



**Jeffrey C. Horowitz, M.D.**

**Faculty Appointment:** Assistant Professor of Medicine  
Department of Internal Medicine

**Specialty:** Pulmonary & Critical Care Medicine

**Clinical Interests:** Acute Respiratory Distress Syndrome, Fibrotic Lung Disease, COPD, Lung Cancer

**Research Interests:** The mechanisms regulating mesenchymal cell survival and apoptosis in the context of wound-repair and fibrosis. The role of anti-apoptotic signaling pathways activated by transforming growth factor-beta1 (TGF- $\beta$ 1) in myofibroblasts in the pathogenesis of lung fibrosis. Mechanotransduction regulation of fibroblast fate and function

**Degree:** M.D., 1998, Rush University-Rush Medical College

**Residency:** Rush-Presbyterian-St. Luke's Medical Center  
1998-2001

**Fellowship:** Pulmonary & Critical Care Medicine 2001-2004,  
University of Michigan Health System

**Certifications:** 2001, Internal Medicine  
2003, Pulmonary Medicine  
2004, Critical Care Medicine

**Faculty Appointment Date:** 7/01/2004

**Clinical Address:** A. Alfred Taubman Health Care Center  
3<sup>rd</sup> Floor Taubman Center, Reception Area C  
3916 Taubman Center  
1500 E. Medical Center Drive  
Ann Arbor, MI 48109-5360

**Appointments:** Toll Free: 1-888-287-1084 or (734) 647-9342

**Nursing:** Toll Free: 1-888-287-1085 or (734) 936-5549  
Option selections: Billing - **3**; Test results - **4**  
Prescription refill **5**; Medical Records - **6**  
Leave a message or speak to a nurse – **7**

**M-Line physician consultation:** 1-800-962-3555

**Clinic Fax:** (734) 763-4585

**Academic Office Address:** University of Michigan Medical School  
6301 MSRB III  
1150 W. Medical Center Drive  
Ann Arbor, MI 48109-5642

**Academic Office Telephone:** (734) 936-7934

**Academic Office Fax:** (734) 764-4556

*Completed Publications in Scientific Journals:*

1. Thannickal VJ, Lee DY, White ES, Cui Z, Larios JM, Chacon R, **Horowitz JC**, Day RM, Thomas PE. Myofibroblast differentiation by transforming growth factor-beta1 is dependent on cell adhesion and integrin signaling via focal adhesion kinase. *J Biol Chem* 2003; 278: 12384-12389.
2. **Horowitz JC**, Lee DY, Waghray M, Keshamouni VG, Thomas PE, Zhang H, Cui Z, Thannickal VJ. Activation of the pro-survival phosphatidylinositol 3-kinase/AKT pathway by transforming growth factor-beta1 in mesenchymal cells is mediated by p38 MAPK-dependent induction of an autocrine growth factor. *J Biol Chem* 2004; 279(2):1359-1367.
3. Vittal R, **Horowitz JC**, Moore BB, Zhang H, Martinez FJ, Toews GB, Standiford TJ, Thannickal VJ. Modulation of pro-survival signaling in fibroblasts by a protein kinase inhibitor protects against fibrotic tissue injury. *Am J Path* 2005; 166(2):367-375.
4. Waghray M, Cui Z, **Horowitz JC**, Subramanian I, Martinez F, Toews GB, Thannickal VJ. Hydrogen peroxide is a diffusible paracrine signal for the induction of epithelial cell death by activated myofibroblasts. *The FASEB J* 2005; 19:854-856.
5. **Horowitz JC**, Cui Z, Moore TA, Reddy RC, Toews GB, Standiford TJ, Thannickal VJ. Constitutive activation of pro-survival signaling in alveolar mesenchymal cells isolated from patients with non-resolving acute respiratory distress syndrome. *Am J Physiol Lung Cell Mol Physiol* 2006; 290(3):L415-L425.
6. Thannickal VJ and **Horowitz JC**. Evolving Concepts of Apoptosis in Idiopathic Pulmonary Fibrosis. *Proc Am Thorac Soc* 2006; 3:350-356.
7. **Horowitz JC**, and Thannickal VJ. Idiopathic Pulmonary Fibrosis: New concepts in pathogenesis and implications for management. *Treat Respir Med* 2006; 5(5):325-342.
8. **Horowitz JC**, and Thannickal VJ. Epithelial-mesenchymal interactions in pulmonary fibrosis. *Semin Respir Crit Care Med* 2006;27(6):600-612.

9. **Horowitz JC**, Rogers DS, Sharma V, Vittal, R, White ES, Cui Z, Thannickal VJ. Combinatorial activation of FAK and AKT by transforming growth factor- $\beta$ 1 confers an anoikis-resistant phenotype to myofibroblasts. *Cell Signal* 2007; 19:761-771
10. Vittal R, Zhang H, Han MK, Moore BB, **Horowitz JC**, Thannickal VJ. Effects of the Protein Kinase Inhibitor, Imatinib Mesylate, on Epithelial/Mesenchymal Phenotypes: Implications for the Treatment of Fibrotic Diseases. *J Pharmacol Exp Ther* 2007 Apr; 321(1):35-44
11. **Horowitz JC**, Rogers DS, Simon RH, Sisson TH, and Thannickal VJ. Plasminogen Activation-Induced Pericellular Fibronectin Proteolysis Promotes Fibroblast Apoptosis. *Am. J. Respir. Cell Mol. Biol.* 2008;38 78-87