

Postdoctoral Position

CIRCADIAN RHYTHMS IN PATHOPHYSIOLOGY OF ALLERGIC ASTHMA DEPARTMENT OF ENVIRONMENTAL MEDICINE UNIVERSITY OF ROCHESTER MEDICAL CENTER

Overview

Joining the laboratory of Dr. Isaac Sundar, Ph.D., the successful candidate will participate in NIH-funded research project to understand the role of circadian clock in pathophysiology of allergic asthma. The postdoctoral researcher will conduct independent research, remain abreast of developments in the field of lung circadian biology and develop novel research tools and methods as needed. Will also work directly with the research team to conduct the proposed studies, analyze and interpret data, perform all the other related research activities and duties as required, work with collaborators to develop proposals for research funding, present the findings in international conference/symposium and publish research articles in a timely manner.

Project Outline:

We know that chronic inflammatory lung disease such as allergic asthma displays time-of-day dependent variations in clinical symptoms and severity. Circadian rhythms are intrinsic biological oscillations with a period near 24 hours that are initiated and maintained by the circadian timing system. Thus, circadian clocks play a crucial role to maintain daily rhythms of physiological processes including immunity, inflammation and metabolism. We have shown that environmental stressors can induce circadian disruption in the lung. The focus of our study is to characterize the molecular signaling mechanisms involved in lung circadian clock disruption by allergen. The successful applicant will work extensively using animal models (mice: global and cell-type specific conditional circadian gene knockout) and cell/tissue culture (human lung primary cells). Since, the aim is to investigate allergen mediated immune-inflammatory response; the studies will employ a broad spectrum of molecular biology, cell/tissue culture, cell imaging, flow cytometry, transcriptomics (RNA-seq), including mice handling and surgical techniques.

Qualifications:

- Ph.D. in Biochemistry, Molecular Biology, Genetics, or related fields, with a proven record of peer-reviewed first author publications in the related field of research.
- Proficiency with routine biochemical techniques, molecular biology, immunology skills, sterile cell culture, DNA, RNA and protein-based assays including animal handling experience.
- Strong work ethics and has the ability to work and collaborate effectively in a team.
- Need to have good oral and written communication skills.
- Experience in lung biology or any pulmonary disease models will be preferred. However, candidates with a track-record of scientific accomplishment and a strong interest in circadian biology and lung pathophysiology are encouraged to apply.

How to Apply:

To apply for a postdoctoral position with the following documents sent by email to Dr. Isaac K Sundar (Isaac_Sundar@urmc.rochester.edu):

- A detailed CV/Resume
- Cover letter with a brief statement of research interests and career goals
- Name, Email ID and Phone Numbers of three references