



Short Communication

No Evidence of Coronaviruses or Other Potentially Zoonotic Viruses in Sunda pangolins (*Manis javanica*) Entering the Wildlife Trade via Malaysia

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Abstract: The legal and illegal trade in wildlife for food, medicine and other products is a globally significant threat to biodiversity that is also responsible for the emergence of pathogens that threaten human and livestock health and our global economy. Trade in wildlife likely played a role in the origin of COVID-19, and viruses closely related to SARS-CoV-2 have been identified in bats and pangolins, both traded widely. To investigate the possible role of pangolins as a source of potential zoonoses, we collected throat and rectal swabs from 334 Sunda pangolins (*Manis javanica*) confiscated in Peninsular Malaysia and Sabah between August 2009 and March 2019. Total nucleic acid was extracted for viral molecular screening using conventional PCR protocols used to routinely identify known and novel viruses in extensive prior sampling (> 50,000 mammals). No sample yielded a positive PCR result for any of the targeted viral families—Coronaviridae, Filoviridae, Flaviviridae, Orthomyxoviridae and Paramyxoviridae. In the light of recent reports of coronaviruses including a SARS-CoV-2-related virus in Sunda pangolins in China, the lack of any coronavirus detection in our ‘upstream’ market chain samples suggests that these detections in ‘downstream’ animals more plausibly reflect exposure to infected humans, wildlife or other animals within the wildlife trade network. While confirmatory serologic studies are needed, it is likely that Sunda pangolins are incidental hosts of coronaviruses. Our findings further support the importance of ending the trade in wildlife globally.

Keywords: Sunda pangolins, SARS-CoV, Malaysia, COVID-19, Zoonotic viruses, Coronavirus, Wildlife trade

INTRODUCTION

The legal and illegal trade in wildlife for consumption as food, medicine and other products is a globally significant threat to

Diana Ramirez deceased on 31st October 2018.

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