DEPARTMENT OF ENVIRONMENTAL HEALTH  
COLLEGE OF MEDICINE  

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE WOMEN  

APPLICATION DEADLINE: 03/01/2019  

PROJECT TITLE: The Role of Environmental Toxicant Exposure in Endometriosis  

Katherine (Katie) Burns  
College of Medicine  
Department of Environmental Health  
260 Panzeca Way  
Cincinnati, OH 45267  
Katherine.burns@uc.edu  
phone: 513-558-1877  

Project Description  

The Burns Laboratory studies endometriosis. Endometriosis is a gynecological disease that affects millions of women with chronic pelvic pain, intense menstrual pain, infertility, and other associated pathologies. We do not understand what causes endometriosis. In our laboratory, we use a mouse model of disease to examine if environmental factors are involved in starting disease or in making endometriosis worse. A WISE student in the Burns Laboratory will have her own project, but will also work with the laboratory as a whole. As a project of her own, she will have the option to pick a project of her interest associated with in vitro cell culture, examining endometriosis lesions by microscopic analysis of structure and protein localization, or experiments examining toxicant effects on gene expression changes occurring in the uterus or endometriosis lesions. With the laboratory as a whole, she will assist in mouse work when dosing or surgery is needed. This combination will allow a student to gain experience and exposure to in vivo and in vitro laboratory techniques associated with molecular biology and toxicology while studying to further understand a debilitating gynecological disease.