

Curriculum Vitae

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Educational Background

- 1998 -2002 B.S., Biology
University of Miami, Miami, FL
- 2004-present Pursuing Ph.D., Biomedical Engineering
Virginia Polytechnic Institute and State University, Blacksburg, VA

Teaching Experiences

- 2006 *Teaching Assistant*, Molecular Biology of Human Disease
Virginia Tech, Blacksburg, VA
- 2003-2004 *Teaching Assistant*, Human Physiology
University of Central Florida, Orlando, FL

Related Experiences

- 2005-present *NSF IGERT Associate*, Virginia Tech
- 2005-present *Graduate Research Assistant*, Laboratory of Vascular Biology
- 2002-2004 *Graduate Research Assistant*, Neurobiology Laboratory

Professional Memberships

- 2005-present Biomedical Engineering Society
- 2005-present Histochemical Society

Honors and Awards

- Travel Award*, Graduate Student Association Travel Fund Program, 2007
- Poster Award*, Graduate Research Symposium, 2007

Publications

Journal Publications

1. Lee, YW, Hirani, AA. Role of Interleukin-4 in Atherosclerosis. Arch Pharm Res 29(2006) 1-15.
2. Lee, YW, Hirani, AA, Kyprianou N, Toborek, M. Human immunodeficiency virus-1 Tat protein up-regulates interleukin-6 and interleukin-8 expression in human breast cancer cells. Inflammation Research 54(2005) 380-389.

Abstract Publications

1. Hirani AA, Kang S, Ehrich M, Lee YW. Vascular endothelial injury by chlorpyrifos: Relationship to brain metastasis. Proceedings of American Cancer Society 24th Annual Seminar of Cancer Researchers in Virginia. 2005: Abstract#29.
2. Layman JM, Hirani AA, McKee MG, Britt PF, Pickel JM, Lee YW, Long TE. Randomly branched poly(2-dimethylaminoethylmethacrylate) polyelectrolytes as gene transfection agents. Excellence in Graduate Polymer Research Symposium, American Chemical Society National Meeting. 2006.
3. Lee YW, Hirani AA, Ehrich M. Chlorpyrifos induces BBB disruption through up-regulation of pro-inflammatory mediators in brain microvascular endothelial cells. Toxicological Sciences. 2006.
4. Hirani AA, Zhao W, Robbins ME, Sonntag WE, Lee YW. Molecular mechanisms of radiation-induced brain injury. The FASEB Journal. 2006.
5. Lee YW, Hirani AA. Genistein attenuates pro-inflammatory pathways in human brain microvascular endothelial cells. The FASEB Journal. 2006.
6. Lee YW, Hirani AA. Signaling mechanisms of interleukin-4-induced pro-inflammatory pathways in human vascular endothelial cells. The FASEB Journal. 2006.
7. Layman JM, Hirani AA, McKee MG, Britt PF, Pickel JM, Lee YW, Long TE. Influence of macromolecular architecture on nucleic acid transfection. Division of Polymer Chemistry for the 232nd ACS National Meeting. 2006.
8. Meldrum B, Balbuena P, Fuhrman K, Wise B, Hirani A, Lee YW, Ehrich M. Transfer Of Lead Acetate Through An In Vitro Blood-Brain Barrier System. Toxicological Sciences. 2007.
9. Hirani AA, Lee WH, Kang S, Ehrich M, Lee YW. Chlorpyrifos induces pro-inflammatory environment in discrete regions of mouse brain. The FASEB Journal. 2007.
10. Hirani AA, Lee WH, Kang S, Lee YW. Endothelial cell targeting of lipopolysaccharide-induced brain inflammation. The FASEB Journal. 2007.
11. Kang S, Lee WH, Hirani AA, Vlachos PP, Lee YW. A Multilayer Design of Parallel-Plate Flow Chamber For Studies of Endothelial Cell Response to Fluid Shear Stress. The FASEB Journal. 2007.
12. Lee WH, Kang S, Hirani AA, Vlachos PP, Lee YW. Biomedical research applications of a novel double-layer parallel-plate flow chamber. The FASEB Journal. 2007.

13. Layman JM, Hirani AA, Hunley MT, Lee YW, Lepene B, Thatcher CD, and Long TE. Macromolecules with tailored non-covalent interactions for biomedical applications. American Chemical Society National Meeting. 2007.
14. Dong S, Hirani AA, Lee YW, Roman, M. Cellulose nanocrystals as targeted drug delivery systems. American Chemical Society National Meeting. 2007

Presentations

1. Hirani, AA, Kang, SK, Ehrich, M, Lee, YW. 2005. Vascular Endothelial Injury by Chlorpyrifos: Relationship to Brain Metastasis. *The Twenty Fourth Annual American Cancer Society Virginia Cancer Researchers Meeting, Charlottesville, VA.*
2. Lee, YW, Hirani, AA, Ehrich, M. 2006. Chlorpyrifos induces BBB disruption through up-regulation of pro-inflammatory mediators in brain microvascular endothelial cells. *Society of Toxicology, San Diego, CA.*
3. Lee, YW, Hirani, AA. 2006. Genistein attenuates pro-inflammatory pathways in human brain microvascular endothelial cells. *Experimental Biology, San Francisco, CA.*
4. Lee, YW, Hirani, AA. 2006. Signaling mechanisms of interleukin-4-induced pro-inflammatory pathways in human vascular endothelial cells. *Experimental Biology, San Francisco, CA.*
5. Hirani, AA, Zhao, W, Robbins, ME, Sonntag, WE, Lee, YW. 2006. Molecular mechanisms of radiation-induced brain injury. *Experimental Biology, San Francisco, CA.*
6. Hirani, AA, Kang, SK, Ehrich, M, Lee, YW. 2006. Nanocrystal Immunotargeting of chlorpyrifos-mediated vascular inflammation. *Graduate Research Symposium, Blacksburg, VA.*
7. Hirani, AA, Lee, YW. 2006. Nanocrystal Immunotargeting of Vascular Inflammation. *SBES Research Symposium, Winston-Salem, NC.*
8. Hirani, AA, Lee WH, Kang S, Ehrich M, Lee YW. 2007. Chlorpyrifos induces pro-inflammatory environment in discrete regions of mouse brain. *Experimental Biology, Washington, DC.*
9. Hirani AA, Lee WH, Kang S, Lee YW. 2007. Endothelial cell targeting of lipopolysaccharide-induced brain inflammation. *Experimental Biology, Washington, DC.*
10. Hirani, AA, Dong, S, Roman, M, Lee, YW. 2007. Biomedical Applications of Cellulose Nanocrystals: Targeting Brain Endothelial Cells. *Graduate Research Symposium, Blacksburg, VA.*
11. Hirani, AA, Dong, S, Roman, M, Lee, YW. 2007. Bioconjugated Cellulose Nanocrystals for Immunotargeting Brain Endothelial Cells. *SBES Research Symposium, Blacksburg, VA.*