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

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

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. Using computational modeling, peptide design, and virtual screening methods, the Morikis group has developed potential anti-inflammatory therapeutics for treatment of early AMD and complement-based biomarkers for early detection of AMD. Our joint 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.

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.

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

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. For the AMD position, research experience in computational modeling, or eagerness/ability to learn computational methods, is also 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, flow cytometry, and high performance computing 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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