

**Department of Biological Sciences
COLLEGE OF *McMicken Arts & Sciences***

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: March 1, 2014

The Department of Biological Sciences is pleased to offer the following research project for the summer of 2014. 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: Color vision in Tanzanian geckos

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Project Description

The research project available in the Petren lab involves genetic analysis and behavioral experiments with Tanzanian geckos.

Dwarf Yellow-headed geckos are one of the few animals that have a completely developed fovea. The fovea is the area of the retina that gives us our high visual acuity and color vision.

Many diseases affect the fovea of humans, but there is no good animal model for fovea development, thus collaborators at Children's Hospital are exploring the gecko fovea as an animal model. In our lab, we are performing genetic analyses to distinguish species and behavioral experiments with geckos in the lab to test for fovea function. The WISE researcher would receive training and develop skills in one or both areas. Skills may include experimental design, DNA handling techniques, genetic analysis and statistical analysis. The main requirement is a willingness to handle small geckos and/or an interest in medium precision laboratory work.