

Department of Chemistry
COLLEGE OF Arts & Sciences

SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN

APPLICATION DEADLINE: March 1, 2013

The Department of Chemistry is pleased to offer the following research project for the summer of 2013. 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: Gene Function in Bacterial Translation

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Project Description

The student will be devising novel tools to understand and modify the role of specific components of the translational apparatus in a bacterial cell. This involves cloning of genes or gene fragments with affinity tags so as to enable purification of their expression product/s in *E. coli*. The research involves designing primers for amplification of target DNA by polymerase chain reaction (PCR), restriction digestion and ligation into a plasmid vector. Following the confirmation of the sequence/s of these clones, the recombinant plasmids will be introduced into an appropriate bacterial strain and their effect on translational process will be analyzed by biochemical, molecular biological and/or mass spectrometry based methods.