

UNDERSTANDING THE TRANSMISSION OF MULTIDRUG RESISTANCE IN LOW MIDDLE INCOME COUNTRIES

The purpose of the point prevalence study is to evaluate antibiotic resistance abundance within the hospital environment. Surface and equipment swabs will be collected from the designated hospital and sent to Cardiff University (Prof Tim Walsh group) to be investigated. This project will inspect the dissemination of MDR and ESBLs carrying bacteria in the environment, clinical and non-clinical settings and its implications. Samples are collected from the chosen hospital in Pakistan and will be used to isolate different species and detect the presence of multiple resistance genes such as blaNDM, blaCTX-M-15, blaOXA-48 and blaKPC. The results will be confirmed by sequencing analysis or hybridisation and the strain will be identified by MALDI-TOF. Further molecular biological techniques such as MLST (Multilocus sequence typing) will be used for characterizing different isolates of microbial species.

The candidate will gain experience in many molecular biological techniques including PCR, sequencing and strain typing.

Duration of project: 9-12 Months

Point of contact: Brekhna Hassan: HassanB1@cardiff.ac.uk

Supervisor: Prof. Tim Walsh, Cardiff University