

## **PhD Studentship: Development of a durable, affordable eco-friendly textile solution for microbial and mosquito borne disease control**

### **Project description**

There is a global demand for textiles to be more sustainable utilising natural resources and following the circular economy approach. The healthcare sector is renowned for using disposable synthetic solutions, which has become more pronounced in light of COVID-19. DMU, as part of the [EU COST Action CA16227](#) project, have demonstrated the production of microcapsules using essential oils (EOs) as an effective solution offering antimicrobial and anti-mosquito protection. The aim of this project is to further develop the microencapsulation techniques and efficiency with a focus on end-product application using textiles. In addition, the work will focus on material assessment for effective protection with consideration of fibre type, structure and provision of long-lasting properties to achieve a functional textile structure aimed at healthcare and wellbeing. This project will involve working within a multidisciplinary team across textile technology, microbiology and chemistry, the candidate should ideally have laboratory experience and we would encourage those from either textile technology or science (microbiology/chemistry) backgrounds to apply.

### **Funding**

DMU is offering a fully-funded 3-year PhD scholarship for this work, **commencing on 1<sup>st</sup> October 2021**. The stipend is pegged to the UKRI rate, currently at £15,609 per annum. **Lead Supervisor** is Dr Angela Davies ([AmDavies@dmu.ac.uk](mailto:AmDavies@dmu.ac.uk)).

Applicants must:

- Possess a UK Honours degree with at least an upper second class (or overseas equivalent), a Masters Degree or an academic or professional qualification plus experience in their sector or industry.
- Demonstrate competence in the use of the English language. Please see section 5b [here](#) for further details on meeting our English language entry criteria.

### **How to apply**

Please go to the [scholarships page](#) which outlines the 2-stage process for applying for these scholarships.