



Impact of climate change on the spread of Antimicrobial Resistance

Master of Public Health

Climate change and antimicrobial resistance (AMR) are two of the top global health challenges identified by the World Health Organisation. There were an estimated 4.95 million deaths globally due to AMR in 2019. Changes in environmental conditions could lead to an increase in the spread of bacterial, viral, parasitic, fungal and vector-borne diseases in humans, animals and plants. There is substantial evidence linking rising temperatures and occurrences of extreme climate events to an increase in bacterial infection. Floods can spread waterborne diseases due to the overflow of contaminated sewage or runoff from livestock. The use of chemical fertilisers also contributes to the contamination of floodwaters during severe flooding events. Droughts can cause malnutrition, weaken immune systems, and increase vulnerability to infections. In summary, the increasing frequency of such extreme events can lead to a rise in infections, which may result in the overuse or misuse of antibiotics. Limited access to health care may also result in people self-medicating with antibiotics, especially in countries where the sale of pharmaceuticals is poorly regulated. Such interlinked challenges of climate change and AMR present a growing threat to global health.

This project will synthesise global evidence on the climate-mediated spread of AMR and explore the evidence using a systems thinking approach.

The successful candidate will be part of a broader citizen science program that aims to improve environmental health surveillance in remote Australia.

Eligibility Criteria and Scholarship Provisions

Eligibility: The successful applicant will be eligible to enrol full-time in a PhD.

Scholarship Provisions: The applicant will be required to apply for a Domestic Research Training Program (RTP) scholarship through CDU. Additional Top-Up funds may be provided by the project.

Other research scholarship opportunities are available through Charles Darwin University.

<https://www.cdu.edu.au/research-and-innovation/higher-degree-research/scholarships>

Application Process:

Applicants should submit the following to Dr Rishu Thakur:

(rishu.thakur@menzies.edu.au)

- Brief summary of why they want to complete the project.
- Current CV with 2x reference contacts
- Copies of certified academic transcripts
- Proof of residency (not required for Australian citizens)

For more information on scholarships and how to apply follow the link below:

<https://www.cdu.edu.au/research-and-innovation/future-research-students>