

**Department of Chemistry
COLLEGE OF ARTS and SCIENCES**

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: March 1, 2012

The Department of Chemistry is pleased to offer the following research project for the summer of 2012. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and, if possible, develop a timetable for the twelve-week research period.

PROJECT TITLE: Investigating the function and significance of an accessory domain of human lysyl aminoacyl tRNA synthetase.

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Project Description

The functional significance of an accessory domain of human lysyl aminoacyl tRNA synthetase is being investigated using spectroscopic techniques. This domain is essential for optimal enzymatic function which is relevant to protein biosynthesis. In addition, this enzyme and in particular this accessory domain is essential for uptake of the lysyl tRNA molecule used as a primer of HIV-1 reverse transcriptase. Deletion of this domain results in reduced uptake of this primer and decreased efficiency of HIV-1 infectivity.