



- *Chief, Division of Pulmonary, Critical Care & Sleep Medicine*
- *Associate Vice President of Faculty Development*
- *Professor of Medicine*
- *Department of Medicine*
- *Division of Pulmonary, Critical Care & Sleep Medicine*
- *Wollowick Chair in COPD Research*

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#### Conditions Treated:

- *Alpha-1 Antitrypsin Deficiency Overview*
- *Chronic Cough*
- *Sarcoidosis Overview*
- *Acute Respiratory Distress Syndrome (ARDS)*

#### Research Areas:

- *Lung Cell Biology*
- *Lung Inflammation*
- *Lung Injury and Repair*
- *Regenerative Medicine*
- *Pulmonary Vascular Disease*
- *Vascular Biology*
- *Sphingolipid signaling and metabolomics*
- *Alpha 1 Antitrypsin Biology*

#### Programs & Services:

- *COPD Program*
- *Department of Medicine*
- *Division of Pulmonary, Critical Care and Sleep Medicine (Adult)*
- *Sarcoidosis Program*

#### Board Certification

2002, 2010: American Board of Internal Medicine, Critical Care Medicine  
2000, 2010: American Board of Internal Medicine, Pulmonary Medicine  
1993: FLEX Part I, and Part II  
1992: FMGEMS Clinical Component, and Basic Science Component  
1992: ECFMG-certified

#### Education

1986 - Carol Davila University of Medicine and Pharmacy (Bucharest, Romania), Doctor of  
1992 - Medicine, MD

#### Residency

1993 - Saint Luke's Medical Center (now Saint Vincent), Case Western Reserve University,  
1996 - Cleveland, OH, Internship and Residency in Internal Medicine

#### Fellowship

1996 - Johns Hopkins University School of Medicine, Baltimore, MD, Research and Clinical  
1999 - Fellowship in Pulmonary and Critical Care Medicine, Department of Medicine, Division of  
Pulmonary and Critical Care Medicine  
1999 - Johns Hopkins University School of Medicine, Baltimore, MD, Clinical Fellowship in  
2000 - Pulmonary and Critical Care Medicine, Department of Medicine, Division of Pulmonary  
and Critical Care Medicine

#### Teaching or Professional Positions

2015-Present: Professor of Medicine, Division of Pulmonary, Critical Care and Sleep Medicine; Department of Medicine, National Jewish Health, Denver, CO  
2012-2015: Professor of Medicine, Biochemistry and Molecular Biology (Tenured), Indiana University, Department of Medicine, Division of Pulmonary, Allergy, Critical Care and Occupational Medicine  
2011-2014: Vice Chair of Research, Indiana University, Department of Medicine  
2008-2012: Associate Professor of Biochemistry and Molecular Biology (secondary appointment) Indiana University, Department of Biochemistry and Molecular Biology  
2006-2012: Associate Professor of Medicine, Calvin E. English Chair Investigator, Indiana University, Department of Medicine, Division of Pulmonary, Allergy, Critical Care and Occupational Medicine  
2006-2007: Adjunct Associate Professor of Medicine, Joint Appointment, Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD  
2005-2006: Assistant Professor of Pathology, Joint Appointment, Department of Pathology, Johns Hopkins University, Baltimore, MD  
2003-2006: Assistant Professor of Medicine, Full-Time Staff, Department of Medicine, Johns Hopkins University, Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center, Baltimore, MD  
2000-2006: Co-Director, Sarcoidosis Clinic, Department of Medicine, Division of Pulmonary and Critical Care Medicine, Johns Hopkins University School of Medicine, Baltimore, MD  
2000-2003: Instructor of Medicine, Full-Time Staff, Department of Medicine, Johns Hopkins University, Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center, Baltimore, MD

### Professional Memberships

2008-Present: Member, American Physiological Society  
1997-Present: Member, American Thoracic Society (ATS)

### Research

2014-2020: Member, Lung Injury, Repair and Remodeling Study Section, CSR

### Patents

2009: "Materials and Methods for Using Adipose Stem Cells to Treat Lung Disease", IURTC Provisional Patent Application 9995-0127, US 20120100112  
2008: "Method for Diagnosing and Treating Emphysema", US Patent # 8,486,405 issued on July 16, 2013 (EMAP II-related)

### Awards & Recognition

2015-2017: Associate Editor, American Journal of Physiology-Lung  
2015-Present: Wollowick Chair in COPD Research, National Jewish Health  
2015: The Golden Lung Award, for excellence in teaching, Pulmonary Critical Care Medicine Fellowship program, Indiana University PCCM fellowship  
2014: IUPUI Chancellor's Prestigious External Award Recognition (PEAR)  
2014: Harrington Scholar-Innovator  
2012-2015: ATS International Conference Committee Chair  
2011-2015: Dr. Calvin H. English Chair, Indiana University  
2010: Research Frontiers Trailblazer Award, IUPUI  
2007-2011: Floyd and Reba Smith Chair in Respiratory Disease, Indiana University  
2004: First Annual Respiratory Disease Young Investigators Forum, First Place in the Junior Faculty Category Basic Science  
2004: The Thurlbeck Award for Research, University of British Columbia  
1998-1999: National Research Scientific Award; Agency: NHLBI, NIH  
1992: Special E. Majorana Center for Scientific Culture Scholarship, World Federation of Scientists, Italy  
1988-1992: National Award for Academic Excellence in Medicine, Romania

### Publications

Melpo Christofidou-Solomidou, Ralph A. Pietrofesa, Evguenia Arguiri, Kelly S. Schweitzer, Evgeny V. Berdyshev, Maureen McCarthy, Astrid Corbitt, Joshua S. Alwood, Yongjia Yu, Ruth K. Globus, Charalambos C. Solomides, Robert L. Ullrich, and **Irina Petrache**. Space Radiation Associated Lung Injury in a Murine Model. *Am J Physiol Lung Cell Mol Physiol* 2015 Mar 1;308(5):L416-28. PMID 25526737

Kara Goss, Anthony Cucci, Amanda Fisher, Marjorie Albrecht, Andrea Frump, Roziya Tursunova, Yong Gao, Mary Beth Brown, **Irina Petrache**, Robert Tepper, Shawn Ahlfeld, and Tim Lahm. Neonatal Hyperoxic Lung Injury Favorably Alters Adult Right Ventricular Remodeling Response to Chronic Hypoxia Exposure. *Am J Physiol Lung Cell Mol Physiol* 2015 Feb 6:ajplung.00276.2014. PMID 25659904

Mary Beth Brown, Tsungai Chingombe, Abigail Zinn, Jagadeshwar Reddy, Rachel Novack, Sean Cooney, Amanda Fisher, Robert Presson, Tim Lahm, and **Irina Petrache**. Novel Assessment of Hemodynamic Kinetics with Acute Exercise in a Rat Model of Pulmonary Arterial Hypertension. *Experimental Physiology* 2015 Apr 13. doi: 10.1113/EP085182. PMID 25867528

Hongyan Lu, Christophe Poirier, Todd Cook, Dmitry O Traktuev, Stephanie Merfeld-Clauss, Benjamin Lease, **Irina Petrache**, Keith L March, Natalia V Bogatcheva. Conditioned media from adipose stromal cells limit lipopolysaccharide-induced lung injury, endothelial hyperpermeability and apoptosis. *Journal of Translational Medicine* 2015 Feb 21;13(1):67. doi: 10.1186/s12967-015-0422-3. PMID 25889857

Schweitzer KS, Chen SX, Law S, Van Demark MJ, Poirier C, Justice MJ, Hubbard WC, Kim ES, Lai X, Wang M, Kranz WD, Carroll CJ, Ray BD, Bittman R, Goodpaster J, **Petrache I**. Endothelial disruptive pro-inflammatory effects of nicotine and e-cigarette vapor exposures. *Am J Physiol Lung Cell Mol Physiol* 2015 May 15; 309(2):L175-98. doi: 10.1152/ajplung.00411.2014. PMID 25979079 PMCID PMC450497

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

Office: 877.225.5654

#### **Locations**

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1400 Jackson St.

Denver, CO 80206