

**ORL-D&H-05****Prevalence and Antibiotic Susceptibility of Pathogenic Bacteria in Cultured *Pangasius hypophthalmus* from The Terai Region of Nepal**

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*Pangasius hypophthalmus* also known as "Pangas" or "Baikhi" in Nepal is a freshwater catfish originating from Southeast Asia that has become one of the most heavily farmed fish worldwide for its mild, string-less white flesh. It has high market demand and grows very fast, so is getting popular in Nepal especially few regions of Terai. The cultivation faces various issues such as the requirement of good water quality management and disease control (ranging from bacteria to parasites). The study was carried out to determine the prevalence and antibiotic susceptibility of pathogenic bacteria associated with *Pangasius hypophthalmus* cultured in Terai region, Nepal.

Altogether 120 samples of liver and kidney on symptomatic and asymptomatic conditions were taken from government as well private farms in Chitwan, Nawalparasi, Jhapa Tarahara and Siraha district. Following culturing on selective and differential agar, *Aeromonas* spp. (44.44%), *Edwardsiella* spp. (36.36%), *Pseudomonas* spp. (33.33%), and *Vibrio* spp. (28.57%) were found along with *Salmonella* spp. and *Citrobacter freundii*.

Results also shows that Liver was more exposed to bacterial infection as compared to kidney. 8 different Antibiotics were used for sensitivity test through disc diffusion revealed that Ciprofloxacin (5µg) and Gentamicin (10µg) were 100% effective drugs, but Novobiocin was resisted by all strains. The most efficient antibiotics against strains of *Vibrio*, *Edwardsiella*, *Aeromonas*, and *Pseudomonas* were found to be Ciprofloxacin (0.065–4 µg/mL) and Gentamycin (0.25–8 µg/mL) according to Minimum Inhibitory Concentration (MIC) assays.

The results showed a key for the targeted use of or less widespread implementation of antimicrobial intervention programme in aquaculture, while stressing regular monitoring as an essential measure to efficiently combat infections caused by these pathogenic microbes



Figure 1: Swab sample collection from kidney of *Pangasius hypophthalmus*

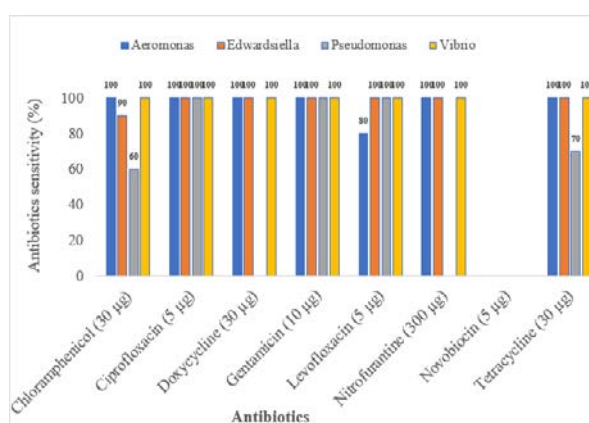


Figure 2: Antibiotics susceptibility patterns observed by *Aeromonas*, *Edwardsiella*, *Pseudomonas* and *Vibrio* Spp.