Isolation of *Salmonella* species in *Rousettus leschenaulti* fruit bats in Sri Lanka

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Salmonella species are frequently isolated from wild and domestic animals, but little is known about the occurrence of *Salmonella spp.* in chiropteran species. Despite the vast amount of scientific literature in other countries, concerning bats as carriers of pathogens, their propensity to serve as a reservoir host for emerging pathogens have not been investigated in Sri Lanka hitherto. Therefore the main objective of this study was to isolate *Salmonella spp.* from a cave dwelling fruit eating bat, *Rousettus leschenaulti* (Megachiroptera), which will be the first bacteriological study conducted on Sri Lankan bats. Ethical clearance for the study has not been obtained as the research method was ethically acceptable, non-invasive method. A total of 45 *Rousettus leschenaulti* were sampled in the study. Bats were captured using hand nets during the emergence at the roosting site. Rectal swabs were collected from bats in two locations; Sri Wijaya Dharma Pirivena, Maha Induruwa (n=15) (6°21'53.6"N 80°01'34.7"E) and Wavul Galge, Wellawaya (n=30) (6°43'00.0"N 81°03'00.0"E). The procedure for isolation of *Salmonella* from rectal swabs followed the ISO-6579: 2002 standard. Isolates were identified by a combination of colonial appearance and biochemical testing. Vial (2 ml) containing the fecal material was vortexed for 3 minutes. It was sub-cultured onto XLD agar using a calibrated wire loop. After overnight incubation at 37°C in air, plates were examined. Suspected colonies were sub-cultured onto Kligler Iron Agar. Indole test and Lysine decarboxylase test were performed for further identification. Biochemically confirmed samples from Wellawaya will be sent to Queensland University of Technology in Australia for 16S rRNA gene sequencing. Binomial test was performed to analyse the data. Two samples from Wellawaya were positive for *Salmonella* indicating high prevalence rate (prevalence rate 6.66%, 95% exact binomial confidence interval 0.008-0.220) when compared to the prevalence rate 0.33% previously recorded in Bangladesh. Presence of *Salmonella* in bat feces confirms the possible environmental contamination through defecation. As *R. leschenaulti* were located in close proximity of human dwellings, a possible inter-species spill-over events needs to be evaluated. Thus our research findings will provide the basis for future epidemiological studies on the occurrence of *Salmonella* species in Sri Lankan bats.