

Detection of Coronaviruses in Wildlife Rodents in the North Central Province, Sri Lanka

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Rodents are the largest group of mammals, widely distributed terrestrial species in the world. They act as a reservoir host for some zoonotic viruses, including coronaviruses (CoV) and are known to play an important role in their transmission. In fact, human CoV HCoV-OC43 and HCoV-HKU1 are linked to have rodent origins. Since the emergence of the SARS-CoV-2 in 2023, renowned interest have been about CoV found in reservoir host such as bats and rodents. They are of greater importance in identifying future pandemic CoVs evolving through bats. In this study, we aimed to detect the presence of CoV in wildlife rodents from selected locations in the North Central Province of Sri Lanka in July 2023. Sampling was done once in July 2023 by capture and release method. A total of 73 nasopharyngeal swabs were collected into 1.5 mL vials containing of phosphate-Buffered Saline. Viral RNA was extracted to perform a Pancoronavirus (PanCoV) nested RT-PCR, which is designed to target the RNA-dependent RNA polymerase gene, a 442 base pair fragment conserved region for the *Orthocoronavirinae* family. Randomly selected nasopharyngeal swabs were tested by PanCoV RT-PCR where CoV positive rodents were detected. Further sequencing data is required to confirm the individual CoV present in each rodent. Surveillance of reservoir host for known human pathogens is important.

Key words: Coronaviruses, Rodents, PanCoV, Sri Lanka

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