Faculty Project Proposal Submission

Project Submission deadline: *February 23rd 2018*

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**Preferred Method of Contact:** E-mail

**Project Name(s):** Structure and function of chromatin modifier complexes

**General Topic (Keywords):** chromatin, epigenetics, cryoEM

**Project Description(s):**

A mechanistic understanding of biological functions needs a structural description of the macromolecular assemblies that carry out those functions. We are using cryo-electron microscopy, a new and powerful structural biology technique, to describe the architecture, dynamics and interactions of complexes involved in gene expression, both at the transcription initiation level and during silencing via epigenetic marks. The student will be involved in molecular cloning, the expression and/or purification of protein components, expression and/or purification and reconstitution of nucleosomes, the biochemical characterization, and the analysis via electron microscopy visualization.

**Desired Skills or Experience:** Knowledge of basic biochemistry principles, molecular cloning (PCR), computational background, strong work ethics, ability to work as part of a team, previous experience in biochemistry/protein purification would be advantageous but not necessary, organized at work.

**Time Commitment: 30-40 hours a week [6 – 8 hours a day]**

**Preferred Starting Date:** May 1st