

## ABSTRACT

*Pseudomonas aeruginosa* was isolated from outbreak of respiratory tract infection with high mortality rate in Chinchillas maintained at Veterinary Research Institute, Lahore. Cadavers of affected rabbits were subjected to postmortem and morbid materials were collected for the isolation and identification of organisms. The nasal swabs of affected rabbits and water samples were also collected and gram negative organism was isolated which was identified by culture tests and biochemical profiling with API-20E test kit. *P. aeruginosa* was highly virulent in albino mice and histopathology of affected lungs, liver, kidney and spleen tissues revealed lesions suggestive of its pathogenicity. Antibiogram analysis of *P. aeruginosa* showed resistance to oxytetracyclin, doxycyclin, penicillin, amoxicillin, cephradine, trimethoprim, chloromphenicol, colistin, erythromycin, kanamycin and lincomycin. For molecular identification and characterization, the 16S ribotyping was performed with genus specific primers for *Pseudomonas*. The PCR product of 618 bp was sequenced. The consensus gene sequence was closely matched with the sequence of highly antibiotic resistant and virulent strains of *P. aeruginosa* isolated from the human clinical samples in NCBI data bank. The isolated *P. aeruginosa* might have been transmitted from the human through sewage water to the drinking water of rabbits or the organism might be prevalent in the rabbits also. Therefore rabbits should be supplied with filtered water and regular and careful monitoring should be practiced to prevent the spread of the pathogen to the lab workers, other animals and the community.