

# Postdoctoral position to study Host-Pathogen interactions and Bacterial Extracellular Vesicles



## Institution

Houston Methodist Research Institute (HMRI) is a 440,000-square-foot research enterprise for Houston Methodist Hospital and is affiliated with the Weill Cornell Medical College in New York City. HMRI is a state-of-the-art laboratory facility for basic, translational and clinical research. It is located at the center of Texas Medical Center, the largest medical center in the world. The institution is surrounded by other world-renowned institutions such as Baylor College of Medicine, M.D. Anderson Cancer Center, Rice University, and University of Texas Health Sciences center.

## Laboratory

We are seeking a microbiologist to join the group of Muthiah Kumaraswami in the Department of Pathology and Genomic Medicine. The project will seek to elucidate the role of quorum sensing pathways in host-pathogen and pathogen-commensal interactions. The candidate will employ a multidisciplinary approach to dissect the mechanisms of bacterial signaling pathways and understand the contribution of such signaling pathways to bacterial pathogenesis. The fellow will use a variety of genetic, biochemical, biophysical, structural, and mouse infection methods to identify novel cellular processes involved in bacterial pathogenesis with the long-term goal of targeting these processes for antibiotic or vaccine development. Some of the key areas we are currently investigating include the role of extracellular vesicles in bacterial signaling and bacterial communication, role of metals at host-pathogen interface, and vaccine development studies.

## Qualifications and Experience

Qualified candidates will have (or be about to obtain) a Ph.D. degree. The candidate is expected to have experience in basic microbiology methods, animal infection studies. The ability to work in a team, and good organizational and communication skills in English are also desired. Applicants should send a CV with a description of current and future research interests, representative pdfs of publications, and the names, addresses, phone numbers, and email addresses of three references to: [mkumaraswami@houstonmethodist.org](mailto:mkumaraswami@houstonmethodist.org)

For additional information contact Dr. Kumaraswami @ [mkumaraswami@houstonmethodist.org](mailto:mkumaraswami@houstonmethodist.org).