



SIDS Genetic Screen Postdoctoral Fellowship at Baylor College of Medicine

An immediate opening for an NIH post-doctoral fellowship (R01HL130249) to study genetic mechanisms in Sudden Infant Death Syndrome is available in the Ray lab at Baylor College of Medicine in Houston, Texas (molecularneurobiology.org). Our Laboratory takes a multidisciplinary approach using a variety of genetic, molecular, and viral techniques to target highly specific brainstem cell types for functional, molecular and anatomical study in physiology, behavior, and disease.

This position will head an effort to carry out a first of its kind genetic screen to identify genes that are required for neuro-developmental and cellular processes critical to protective neonate respiratory reflexes that may be perturbed in Sudden Infant Death Syndrome (SIDS) and other congenital respiratory pathophysologies. To that end, we are in a unique position to leverage the Baylor College of Medicine (BCM) Knockout Mouse Project-2 (KOMP2) effort to knock out or mutate and characterize every gene in the mouse genome. To screen KOMP2 mutants, we will utilize an array of novel and highly innovative closed loop feature detection robotic platforms for automated neonate cardio-respiratory measurements developed in our lab (<https://www.youtube.com/watch?v=FiOV1F6fnFA>). Successful outcomes will uncover genetic, molecular, and cellular developmental processes critical to neonate cardio-respiratory function that may play a role in congenital pathophysologies.

The candidate should have a doctoral degree, strong research background, and initiative to lead projects. The ideal candidate would have experience in respiratory physiology, genetic mouse models, and statistical knowledge sufficient for handling datasets and addressing different variance components for large scale experiments (phenotypic screens). *However, highly motivated applicants with a successful and productive research track-record will be trained as needed for this project.*



 Ray Lab closed loop automated platform for neonate cardio-respiratory measurements.

Additionally, our laboratory is active in the development of new tools for improved access and study of neural circuits and thus offers several training opportunities in mouse genetic model generation (including CRISPR/Cas9 techniques) and development of novel viral vectors, as well as a variety of animal physiology and behavioral assays.

Baylor College of Medicine offers an outstanding research environment at the Texas Medical Center with more than 50 non-profit institutions which offers one of the highest densities of clinical, translational, and basic science research facilities in the world. BCM and the Ray lab are equal opportunity employers committed to building a culturally diverse intellectual community and encourage applications from women and minorities.

Please respond with a cover letter including a description of work experience, C.V., and contact information for two references to:

Russell Ray, Ph.D.

Email: russell.ray@bcm.edu.

Ray Lab Website: <http://www.molecularneurobiology.org>

BCM Website: <https://www.bcm.edu/russell-ray-29268>

