Postdoctoral Positions in Vascular Inflammation Associated with Eye Diseases: Two postdoctoral positions in vascular inflammation are available in the laboratory of Professor Kaustabh Ghosh at the University of California, Riverside (UCR). With funding from the NIH and BrightFocus Foundation and an interdisciplinary approach, the Ghosh Research Group is committed to developing new treatments for vision-threatening eye diseases.

Job Description: These positions will focus on the early inflammatory stage of diabetic retinopathy (DR) and age-related macular degeneration (AMD), potentially blinding diseases commonly associated with diabetes and aging, respectively.

DR project: This project will extend recent work in the Ghosh Research Group that has introduced a new paradigm for retinal vascular inflammation in DR by showing that diabetes-induced retinal capillary stiffening is a crucial and independent regulator of NF-kB-dependent vascular inflammation. The current focus is to obtain a deeper understanding of the link between diabetes, vascular stiffening, cell signaling, and retinal vascular inflammation. Simultaneously, drug design approaches will be used to discover therapeutic agents (small molecules or peptides) that can block stiffness-dependent DR pathogenesis.

AMD project: Using a unique rhesus macaque model of early AMD, this project will build on the recent discovery by Ghosh Research Group that aging leads to an increase in choroidal vascular stiffness that, in turn, enhances vascular sensitivity to complement injury, a key inflammatory risk factor for AMD. This work aims to establish a cell culture model of choroidal inflammation that will enable us to both deeply understand the mechanisms driving early AMD pathogenesis and identify novel therapeutic and diagnostic agents for superior AMD management.

To drive this innovative research forward, we are looking for motivated individuals to perform interdisciplinary research involving animal and cell culture models of eye disease, and principles and techniques related to vascular biology, inflammation, and mechanobiology.

Requirements: Candidates must be a recent (or soon-to-be) Ph.D. graduate or a current postdoctoral fellow in biomedical sciences/engineering. The successful applicant will have a strong research background in cell and molecular biology, and biochemistry. Previous experience with mammalian cell culture, fluorescence microscopy, flow cytometry, PCR, immunoblotting, and immunohistochemistry is desirable.

Environment: UCR is one of 10 universities within the prestigious University of California system that is renowned for pioneering research. State-of-the-art facilities for proteomics, genomics, metabolomics, cell mechanics, imaging, and flow cytometry are all available on campus.

How to Apply: Interested applicants should send (via email) a statement of interests, curriculum vitae (CV), and contact information for three references to:

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