8 million NOK for INN University on Antibiotic Resistance project

Associate Professor Rafi Ahmad at Inn University has received 8 million NOK from NFR’s “BEDRE HELSE”-programme for the Norwegian-Indian collaboration project “AMR-Diag: A Novel Diagnostic Tool for Sequence Based Prediction of Antimicrobial Resistance”. Total budget is 15 million NOK. The project has great potential to make pathogen diagnostics faster, cheaper and more accurate, thereby reducing unnecessary prescription of antibiotics.

The emergence and spread of antimicrobial resistant (AMR) bacteria is defined as a global health problem by WHO. The situation is at its gravest in low- and middle-income countries, where antibiotic consumption is high and largely unregulated. Due to the lack of real-time diagnostics, prescription of the right antimicrobial at the right time is not always achieved. Time required for culture based identification of pathogen and phenotype-based identification of susceptibility to antimicrobials often necessitates unessential use of broad spectrum antimicrobials, which contributes to increase in resistance among pathogens.

Accurate and rapid diagnostics that both identify the pathogen and provide drug susceptibility data in real-time would transform patient management and the current AMR crisis. Their application would reach broadly from primary health care centres to tertiary care hospitals, providing immediate guidance for therapeutic intervention thereby resulting in more prudent and appropriate use of antimicrobials.

Taking advantage of the advances in whole genome sequencing (WGS), bioinformatics, proteomics and machine learning methods we plan to develop a decision-making tool AMR-Diag, for the detection of bacterial infection, including its resistance profile.

**Collaboration partners are:**

From Norway: INN University, Ullevål Sykehus OUS, Folkehelseinstituttet, Rikshospitalet OUS, Universitetssykehuset Nord-Norge, Universitetet i Tromsø og Norwegian Sequencing Centre.

From India: Indian Council of Medical Research, All India Institute of Medical Sciences and Indian Institute of Technology

Others: Uppsala University and Oxford University

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