

## ABSTRACT

The current study has been conducted for the identification and characterization of pathogens involved in corneal infections. Ophthalmic infections are serious medical health issue due to polluted environment. The samples of eye infection have been collected from Fatima Memorial Hospital Shadman Lahore. The bacterial culture was spread and streaked on the nutrient agar plates. Blood agar test was performed to confirm the pathogenicity of bacterial strains. The beta hemolysis had been shown by the four strains which indicates the bacterial pathogens are responsible for eye infections.

Different biochemical activities have also been performed against bacterial pathogens to check their resistivity. Antibiotic discs such as Meronem and Cifixime has been applied on culture plates to examine the inhibition zones of bacterial strains. Four different plants extract solutions and silver nano particles of *Azadirachta indica*, *Cassia fistula*, *Calotropis procera* and *Eucalyptus radiata* has been applied on culture plates by well diffusion method to evaluate the resistance of bacterial strains.

Antibacterial activity against seven different antibiotics solutions such as Amoxicillin, Ceftriaxone, Chloramphenicol, Ciprofloxacin, Oxytetracycline, Doxycycline and Azithromycine had been performed by taking injection water as control. Some bacterial strains had shown resistance towards these antibiotics.

Molecular characterization of bacterial strains had also been performed by ribotyping for the identification of bacteria which are responsible for ophthalmic infections. The product of PCR has been sent to for sequencing.