


Name	Irina Petrache, MD	
Country	United States	
Organization	National Jewish Health	
Current Position	Professor and Chief, Division of Pulmonary, Critical Care, and Sleep Medicine, Associate VP–Faculty Development	

Educational Background

1982 - 1986	<i>Dr. I. Mesota</i> Lyceum, Brasov, Romania Major: Mathematics and Physics. Degree: Baccalaureate
1986 - 1992	<i>Carol Davila</i> University of Medicine and Pharmacy, Bucharest, Romania Degree: Doctor of Medicine, MD

Professional Experiences

Post-Doctoral Positions

1993 – 1996	Saint Luke’s Medical Center (now Saint Vincent Medical Center), Case Western Reserve University, Cleveland, OH Internship and Residency in Internal Medicine
1996 - 2000	Johns Hopkins University School of Medicine, Baltimore, MD Research and Clinical Fellowship in Pulmonary & Critical Care Medicine, Research

Academic Appointments

2000 - 2003	Instructor of Medicine, Full-Time Staff Department of Medicine, Johns Hopkins University
2003 - 2006	Assistant Professor of Medicine, Full-Time Staff Department of Medicine, Johns Hopkins University
2006 - 2012	Associate Professor of Medicine; Calvin E. English Chair Investigator Division of Pulmonary, Allergy, Critical Care and Occupational Medicine Department of Medicine, Indiana University School of Medicine, Indianapolis, IN
2011 - 2014	Vice Chair of Research Department of Medicine, Indiana University School of Medicine
2012 - 2015	Calvin E. English Chair Professor of Medicine, Biochemistry and Molecular Biology (Tenured), Indiana University School of Medicine
2015 – Present	Professor, Division of Pulmonary, Critical Care, and Sleep Medicine; Department of Medicine, National Jewish Health (NJH), Denver, CO
2015 - Present	Professor, Department of Medicine and Pharmacology Graduate Program, University of Colorado School of Medicine, Anschutz Medical Campus, Denver, CO
2015 - Present	Chief, Division of Pulmonary, Critical Care and Sleep Medicine, NJH
2021 - Present	Associate Vice President for Faculty Development, NJH

Professional Organizations

Honorary Societies

- 2012 - Present American Society of Clinical Investigation
2021 - Present Association of American Physicians

National Committees Membership/Role

- 2013 – 2015 Chair, ATS International Conference Committee
2013 – 2015 ATS, Board of Directors
2013 – 2014 ATS, Finance Committee
2015 – 2016 ATS, Planning Committee
2015 – Present Thomas Petty Aspen Lung Conference, Local Steering Committee
2020 – 2024 Council Member of Scientific Advisors, Parker B. Francis Fellowship
Program 2020 - 2021 President, Association of Pulmonary Critical Care and Sleep Division
Directors 2021 - 2026 ATS Executive Committee, 2023-2024: ATS President Elect

Main Scientific Publications

LAST 5 YEARS

1. Serban KA, Mikosz A, Strange C, Janciauskiene SM, Stolk J, Jonigk D, Sandhaus RA, **Petrache I**. Lectin Complement Pathway in Emphysema. *Am J Respir Crit Care Med*. 2019. 199(5):659-661. PMID: 30557515.
2. Koike K, Beatman EL, Schweitzer KS, Justice MJ, Mikosz AM, Ni K, Clauss MA, **Petrache I**. Subcutaneous administration of neutralizing antibodies to endothelial monocyte-activating protein II attenuates cigarette smoke-induced lung injury in mice. *Am J Physiol Lung Cell Mol Physiol*. 2019; 316(3):L558-L566. PMID: 30628489.
3. Koike K, Berdyshev EV, Mikosz AM, Bronova IA, Bronoff AS, Jung JP, Beatman EL, Ni K, Cao D, Scruggs AK, Serban KA, **Petrache I**. Role of Glucosylceramide in Lung Endothelial Cell Fate and Emphysema. *Am J Respir Crit Care Med*. 2019. 200(9):1113-1125. PMID: 31265321.
4. Cao D, Mikosz AM, Ringsby AJ, Anderson KC, Beatman EL, Koike K, **Petrache I**. MicroR NA-126-3p Inhibits Angiogenic Function of Human Lung Microvascular Endothelial Cell via LAT1 (L-Type Amino Acid Transporter 1)-Mediated mTOR (Mammalian Target of Rapamycin) Signaling. *Arterioscler Thromb Vasc Biol*. 2020 40, 1195-1206. PMID: 32212853.
5. Gellatly S, Pavelka N, Crue T, Schweitzer KS, Day BJ, Min E, Numata M, Voelker DR, Scruggs A, **Petrache I***, Chu HW. Nicotine-Free e-Cigarette Vapor Exposure Stimulates IL-6 and Mucin Production in Human Primary Small Airway Epithelial Cells. *J Inflamm Res*. 2020 Apr 16;13:175-185. PMID: 32368126 (*co-corresponding author)
6. Schweitzer KS, Jinawath N, Yonescu R, Ni K, Rush N, Charoensawan V, Bronova I, Berdyshev E, Leach SM, Gillenwater LA, Bowler RP, Pearse DB, Griffin CA, **Petrache I**. IGSF3 mutation identified in patient with severe COPD alters cell function and motility. *JCI Insight*. 2020 Jul 23;5(14):138101. PMID: 32573489
7. Schweitzer KS, Crue T, Nall JM, Foster D, Sajuthi S, Correll KA, Nakamura M,

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- Everman J, Downey GP, Seibold MA, Bridges JP, Serban KA, Chu HW, **Petrache I**. Influenza virus infection increases ACE2 expression and shedding in human small airway epithelial cells. *Eur Respir J*. 2021. 58: 2003988. PMID: 33419885
8. Berdyshev EV, Serban KA, Schweitzer KS, Bronova IA, Mikosz A, **Petrache I**. Ceramide and sphingosine-1 phosphate in COPD lungs. *Thorax*. 2021. PMID: 33514670
9. Poczobutt JM, Mikosz AM, Poirier C, Beatman EL, Serban KA, Gally F, Cao D, McCubbr ey AL, Cornell CF, Schweitzer KS, Berdyshev EV, Bronova IA, Paris F, **Petrache I**. Altered Macrophage Function Associated with Crystalline Lung Inflammation in Acid Sphingomyelinase Deficiency. *Am J Respir Cell Mol Biol*. 2021 PMID: 33662226.
10. Goel K, Beatman EL, Egersdorf N, Scruggs A, Cao D, Berdyshev EV, Schweitzer KS and **Petrache I**. Sphingosine 1 Phosphate (S1P) Receptor 1 Is Decreased in Human Lung Microvascular Endothelial Cells of Smokers and Mediates S1P effect on Autophagy. *Cells* 2021, 10(5), 1200; May 14.
11. de Boer E, **Petrache I***, Goldstein NM, Olin JT, Keith RC, Modena B, Mohning MP, Yunt ZX, San-Millán I, Swigris JJ. Decreased Fatty Acid Oxidation and Altered Lactate Production during Exercise in Patients with Post-Acute COVID-19 Syndrome. *Am J Respir Crit Care Med*. 2022 Jan 1;205(1):126-129. PMID: 34665688 (*corresponding author)
12. Goel K, Schweitzer KS, Serban KA, Bittman R, **Petrache I**. Pharmacological sphingosine-1 phosphate receptor 1 targeting in cigarette smoke-induced emphysema in mice. *Am J Physiol Lung Cell Mol Physiol*. 2022 Jun 1;322(6):L794-L803. PMCID: PMC9109793.
13. Goel K, Egersdorf N, Gill A, Cao D, Collum SD, Jyothula SS, Huang HJ, Sauler M, Lee PJ, Majka S, Karmouty-Quintana H, **Petrache I**. Characterization of pulmonary vascular remodeling and MicroRNA-126-targets in COPD-pulmonary hypertension. *Respir Res*. 2022 Dec 15;23(1):349. doi: 10.1186/s12931-022-02267-4. PMCID: PMC9756782.
14. **Petrache I**, Gupta A, Hume PS, Rivera T, Schweitzer KS, Chu HW. Pathogenesis of E-Cigarette Vaping Product Use-Associated Lung Injury (EVALI). *Compr Physiol*. 2023 Mar 30; 13(2):4617-4630. doi: 10.1002/cphy.c220022. PMID: 36994770.
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