



- *Assistant Professor*
- *Department of Medicine*
- *Division of Pulmonary, Critical Care & Sleep Medicine*

#### Conditions Treated:

- *Alpha-1 Antitrypsin Deficiency Overview*
- *Chronic Bronchitis*
- *Chronic Cough*
- *Combined pulmonary fibrosis and emphysema*

#### Research Areas:

- *Alpha-1 Antitrypsin Deficiency Overview*

#### Programs & Services:

- *Alpha-1 Antitrypsin Deficiency Program*
- *Department of Medicine*
- *COPD Program*
- *Division of Pulmonary, Critical Care and Sleep Medicine (Adult)*

#### Clinical interests

chronic obstructive airway diseases (e.g. emphysema, alpha-1 antitrypsin deficiency, combined pulmonary fibrosis and emphysema) and chronic cough

#### Research interests

I conduct basic and translational research focused on the cross talk between inflammation and immune responses in emphysema and alpha-1 anti-trypsin deficiency. I specifically look at the anti-inflammatory and immuno-modulatory role of alpha-1 antitrypsin on macrophages functions and endothelial cell-monocyte interactions.

#### Board Certification

10/2013: ABIM Critical Care Medicine Certification Examination  
11/2012: ABIM Pulmonary Medicine Certification Examination  
8/2010: ABIM Internal Medicine Certification Examination

#### Education

Carol Davila University of Medicine and Pharmacy (Bucharest, Romania), M.D.

#### Residency

Marius Nasta National Institute of Pulmonology (Bucharest, Romania) , Pulmonary Medicine  
The Chicago Medical School, Rosalind Franklin University of Medicine & Science (North Chicago, IL) , Internal Medicine

#### Fellowship

Indiana University Purdue University Indianapolis / Division of Pulmonary, Allergy, Critical Care, and Occupational Medicine (Indianapolis, IN) , Pulmonary and Critical Care

### **Professional Memberships**

American Thoracic Society

### **Publications**

Lockett AD, Petrusca DN, Justice MJ, Poirier C, Serban KA, Rush NI, Kamocka M, Predescu DN, Predescu SA, Petrache I. Scavenger Receptor Class B, Type 1 mediated uptake of Alpha-1 antitrypsin by pulmonary endothelial cells, *Am J Physiol Lung Cell Mol Physiol*. 2015 Jun 19, [Epub ahead of print], PMID: 26092999

McCaslin CA, Petrusca DN, Poirier C, Serban KA, Anderson GG, Petrache I, Impact of alginate-producing *Pseudomonas aeruginosa* on alveolar macrophage apoptotic cell clearance, *J Cyst Fibros*. 2015 Jan; 14(1):70-7, PMID: 25027418

Lockett AD, Brown MB, Santos-Falcon N, Rush NI, Oueini H, Oberle AJ, Bolanis E, Fragoso MA, Petrusca DN, Serban KA, Schweitzer KS, Presson RG Jr, Campos M, Petrache I. Active trafficking of alpha 1 antitrypsin across the lung endothelium, *PLoS One*. 2014 Apr 17; 9(4), PMID: 24743137.

I Petrache, KA Serban, Emphysema. *Pathobiology of Human Disease*, a dynamic encyclopedia of disease mechanism, Elsevier Publishing group, online August, 2014

A Lockett, M Van Demark, Y Gu, K S. Schweitzer, N Sigua, K Kamocki, I Fijalkowska, J Garrison, A Fisher, K Serban, R A. Wise, T Flotte, R G. Presson, H I. Petrache, R M Tuder, I Petrache, Effect of cigarette smoke exposure and structural modifications on the alpha-1 antitrypsin interaction with caspases, *Mol. Med*, Jan 2012, PMID: 22245800

### **Doctor's Contact Information**

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### **Locations**

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