



Syeda Mahreen UI HASSAN

Home Country: Pakistan

Degree: PhD in Microbiology

Expertise: Genomics, Proteomics

Research Focus: Combating Multidrug Resistance in Bacteria

Host University: University of Sheffield, United Kingdom

Fellowship Awarded: 2016

Syeda Mahreen UI Hassan was born in Peshawar, the capital of the Khyber Pakhtunkhwa (KPK) province of Pakistan. She grew up, attended school and started her academic career in Kohat, another city in the KPK province. In this area, the local culture and tradition discriminates against female education and many women do not even attend primary school, particularly in rural areas.

After successfully graduating from high school, Mahreen joined the Kohat University of Science and Technology where she received a BSc (Hons) in Microbiology. Since 2009 she has been a Lecturer in the Department of Microbiology of Shaheed Benazir Bhutto Women University (SBBWU), Peshawar, which is the only university for females in the KPK province. In 2016 she gained an MPhil in Microbiology from Khyber Medical University, Peshawar.

Pakistan is a developing country with a compromised healthcare infrastructure and lack of understanding of biosafety among many communities. Medicines, often of poor quality, are frequently used excessively and are a major factor in an increase in multidrug resistance (MDR) in bacterial diseases - an issue that particularly impacts women. The main objective of Mahreen's research is to develop new strategies to identify the structure of virulence factors – usually proteins – present in MDR bacteria, which will help the development of new and more effective drugs to combat them.

Mahreen intends to return to SBBWU after completing her PhD program, where she hopes to develop a molecular research laboratory. She plans to initiate MPhil and PhD programs so that female students can participate in this area of higher education, and believes this will particularly benefit women whose parents are reluctant to send their daughters to co-educational institutions. Mahreen also proposes to arrange awareness workshops on MDR and work to improve sanitation systems in hospitals in KPR province.