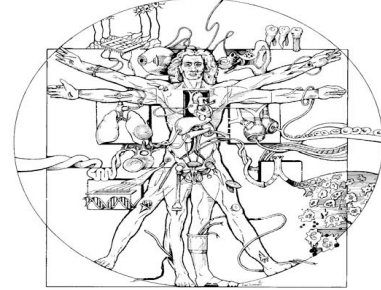


## **Biomedical Engineering Seminar**

**Monday, November 9, 2009**

**2:00 pm**

**Keating 103**



### **Saumya VanderWyst, Ph.D. Candidate**

Biomedical Engineering Interdisciplinary Program  
University of Arizona

### **“Structural Basement Membrane Components and Corresponding Integrins in Human Schlemm’s Canal Endothelia”**

Age-related glaucoma accounts for 9-12% of all cases of blindness in the U.S. with over 2.2 million people over 40 years old affected. The most common form of glaucoma, primary open-angle, has increased age and higher intraocular pressure (IOP) as primary risk factors. Elevated IOP is generated by an increase in resistance to drainage of aqueous humor in the juxtacanalicular (JCT) region of the trabecular meshwork and/or the inner wall of Schlemm’s canal. Because of its unique microenvironment, Schlemm’s canal inner wall likely plays a significant role in outflow resistance. However, how Schlemm’s canal generates and regulates resistance remains unclear. While it is well established that Schlemm’s canal cells experience a large variety of mechanical stresses *in vivo*, no research has focused on their response to mechanical loads and little is known about their extracellular matrix environment. Such knowledge will increase understanding in how Schlemm’s canal endothelial cells contribute to resistance generation and regulation, and highlight what might be changing in some elderly patients.

*Host: Marty Pagel, Ph.D. (404-7049)*

*Persons with a disability may request a reasonable accommodation by contacting the Disability Resource Center at 621-3268 (V/TTY). Requests should be made as early as possible to allow time to arrange the accommodation.*