

جامعة نيويورك أبوظبي



Effects of Stress on Mood, Circadian Rhythms and Sleep/Wake Cycles

Position Title: Biology Research Assistant

Faculty Name and Title: Dipesh Chaudhury, Assistant Professor of Biology

Research Project Description: Patients suffering from depression are known to exhibit aberrations in circadian rhythms and sleep/wake cycle. The increase in reported cases of global depression is thought, in part, to be due to the modern life style where increasing number of people are exposed to situations that may affect circadian and sleep/wake rhythms such as extended night-time exposure to bright lights and prolonged shift work. Related to aberrations in biological rhythms, an unexpected and counterintuitive observation is that sleep deprivation alone or together with pharmacological medication is able to rapidly alleviate depression in subsets of patients suffering from mood disorders. Our lab is interested in investigating stress-induced changes in cellular and molecular pathways linking the circadian, sleep/wake and mood regulation centers of the brain that lead to depression. We use a multidisciplinary approach combining rodent behavioural models of depression, optogenetics, in vitro and in vivo electrophysiology, viral tracing, pharmacological, molecular and imaging techniques to systematically investigate these functional changes in the brain.

Responsibilities of the Position:

- Handle mice and help with behavioural assays
- Take brain punches
- Cut brain sections and perform immunohistochemistry
- Perform molecular assays such as QPCR
- Prepare standard electrophysiology solutions

Essential Qualifications:

Bachelors degree or higher in Biology or related Biomedical subjects.

Preferred experience:

Knowledge of standard computer use (Microsoft windows). Basic statistics. Animal handling. Knowledge of basic solution making, molecular assays and immunohistochemistry is a plus.

Applicants to provide:

1. Statement of interest
2. CV
3. Names and contact information for at least two people willing to provide letters of recommendation