EDITH COWAN UNIVERSITY

PROJECT DETAILS

Project Title:

Enhancing Occupational Monitoring of Firefighters

Project Summary:

Firefighters are exposed to a variety of chemical agents (e.g., volatile organic compounds and polycyclic aromatic hydrocarbons) and particulate matter (PM) while performing duties. This project aims to examine whether measuring one type of exposure can reliably predict overall exposure, thereby simplifying occupational monitoring protocols. By identifying correlations between chemical and PM exposures, the study could streamline risk assessments and improve the cost-effectiveness of long-term health surveillance. The initial objective would be to develop a predictive model of exposure of wildland firefighters.

Preferred Applicant Skillset:

We are seeking a self-motivated postgraduate candidate with strong analytical and organisational skills. A background in occupational health, environmental health, or a related field is preferred. Familiarity with air sampling instrumentation, chemical analysis, and/or particulate matter monitoring is highly desirable. Basic proficiency in statistical analysis software (e.g., R, SPSS) and data management is beneficial. Excellent written and verbal communication skills are important for engaging with emergency services personnel, stakeholders, and academic audiences. The ideal candidate will be resourceful, able to work independently in field-based settings, and passionate about advancing health and safety of workers.

Internship Opportunity:

The successful applicant may have the opportunity to collaborate with DBCA health and safety, assisting with on-site sampling and exposure assessments. This internship will enhance practical skills in occupational hygiene, data collection, and stakeholder engagement.

Primary Contact:

Kiam Padamsey

(0)8 6304 3159

k.padamsey@ecu.edu.au