

## **Why choose UAB for your Pulmonary and Critical Care training?**

### 2013 Highlights from the Division of Pulmonary, Allergy and Critical Care Medicine

Thank you for your interest in our fellowship program. These are exciting times for us and this document is meant to give you an update on some of the new initiatives and programs our division has established during the last few years.

The UAB Department of Medicine is one the largest and most diverse in the Nation. In 2012, our Department ranked 18<sup>th</sup> nationally in NIH funding and is one of the few departments in the country that saw significant growth during the last few years. Our Internal Medicine Residency Program attracts stellar candidates from medical schools across the country, and our division has been recognized for **19 years in a row as the best in education.**

Our Division has been training generations of pulmonary and critical care specialists for more than 40 years. Our graduates are highly competitive for private practice positions. Others have been very successful in pursuing academic careers. We are proud to offer a rigorous and broad clinical training along with ample opportunities for mentored projects in quality improvement as well as bench, translational and clinical research. The excellence of our clinical and clinical research programs have been recognized with our selection to membership in the NIH-funded COPD and IPF Clinical Research Networks (COPDnet and IPFnet, respectively) as well as the Cystic Fibrosis Foundation's Therapeutics Development Network.

### **Clinical Programs**

Our faculty has grown to more than 40 members. We have recently recruited faculty from prestigious institutions such as Harvard University, University of Colorado/National Jewish Health, Iowa University and the Cleveland Clinic. The Division has also matriculated UAB fellows into both research and clinical positions. These faculty are enhancing our pool of potential mentors for our present and future fellows.

Our lung transplant program has new leadership and is on track to perform more than 30 transplants this year. The fellows now have the opportunity of being exposed to all aspects of the lung transplantation process: evaluating patients in pre- and post-transplant clinics, managing post transplantation ICU care, and participating in organ procurement and harvesting.

Fellows gain expertise in the breadth of critical care medicine through our critical care rotations. At University Hospital, a fellow and faculty attending are paired with each of the two housestaff teams. Fellows also have the opportunity to work with our ICU nurse practitioner service, where an upper level fellow has graduated autonomy with appropriate attending supervision, oversight, and a focus on more fellow-centric

education. Our fellows rotate in the VA ICU, nested into the housestaff team. Fellows gain experience in airway management during dedicated rotations with the rapid response team. These experiences, combined with formal training and didactics in complex airway problems and ICU-related ultrasonography, create an excellent platform for clinical training in critical care medicine. For those interested in ICU-related quality and process improvement projects, there is opportunity for involvement in these endeavors.

We are expanding our interventional capabilities with a nearly 1 million dollar capital upgrade pending for our inpatient bronchoscopy suite. The expansion of our Interventional Bronchoscopy Program will allow trainees to be exposed to a number of different techniques in advanced bronchoscopy such as navigational bronchoscopy, rigid bronchoscopy, medical pleuroscopy, airway stenting, airway lesion ablative techniques including endobronchial laser therapy in addition to endobronchial ultrasound (EBUS), and bronchial thermoplasty (BT). Established clinical programs in environmental medicine, COPD, interstitial lung disease, cystic fibrosis, mycobacterial infections, and lung cancer allow our fellows to have a deep and diverse exposure to all aspects of pulmonary medicine.

First year fellows are now paired with a senior fellow and faculty mentor. This facilitates training in ICU-related procedures and helps the junior fellow to efficiently devise a self-learning plan and to eventually identify a mentor for either a research or a quality improvement project.

### **National Leadership Positions**

A number of our faculty holds leadership positions in national and international organizations.

<b>Barney</b>	Outgoing Alabama governor for the ACCP
<b>Zhou</b>	Program Committee Member of ATS Assembly on Respiratory Structure and Function (RSF)
<b>Harding</b>	American College of Chest Physicians: Member Board of Regents, Member at Large CHEST: Section Editor, Sleep Medicine Pearls CHEST: Editorial Board member Member, Nominations Committee Member, Conflicts of Interest Ad-Hoc Committee

ABIM: Chair, Sleep Medicine Maintenance of Certification Committee

American Academy of Sleep Medicine: Member, Polysomnography Scoring Committee  
American Journal of Clinical Sleep Medicine:

- Thannickal** Regular Member, NIH/NHLBI Respiratory Integrative Biology and Translational Research Study Section  
 NIH/NHLBI Special Emphasis Panel; Clinical Trials Review Committee (CLTR)  
 ATS Scientific Advisory Committee  
 ATS Awards Committee  
 ATS Respiratory Cell and Molecular Biology Working Group on “Aging”  
 NIH Member, External Advisory Committee, NHLBI Lung Repair and Regeneration Consortium  
 Member, Leadership Council, American Lung Association of Alabama  
 Medical Advisory Council. The Global Fibrosis Foundation  
 Editorial Board, American Journal of Respiratory and Critical Care Medicine
- Dransfield** ATS Nominating Committee & Program Committee for Clinical Problems Assembly  
 COPDnet
- Bailey** Membership in the ATS Foundation Board of Directors
- de Andrade** Steering Committee, NHLBI IPF Clinical Research Network (IPFnet)  
 Vice-Chair, ACCP Interstitial and Diffuse Lung Disease Network  
 Scientific Advisory Board, Pulmonary Fibrosis Advocates
- Rowe** North American Cystic Fibrosis Foundation Conference Planning Committee  
 Inducted to the Southern society of Clinical Investigation  
 Nominated to the American Society of Clinical Investigation  
 CF Therapeutics Development Network Translational Working Group  
 Reviewer for NIH Study Section (ZRG1 CVRS-G(04) M Respiratory Diseases)  
 Reviewer for NIH/FDA Special Emphasis Panel (ZRG1 BDCN-A; P50)  
 Reviewer for NIH Special Study Section  
 Grant reviewer for *The Netherlands Organization for Health Research and Development*
- Antony** AHA Grant Review Committee: Member  
 Research Advisory Committee, College of Medicine: Member  
 ATS Scientific Advisory Committee  
 ATS Research Advocacy Committee

ATS VA Research Advocacy Subcommittee  
ATS Better Breathers Alliance Committee

NIH-ZRG1 AARR-K (58) R - PAR Panel: Multidisciplinary Studies of  
HIV/AIDS and Aging, Reviewer

NIH-ZAI1 MM-M (S1) 1 - Loan Repayment Program (LRP), Reviewer

NIH-ZRG1 AARR-E (2) M – AIDS and AIDS Related Research,  
Reviewer

NIH-ZAI1 DR-A (S1) – National Institute of Allergy and Infectious  
Diseases Special Emphasis Panel, Reviewer

NIH – ZA1 DR-A (S3)1 HIV Clinical Trial Units for NIAID Network,  
Chair

NIH – NHLBI R21/R33 National Heart, Lung, and Blood Institute Special  
Emphasis Panel, Reviewer

- Blalock**      2012/2013 Member, NHLBI Translational PPG Study Section
- Member, Scientific Review Board for Science Moving Towards Research  
Translation and Therapy (SMARTT, NHLBI)
- Editorial Board, Cellular and Molecular Neurobiology
- Editorial Board, Journal of Inflammation Research
- Cooper**      Veterans Administration Central Institutional Review Board – Member
- Lazenby**      Quality Improvement Committee of the American College of Chest  
Physicians
- Deshane**      Editorial Board of the American Journal of Respiratory Cell and Molecular  
Biology
- Steele**      Section Editor, *The Journal of Immunology*
- Appointed Academic Editor for *PLoS ONE*

Reappointed to the Editorial Board of *The American Journal of Physiology*  
- *Lung Cellular and Molecular Physiology*

Member, AIDS, Opportunistic Infections and Cancer study section, NIH

Ad hoc member, Vector and Eukaryotic Pathogens study section, NIH

Ad hoc member, NIAID U19 Centers of Excellence for Translational Research, NIH

Appointed Member, Lung Biomedical Sciences 2 Peer Review Committee,  
American Heart Association

## **Research Programs**

Our recently established NIH-funded T-32 *Training Program in Lung Biology and Translational Medicine* provides multidisciplinary training in a stimulating and collaborative environment that nurtures the development of highly competent and innovative biomedical research scientists. The program supports 2-3 years of structured and rigorous research training for M.D. or Ph.D. postdoctoral fellows. The multidisciplinary nature of the proposed training is fostered by the diversity of the 26 faculty mentors who hold primary appointments in nine UAB departments.

Additionally, our division has a well-organized biospecimen repository as well as a comprehensive clinical database that are available to support both fellow and faculty-initiated research projects. Please see below a list of some of our fellows' publications from the last 2 years.

A few years ago, the NIH established a new funding mechanism called "Program Project Grants" believing that "a collaborative research effort can accelerate the acquisition of knowledge more effectively than a simple aggregate of research projects that have no interaction or thematic integration". These are high profile, multi-investigator grants and our Division had a successful application for one themed around COPD.

In summary, our diverse clinical programs and our enhanced research portfolio offer ample opportunities to support the career development of physicians seeking training in pulmonary and critical care. Please feel free to learn more about our program by visiting our website ([www.uab.edu/medicine/pulmonary](http://www.uab.edu/medicine/pulmonary)) and we are looking forward to hearing from you soon!

## Selected publications from our fellows

### [Pleural mesothelial cell differentiation and invasion in fibrogenic lung injury.](#)

**Zolak JS**, Jagirdar R, Surolia R, Karki S, Oliva O, Hock T, Guroji P, Ding Q, Liu RM, Bolisetty S, Agarwal A, Thannickal VJ, Antony VB.

Am J Pathol. 2013 Apr;182(4):1239-47. doi: 10.1016/j.ajpath.2012.12.030. Epub 2013 Feb 9.

PMID: 23399488 [PubMed - in process]

### [Idiopathic pulmonary fibrosis.](#)

**Zolak JS**, de Andrade JA.

Immunol Allergy Clin North Am. 2012 Nov;32(4):473-85. doi: 10.1016/j.iac.2012.08.006. Epub 2012 Sep 14. Review.

PMID: 23102062 [PubMed - indexed for MEDLINE]

### [Heme oxygenase-1 promotes granuloma development and protects against dissemination of mycobacteria.](#)

Regev D, Surolia R, Karki S, **Zolak J**, Montes-Worboys A, Oliva O, Guroji P, Saini V, Steyn AJ, Agarwal A, Antony VB.

Lab Invest. 2012 Nov;92(11):1541-52. doi: 10.1038/labinvest.2012.125. Epub 2012 Sep 10.

### [STAT4-Dependent and Independent Th2 Responses Correlate with Protective Immunity against Lung Infection with Pneumocystis murina.](#)

Myers RC, Dunaway CW, Nelson MP, **Trevor JL**, Morris A, Steele C.

J Immunol. 2013 May 6. [Epub ahead of print]

PMID: 23650614 [PubMed - as supplied by publisher]

### [IL-33 and M2a alveolar macrophages promote lung defense against the atypical fungal pathogen Pneumocystis murina.](#)

Nelson MP, Christmann BS, Werner JL, Metz AE, **Trevor JL**, Lowell CA, Steele C.

J Immunol. 2011 Feb 15;186(4):2372-81. doi: 10.4049/jimmunol.1002558. Epub 2011 Jan 10.

PMID: 21220696 [PubMed - indexed for MEDLINE]

### [Acquired CFTR Dysfunction in the Lower Airways in COPD.](#)

Dransfield MT, **Wilhelm AM**, **Flanagan B**, **Courville C**, Tidwell SL, Raju SV, Gaggar A, Steele C, Tang LP, Liu B, Rowe SM.

Chest. 2013 Mar 28. doi: 10.1378/chest.13-0274. [Epub ahead of print]

PMID: 23538783 [PubMed - as supplied by publisher]

### [A pharmacologic approach to acquired cystic fibrosis transmembrane conductance regulator dysfunction in smoking related lung disease.](#)

Sloane PA, Shastry S, **Wilhelm A**, **Courville C**, Tang LP, Backer K, Levin E, Raju SV, Li Y, Mazur M, Byan-Parker S, Grizzle W, Sorscher EJ, Dransfield MT, Rowe SM.

PLoS One. 2012;7(6):e39809. doi: 10.1371/journal.pone.0039809. Epub 2012 Jun 29.

PMID: 22768130 [PubMed - indexed for MEDLINE]

[Computed Tomographic Measures of Pulmonary Vascular Morphology in Smokers and their Clinical Implications.](#)

San José Estépar R, Kinney GL, Black-Shinn JL, Bowler RP, Kindlmann GL, Ross JC, Kikinis R, Han MK, Come CE, Diaz A, Cho MH, Hersh CP, Schroeder JD, Reilly JJ, Lynch DA, Crapo JD, **Wells JM**, Dransfield MT, Hokanson JE, Washko GR; for the COPDGene Study.

Am J Respir Crit Care Med. 2013 May 8. [Epub ahead of print]

PMID: 23656466 [PubMed - as supplied by publisher]

[Pulmonary arterial enlargement and acute exacerbations of COPD.](#)

**Wells JM**, Washko GR, Han MK, Abbas N, Nath H, Mamary AJ, Regan E, Bailey WC, Martinez FJ, Westfall E, Beaty TH, Curran-Everett D, Curtis JL, Hokanson JE, Lynch DA, Make BJ, Crapo JD, Silverman EK, Bowler RP, Dransfield MT; COPDGene Investigators; ECLIPSE Study Investigators.

N Engl J Med. 2012 Sep 6;367(10):913-21. doi: 10.1056/NEJMoa1203830. Epub 2012 Sep 3.

PMID: 22938715 [PubMed - indexed for MEDLINE] **Free Article**

[Cigarette smoke enhances chemotaxis via acetylation of proline-glycine-proline.](#)

Hardison MT, **Brown MD**, Snelgrove RJ, Blalock JE, Jackson P. Front Biosci (Elite Ed). 2012 Jun 1;4:2402-9.

PMID: 22652647 [PubMed - indexed for MEDLINE]

[Pneumococcal vaccine and opsonic pneumococcal antibody.](#)

Song JY, **Moseley MA**, Burton RL, Nahm MH. J Infect Chemother. 2013 May 9. PMID: 23657429 [PubMed - as supplied by publisher]

[Clinical implications of pneumococcal serotypes: invasive disease potential, clinical presentations, and antibiotic resistance.](#)

Song JY, Nahm MH, **Moseley MA**. J Korean Med Sci. 2013 Jan;28(1):4-15. doi: 10.3346/jkms.2013.28.1.4. Epub 2013 Jan 8. PMID: 23341706 [PubMed - in process]

[Disparities in lung transplantation before and after introduction of the lung allocation score.](#)

Wille KM, Harrington KF, de Andrade JA, **Vishin S**, Oster RA, Kaslow RA.

J Heart Lung Transplant. 2013 Apr 9. doi:pii: S1053-2498(13)01171-6.

10.1016/j.healun.2013.03.005. [Epub ahead of print]

PMID: 23582477 [PubMed - as supplied by publisher]

[Antifungal prophylaxis in solid organ transplant recipients.](#)

Brizendine KD, **Vishin S**, Baddley JW.

Expert Rev Anti Infect Ther. 2011 May;9(5):571-81. doi: 10.1586/eri.11.29. Review.

PMID: 21609268 [PubMed - indexed for MEDLINE]