

ENTEROPATHOGENIC BACTERIA; *Escherichia coli*, *Shigella* spp. AND *Salmonella* spp. IN THE GUT OF *Decapterus russelli* (INDIAN SCAD MACKEREL) FROM THE COASTLINE OF WESTERN PROVINCE, SRI LANKA

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Though fish is a common food source for humans, fish gut can harbour pathogenic bacteria such as *Salmonella* spp., *Shigella* spp., and *Escherichia coli*, which may pose health risks. *Decapterus russelli* (Indian scad mackerel) is a common fish found in the Indian Ocean and along the coastal waters of Sri Lanka. This study investigated the presence of human pathogenic bacteria in the gut of *D. russelli*, their antibiotic resistance, and the association between the presence of pathogens and sampling sites. A total of 15 *D. russelli* individuals were collected to represent five from each of the three locations; Negombo, Beruwala, and Muthuwella. Extracted fish guts were homogenized separately, and 100 µL of each sample was cultured on MacConkey agar. After incubation at 37 °C for 24 hrs., 42 colonies with different morphologies were selected and sub-cultured. These colonies were subjected to further analysis with IMViC tests: Sulfideindole-motility (SIM) agar, Methyl red-Voges Proskauer (MR-VP) broth and Simmon's citrate agar to determine different characteristics of Enterobacteriaceae. The suspected species were cultured on differential media. The study yielded seven *Salmonella* species, two *Shigella* species, and two enteropathogenic *E. coli* (EPEC) isolates. The antibiotic susceptibility test performed using Ampicillin, Erythromycin, and Chloramphenicol on Mueller-Hinton agar revealed that all seven *Salmonella* species, both *Shigella* species, and both EPEC samples were resistant to Ampicillin and Erythromycin. In contrast, two *Salmonella* species, and both EPEC isolates, were susceptible to Chloramphenicol while *Shigella* species showed an intermediate susceptibility. *Salmonella* species were found in all three locations and EPEC was present in both Beruwala and Negombo. However, *Shigella* species were exclusively found in the Beruwala samples. A Chi-square analysis ($p > 0.05$, likelihood ratio = 5.597) indicated no significant association between sample collection location and the presence of pathogenic bacteria.

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