

DEPARTMENT OF ENVIRONMENTAL AND PUBLIC HEALTH SCIENCES
COLLEGE OF MEDICINE

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

FOR APPLICATION YEAR: 2025

PROJECT TITLE: Assessment of Impact of Heat Wave of Physiological Outcomes in Landscapers

Kermit Davis PhD CPE
College of Medicine
423 Kettering Lab
160 Panzeca Way
Cincinnati OH 45267
kermit.davis@uc.edu
513-558-2809

Project Description

We will use wearable sensors to measure physiological responses, including exertion levels, heart rate response, body temperature, and other responses, as well as dehydration through urine samples. In addition, we will monitor particulate matter through personal aerosol monitors during the workday. Weather conditions will be recorded, including local temperature, sun intensity levels, humidity, and wind.

Hypothesis #1: High temperature and humid conditions will increase heat stress indicators (physiological responses, body temperature, dehydration).

Hypothesis #2: More exertion intensity will exacerbate the heat effects for landscapers.