

## TITLE: POST-DOCTORAL FELLOW

**JOB PURPOSE:** The Ethier lab seeks a Post-doctoral Fellow to study mechanosignalling pathways in Schlemm's Canal endothelial cells. Schlemm's canal is an ocular structure that is important in determining intraocular pressure (IOP), and elevated IOP is the major risk factor for glaucoma, the world's most common cause of irreversible blindness (PMID: 25201985). A major focus of the Ethier laboratory is improving our understanding of the mechanobiology of IOP regulation. We, together with colleagues at Imperial College London, have recently received NIH funding to study the mechanobiology of Schlemm's Canal endothelial cells, including calcium and phospho-signaling in response to focal mechanical deformation. The successful candidate will undertake these studies as part of a collegial and diverse team of students and post-docs.

**KEY RESPONSIBILITIES:** The specific job duties include the following:

- Culture of Schlemm's canal endothelial cells on patterned substrates
- Delivery of focal mechanical stimulation to cultured cells via magnetic microbeads, and assaying calcium and other downstream messengers via quantitative fluorescence microscopy and Luminex analysis.
- Experimental design, data analysis.
- Preparing manuscripts and abstracts for scientific meetings.
- Mentoring of graduate and undergraduate students, as appropriate and in conjunction with the lab PI.

**PREFERRED EDUCATION, SPECIALIZED KNOWLEDGE AND EXPERIENCE:**

Degrees required for this job: PhD in biomedical engineering, cell biology, or a closely related field.

**PREFERRED YEARS OF EXPERIENCE REQUIRED FOR THIS JOB:** 0+ after Ph.D.

**PREFERRED KNOWLEDGE AND SKILL QUALIFICATIONS:** Strong knowledge of cellular mechanobiologic signaling pathways, with a focus on experimental approaches. Proven ability to work as part of a diverse team and contribute to a positive lab culture; to communicate effectively, both verbally and in writing; and to assist with preparation of grants.

**SPECIALIZED SKILLS:**

- Significant experience in: Cell culture, microscopy, molecular biology
- Knowledge of: mechanotransduction pathways, ocular anatomy