

**Fax** (650) 725-5489

### Bio

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### BIO

Dr. Sweatt is board certified in internal medicine, pulmonary diseases, and critical care medicine. He sub-specializes in the evaluation and treatment of pulmonary hypertension. He recently completed his subspecialty fellowship training in 2016, and thereafter joined the multidisciplinary pulmonary hypertension team at Stanford University as a clinician and translational researcher. He sees patients at the main Stanford University campus and East Bay site in Emeryville.

### CLINICAL FOCUS

- Pulmonary Hypertension
- Pulmonary Disease

### ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine

### ADMINISTRATIVE APPOINTMENTS

- Stanford East Bay Pulmonary Hypertension Clinic Site Physician, Stanford Health Care, (2017- present)

### HONORS AND AWARDS

- Research Support, NIH/NHLBI K12 Career Development Program in 'Omics' of Lung Diseases (2016- Present)
- Research Support, Blue Lips Foundation- Early Detection of Pulmonary Arterial Hypertension (2016- Present)
- Chief Fellow, Stanford University- Pulmonary and Critical Care Medicine Fellowship Program (2015-2016)
- Presidential Poster and Fellow-In-Training Awards, American College of Gastroenterology (2015)
- Resident Travel Award, American Thoracic Society (2012)
- Resident Teaching Award, University of Colorado Internal Medicine (2012)
- Colorado Governor's Presentation Selection, American College of Physicians (2011)
- Student Research Award, Society of Toxicology (2004)
- Team Captain, University of Connecticut Mens' Varsity Tennis Team (2004)

- New England and Nutmeg Scholar, University of Connecticut (2003-2004)
- University Scholar Program Participant, University of Connecticut (2003-2004)
- Director of Athletics Scholar-Athlete Award, University of Connecticut (2002-2004)
- Altshuler Family Scholarship, University of Connecticut (2002)
- Academic Merit Annual Award, University of Connecticut School of Engineering (2002)
- Academic-Athlete All-Star Team, Big East Conference (2001-2004)
- Magna Cum Laude with Honors Degree Distinction, University of Connecticut (2004)
- Salutatorian, Galena High School- Reno, NV (2000)
- Finalist, Wendy's High School Heisman Scholar Athlete Award (2000)
- Nationally ranked junior tennis player and Nevada High School Individual State Champion, United States Tennis Association (1998-2000)

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

- Member, American College of Chest Physicians (2014 - present)
- Member, American Thoracic Society (2011 - present)
- Representative, University of Colorado Housestaff Association (2011 - 2012)
- Member and Key Advocate, American College of Physicians (2010 - 2013)
- Member and Advocate, Physicians for Human Rights (2006 - 2009)
- Student Representative, Georgetown University School of Medicine Social Justice Committee (2006 - 2009)
- Member, American Medical Association (2005 - 2009)
- Member, Tau Beta Pi- international engineering honor society (2002 - 2005)
- Member, Eta Kappa Nu- international engineering honor society (2002 - 2005)
- Team Representative, University of Connecticut Student Athlete Advisory Council (2001 - 2004)

### **PROFESSIONAL EDUCATION**

- Medical Education: Georgetown University School of Medicine Registrar (2009) DC
- Fellowship: Stanford University Pulmonary and Critical Care Fellowship CA
- Board Certification: Critical Care Medicine, American Board of Internal Medicine (2016)
- Board Certification: Internal Medicine, American Board of Internal Medicine (2012)
- Residency: University of Colorado Internal Medicine Residency (2012) CO
- Board Certification: Pulmonary Disease, American Board of Internal Medicine (2015)
- Bachelor of Science, University of Connecticut School of Engineering , Major- Biomedical Engineering (Chemical Engineering focus) Minor- Biotechnology (2004)
- Board Certification, Critical Care Medicine , American Board of Internal Medicine (2017)

## **Research & Scholarship**

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

Dr. Sweatt currently participates in the NIH/NHLBI K12 Career Development Program in 'Omics' of Lung Diseases. The focus of his ongoing research is to characterize novel immunophenotypes in pulmonary arterial hypertension (PAH), by employing informatics-based methods to delineate peripheral blood proteomic and transcriptomic signatures. A move beyond the traditional PAH classification scheme, this multimodal deep phenotyping approach may have the potential to provide new mechanistic insights, help explain heterogeneity in observed clinical outcomes, and someday identify patients who are more likely to benefit from targeted immunomodulatory therapy.

Dr. Sweatt has also recently been involved in multiple other pulmonary hypertension clinical research projects. In the first study of patients with serial acute vasodilator testing, he showed that changes in vasoreactivity status occur during PAH treatment. He demonstrated that the evolution of vasoreactivity status reflects alterations in static and pulsatile hemodynamic responses to inhaled nitric oxide, tracks with well-established clinical end-points, and could inform clinical decision-making. Furthermore, he has been a collaborator in pulmonary hypertension studies that have evaluated change in diffusion capacity of the lung for carbon monoxide as a prognostic biomarker, explored the relationship between insulin resistance and right ventricular function, investigated the peripheral tissue oxygenation response to vasodilator therapy, and evaluated the prognostic value of a novel right ventricular echocardiographic parameter.

## Publications

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### PUBLICATIONS

- **Genetic Admixture and Survival in Diverse Populations with Pulmonary Arterial Hypertension.** *American journal of respiratory and critical care medicine*  
Karnes, J. H., Wiener, H. W., Schwantes-An, T. H., Natarajan, B., Sweatt, A. J., Chaturvedi, A., Arora, A., Batai, K., Nair, V., Steiner, H. E., Giles, J. B., Yu, J., Hosseini, et al  
2020
- **Mural Cell SDF1 Signaling is Associated with the Pathogenesis of Pulmonary Arterial Hypertension.** *American journal of respiratory cell and molecular biology*  
Yuan, K., Liu, Y., Zhang, Y., Nathan, A., Tian, W., Yu, J., Sweatt, A. J., Condon, D., Chakraborty, A., Agarwal, S., Auer, N., Zhang, S., Wu, et al  
2020
- **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
- **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. R., Sweatt, A. J., Bill, M., Lahey, L. J., Hsi, A. C., Lee, C. S., Kongpachith, S., Ju, C. H., Mao, R., Wong, H. H., Nicolls, M. R., Zamanian, et al  
2018
- **Right Heart End-Systolic Remodeling Index Strongly Predicts Outcomes in Pulmonary Arterial Hypertension: Comparison With Validated Models.** *Circulation. Cardiovascular imaging*  
Amsellem, M., Sweatt, A. J., Aymami, M. C., Kuznetsova, T., Selej, M., Lu, H., Mercier, O., Fadel, E., Schnittger, I., McConnell, M. V., Rabinovitch, M., Zamanian, R. T., Haddad, et al  
2017; 10 (6)
- **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., Jorden, M., Kudelko, K., Liu, J., Hsi, A., Rupp, A., Sweatt, A. J., Tuder, R., Berry, et al  
2017
- **Serial Vasoreactivity Reassessment is a Prognostic Tool in Pulmonary Arterial Hypertension** *American Journal of Respiratory and Critical Care Medicine*  
Sweatt, A., Spiekerkoetter, E., Hsi, A., Sung, Y., De Jesus Perez, V., Kudelko, K., Zamanian, R.  
2016; 193: A6464
- **Interventional pulmonologist perspective: treatment of malignant pleural effusion.** *Current treatment options in oncology*  
Sweatt, A. J., Sung, A.  
2014; 15 (4): 625-643
- **Evolving epidemiology and definitions of the acute respiratory distress syndrome and early acute lung injury.** *Clinics in chest medicine*  
Sweatt, A. J., Levitt, J. E.

2014; 35 (4): 609-624

- **Quantifying the Influence of Wedge Pressure, Age, and Heart Rate on the Systolic Thresholds for Detection of Pulmonary Hypertension.** *Journal of the American Heart Association*  
Amsallem, M., Tedford, R. J., Denault, A., Sweatt, A. J., Guihaire, J., Hedman, K., Peighambari, S., Kim, J. B., Li, X., Miller, R. J., Mercier, O., Fadel, E., Zamanian, et al  
2020: e016265
- **PROGNOSTIC VALUE OF THE RELATIVE PULMONARY PRESSURE RATIO AND ITS TRAJECTORY IN PATIENTS WITH PULMONARY ARTERIAL HYPERTENSION**  
Bagherzadeh, S. P., Amsallem, M., Denault, A., Sweatt, A., Kudelko, K., Sung, Y., Haddad, F., Zamanian, R.  
ELSEVIER SCIENCE INC.2020: 2096
- **Survival implications of pulmonary hypertension in end-stage COPD**  
Kapasi, A., Halloran, K., Hirji, A., Lien, D., Mooney, J., Raj, R., Sweatt, A., Weinkauff, J., Zamanian, R.  
EUROPEAN RESPIRATORY SOC JOURNALS LTD.2019
- **Elevated pulmonary vascular resistance is associated with increased risk of death in IPF**  
Kapasi, A., Halloran, K., Hirji, A., Lien, D., Mooney, J., Raj, R., Sweatt, A., Weinkauff, J., Zamanian, R.  
EUROPEAN RESPIRATORY SOC JOURNALS LTD.2019
- **Identification of Biomarkers Predictive of Pulmonary Arterial Hypertension in Systemic Sclerosis**  
Kolstad, K. D., Holmes, T., Rosenberg-Hasson, Y., Sweatt, A., Zamanian, R. T., Li, S., Steen, V. D., Utz, P. J., Chung, L.  
WILEY.2017
- **Kaposiform Lymphangiomatosis: An Unforeseen Cause of Spontaneous Hemothorax and Episodic Hemoptysis** *American Journal of Respiratory and Critical Care Medicine*  
Sweatt, A., Regalia, K.  
2016; 193: A3346
- **DLCO Change in Pulmonary Arterial Hypertension Reflects Vascular Function as Determined by Longitudinal Response to Inhaled Nitric Oxide** *American Journal of Respiratory and Critical Care Medicine*  
Sweatt, A., Spiekerkoetter, E., Hsi, A., Sung, Y., Kudelko, K., De Jesus Perez, V., Zamanian, R.  
2016; 193: A7320
- **Right Heart End-Systolic Remodeling Index Strongly Predicts Outcomes in Pulmonary Arterial Hypertension, Insights From a Network Analysis** *Circulation*  
Amsallem, M., Sweatt, A., Aymami, M., Kuznetsova, T., Mercier, O., Fadel, E., McConnell, M., Rabinovitch, M., Zamanian, R., Haddad, F.  
2016; 134: A18038
- **Comprehensive Characterization of Insulin Resistance and its Association with Ventricular Function in Pulmonary Hypertension** *American Journal of Respiratory and Critical Care Medicine*  
Wells, R., Sweatt, A., Cuttica, M., Dash, R., Abbasi, F., Van de Veerdonk, M., Preston, I., Hemnes, A., Gomberg-Maitland, M., Zamanian, R.  
2016; 193: A6462
- **Evaluation of Changes in Static and Pulsatile Hemodynamic Indices Across Longitudinal Vasoreactivity Tests in Pulmonary Arterial Hypertension** *American Journal of Respiratory and Critical Care Medicine*  
Sweatt, A., Spiekerkoetter, E., Hsi, A., Sung, Y., Kudelko, K., De Jesus Perez, V., Zamanian, R.  
2016; 193: A7319
- **Spastic Esophageal Motility Disorders in Post-Lung Transplant Patients** *59th Annual Aspen Lung Conference*  
Regalia, K., Sweatt, A., Chhatwani, L., Mooney, J., Dhillon, G., Nguyen, L.  
2016
- **Using Near-Infrared Spectroscopy to Characterize the Effects of Inhaled Nitric Oxide on Skeletal Muscle Oxygen Saturation in Adults with Pulmonary Arterial Hypertension** *American Journal of Respiratory and Critical Care Medicine*  
Brian, S., Kholdani, C., Sweatt, A., Hedlin, H., Hsi, A., Spiekerkoetter, E., Zamanian, R.  
2016; 193: A3961
- **High Prevalence of Gastroparesis in Post-Lung Transplant Patients and Pyloric Botox for the Prevention of Bronchiolitis Obliterans Syndrome** *American Journal of Gastroenterology*  
Regalia, K., Sweatt, A., Wang, L., Nguyen, L.

2015; 110: S1028

- **Evolving Epidemiology and Definitions of the Acute Respiratory Distress Syndrome and Early Acute Lung Injury** *CLINICS IN CHEST MEDICINE*  
Sweatt, A. J., Levitt, J. E.  
2014; 35 (4): 609-?
- **Interventional Pulmonologist Perspective: Treatment of Malignant Pleural Effusion** *CURRENT TREATMENT OPTIONS IN ONCOLOGY*  
Sweatt, A. J., Sung, A.  
2014; 15 (4): 625-643
- **A Microarray Biosensor for Multiplexed Detection of Microbes Using Grating-Coupled Surface Plasmon Resonance Imaging** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Marusov, G., Sweatt, A., Pietrosimone, K., Benson, D., Geary, S. J., Silbart, L. K., Challa, S., Lagoy, J., Lawrence, D. A., Lynes, M. A.  
2012; 46 (1): 348-359
- **The effect of plasma transfusion on oxygenation in critically ill patients with chronic liver disease** *American Journal of Respiratory and Critical Care Medicine*  
Sweatt, A., Biggins, S., Rosen, H., Clark, B., Smart, A., Moss, M., Benson, A.  
2012; 185: A1151
- **When a Pain in the Neck May Have Helped: Painless Subacute Granulomatous Thyroiditis Causing Fever of Unknown Origin** *American College of Physicians National Meeting*  
Sweatt, A., Mascolo, M.  
2012
- **A Case of Multi-Organ Langerhans Cell Histiocytosis Responsive to Tobacco Cessation** *American Journal of Respiratory and Critical Care Medicine*  
Sweatt, A., Rizeq, M., Sandberg, M.  
2012; 185: A5429
- **A dosing formula for INR-targeted plasma transfusion in bleeding patients with chronic liver disease** *American Journal of Respiratory and Critical Care Medicine*  
Sweatt, A., Moss, M., Tripputi, M., Benson, A.  
2011; 183: A5828

## PRESENTATIONS

- Is Deep Immunophenotyping on the Horizon in Pulmonary Arterial Hypertension - Proteomic and Genomic Deep Phenotyping in PAH International Symposium (May 13, 2016)
- Selected Highlights from ATS 2016- Pulmonary Circulation Assembly Journal Club Webinar - American Thoracic Society Pulmonary Circulation Assembly (8/12/2016)