

BIOLOGICAL SCIENCES
ARTS & SCIENCES

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

FOR APPLICATION YEAR: 2026

PROJECT TITLE: The impact of environmental variation on gene expression in non-human primates

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Project Description

Environmental modification due to climate change has a profound impact on individuals and populations around the world. Individuals can adjust to environmental change through acclimatization, or changes in gene expression, but humans can be challenging to study due to extensive variation in sociocultural factors. Non-human primates can be a more tractable model for understanding the impact of environmental change on gene expression. The Grogan lab looks at variation in how genes are expressed across environmental conditions in non-model primates like ring-tailed lemurs or greater thick-tailed bushbabies, which experience highly variable rainfall and also semi-frequent events like droughts and cyclones. UPRISE students will work with gene expression data to understand the impact of variation in environment. Depending on the interests of the students and the available samples or data, students may learn molecular bench skills like DNA/RNA extraction and PCR, or computational skills like mapping sequencing data to a genome, assessing the quality, and analyzing the levels of expression of different genes. Students will also learn about career paths in science and academy in a positive and supportive environment.