

**Department of Biological Sciences  
MCMICKEN COLLEGE OF ARTS AND SCIENCES**

**SUMMER RESEARCH OPPORTUNITIES  
FOR UNDERGRADUATE WOMEN**

**APPLICATION DEADLINE: March 1, 2007**

*The Department of Biological Sciences is pleased to offer the following research project for the summer of 2007. 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.*

**Evolutionary Biology and Phylogeny**

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**Project Description**

Research in the DeBry lab addresses issues related to evolutionary biology and phylogenetics. One current project uses molecular phylogenetics to improve Post-Mortem Interval estimates for forensic science, by creating a reference database of mitochondrial DNA sequence for flies that feed on carrion in North America. A student might work on this project either in the lab or the field, or both, and would have the opportunity to learn DNA extraction, PCR amplification, and other tools for modern molecular biology research. Another project is investigating the cumulative effects on fitness of multiple minor mutations, in an *E. coli* model system. A student would have the opportunity to learn molecular lab techniques, as well as the feed and caring of microbial strains.