

Public health concerns of *Legionella pneumophila* in District Faisalabad

Adnan Mehmood, Muhammad Shahid Mahmood, Mashkoor Mohsin Gilani, Zia-ud-Din Sindhu, Faisal Siddique and Tajamal Irshad
University of Agriculture Faisalabad, Pakistan

Legionellosis is one of the most life-threatening waterborne disease round the globe. *Legionella pneumophila* serogroup-1 is the causative agent of this night mare. In developing countries like Pakistan this disease remain underdiagnosed and underreported mainly due to the lack of clinical awareness, high cost of its diagnosis and technical reasons. The present study was conducted with the main objective of the isolation, identification and characterization of *Legionella pneumophila* (*L. pneumophila*) from clinical and water sources. For this purpose, a total of one hundred and sixty-two samples including sputum, swab and water samples were collected from different hospitals in district Faisalabad. *Legionella* in water samples was concentrated through filtration assembly by using a 0.22µm pore size filter paper and then heat treated at 50°C for selective inhibition of non-*Legionella* species. All samples were cultured on four different media plates Staph 110, Salmonella Shigella Agar, MacConkey agar and GVPC selective media (buffered charcoal yeast

extract agar with supplements). Cultural and morphological characteristics of colonies of bacteria were observed daily for seven days. Identification of the isolate was done by microscopy and biochemical tests. Nineteen isolates were positive for *L. pneumophila* analyzed by sodium hippurate hydrolysis test. Antibiotic sensitivity pattern against pure isolates were analyzed by the Kirby-Bauer's method. Greyish white colonies of *L. pneumophila* were resistance to ampicillin, amoxicillin and erythromycin while yellowish green isolates were resistance to ampicillin and gentamicin. All the isolated strains were sensitive to chloramphenicol, tetracycline and ciprofloxacin

Speaker Biography

Adnan Mehmood from Pakistan has completed his MPhil in Microbiology degree under the supervision of Muhammad Shahid Mahmood, Associate Professor, Institute of Microbiology in University of Agriculture Faisalabad. Adnan is proficient in using variety of lab equipments, isolate, identify organism from sample and implement measures to eradicate contamination and aware in depth about every type of microbiological test and knows how to control quality of products.

e: adnanmehmod@yahoo.com