Fellows Pursuing Additional Protected Research Time (2015-Current)

Alexandra C. Racanelli, M.D., Ph.D.
BS: University of Mary Washington
MD, **PhD**: Virginia Commonwealth University School of Medicine
Residency: NewYork-Presbyterian Hospital/Weill Cornell Medical Center

Research Profile and Publications

Alexandra C. Racanelli, M.D., Ph.D.

Research Interests

My previous research interest focused on transcriptional, epigenetic, and cellular signaling events involved in the efficacy of targeted cancer therapeutics. As a resident, I became interested in the disease processes associated with pulmonary and critical care medicine, with a particular interest in pulmonary vascular disease. The dysfunctional state of pulmonary vascular endothelial cells (ECs), namely arterial, in human pulmonary hypertension tissues is well established, but whether this change initiates or is a consequence of disease progression remains unclear. Non-canonical functions of vascular ECs as drivers of organ regeneration and repair have been illustrated in multiple organs. Our collaborators Drs. Shahin Rafii and Bi-Sen Ding, pioneered this field and defined the importance of the instructive vascular niche created by ECs, but also linked dysregulated ECs to maladaptive repair such as fibrosis and tumorigenesis. I am currently using a hypoxia mouse model to assess if dysregulated ECs drive release of aberrant angiocrine factors that create a maladaptive vascular niche which promotes the development of pulmonary vascular disease in humans.

Mentors: Augustine MK Choi, M.D., Shahin Rafii, M.D., Joseph Scandura, M.D., Ph.D., Mary Choi, M.D.

Publications, Talks, and Awards

PUBLICATIONS

1. **Racanelli AC**, Ding Bi-Sen. Man-made Macrophage Offers a New Therapy for PAP. *American Journal of Respiratory and Critical Care Medicine.* 2018 April. Article in Press.

2. **Racanelli AC**, Kikkers SA, Choi, AMK, Cloonan SM. Autophagy and inflammation in chronic respiratory disease. *Autophagy.* 2018 Feb 08; 14 (2): 221-232.

3. **Racanelli AC**, Zappetti D, A Lifestyle Modification Program Associated With Weight Loss Reduces the Severity of OSA. *Clin Pulm Med.* 2016, 23(2):95-96.

ABSTRACTS

1. **Racanelli, AC**, Chavez, D, Guo, P, Zhou, A, Zhu, Y, Borczuk, AC, Choi, AMK. Disruption of Endothelial-derived angiocrine factor signaling pertubs the development of pulmonary hypertension. Thomas L. Petty Aspen Lung Meeting, Aspen, Co. Abstract, June 2019
2. **Racanelli, A,** Chavez, D, Guo, P, Ding B, Choi, A.M.K. Endothelial Fibroblast Growth Factor Receptor -1 Promotes Chronic Hypoxia Induced Pulmonary Arterial Hypertension Involving Estrogen Receptors. American Thoracic Society. 2018. 2018-S-10949-ATS
3. **Racanelli AC**, Chavez, D, Ding, BS, Choi, Augustine M.K. Mechanisms of endothelial dysfunction as therapeutic targets for pulmonary hypertension. Pulmonary Research

Day, Weill Cornell Medicine. March 2018 (oral presentation).

4. **Racanelli AC**, Wu X, Hayward B. Sjogren's syndrome presenting as severe obstructive airway disease. New York State Thoracic Society Annual Assembly 2017. NYSTS 2017.

5. Ma KC, **Racanelli AC**, Lizardi MT, DeSimone RA, Sanders A. Recurrent Pneumocystis jirovicii Pneumonia Presenting as Necrotizing Granulomatous Disease with Diffuse Pulmonary Nodules. 2017 ATS International Conference. ATS 2017

ORAL PRESENTATIONS

1. A young man with chest wall mass. *Joint Case Conference. NYPH-Weill Cornell Medicine*, May 2016.

HONORS/AWARDS

2018 **NIH T32 Post-doctoral training research fellow**- 1T32HL134629-01A1

2017 **Stony Wold-Herbert Fund Award,** Endothelial Dysfunction in Pulmonary Hypertension