



# INTELLIGENCE REPORT

## Can COVID-19 infect domestic animals?

**Released** 5 March 2020  
**To** Controller, COVID-19 Response  
Intelligence Function Lead, COVID-19 Response  
**From** Biosecurity Intelligence team and Animal and Aquatic Science and Risk team

### Key Judgments

- Despite a recent report of a dog in Hong Kong testing 'weakly positive' for COVID-19 virus, available information indicates that domestic animals are unlikely to become infected or transmit the virus to humans.
  - The reported test cannot distinguish between active infection and the dog passively acquiring viral material from its environment. Only active infection would likely have consequences for human or animal health.
  - We have seen no evidence that dogs or other domestic animals are susceptible to COVID-19 infection.

### Background

1. We recently assessed that domestic animals were unlikely to acquire and transmit COVID-19 virus ([20200207 Domestic animals and 2019-nCoV.pdf](#)).<sup>1</sup> Since then, a 'weak positive' test result has been reported for a dog belonging to a COVID-19 patient in Hong Kong.<sup>2</sup> Our updated assessment in light of this report is summarised below.

### Assessment

#### Can dogs and other domestic animals become infected with COVID-19?

2. We have seen no evidence that dogs or other domestic animals can be infected with COVID-19 virus. The result for the dog in Hong Kong refers to a testing procedure that detects viral genetic material, but does not necessarily imply infection with viable virus.<sup>3</sup>

- The dog may have licked or breathed in viral material present in its environment, and be carrying it passively without becoming infected.

3. We have seen no further reports of positive COVID-19 tests for dogs or other domestic species. We have seen no reports of domestic animals becoming infected or carrying viable COVID-19 virus.

4. Hong Kong authorities say the dog has no clinical signs and they have no evidence that pet animals can be infected.<sup>2,3</sup> They are conducting further tests to determine whether the dog has been infected or is passively carrying environmental contamination.

#### Can dogs and other domestic animals spread COVID-19?

5. It is highly unlikely that people can catch COVID-19 from domestic animals. We have seen no evidence that domestic animals can be infected by the virus and spread it. Domestic animals carrying environmental contamination would be unlikely to transmit viable virus back to humans.

### Should domestic pets living with confirmed cases in NZ be tested for COVID-19?

6. There would be little benefit in testing pets living with people who have COVID-19 in NZ. The tests currently available for domestic animals do not indicate infection or capability to spread the virus.

- Current tests would provide little or no insight into the risks to either humans or domestic animals. Serological tests that would demonstrate COVID-19 infection are not yet available for domestic animals.
- The OIE advocates further research into the susceptibility of domestic animals, to better manage the human epidemic.<sup>4</sup> However, such research would best be undertaken in controlled laboratory conditions, or alternatively, in a society with a large number of human cases and associated animal exposure. *Ad hoc* testing of a very small number of animals in NZ would contribute little to this research.

### Should domestic pets living with confirmed cases in NZ be put into quarantine?

7. There would be little benefit in quarantining pets living with COVID-19 cases in NZ. These pets are unlikely to spread the virus.

- While acknowledging there is no evidence of animal susceptibility, the World Small Animal Veterinary Association and the USA's Centers for Disease Control and Prevention recommend that COVID-19 patients restrict their contact with pets, as a precautionary measure until the virus is better understood.<sup>5,6</sup> Their advice is to minimise physical contact between the patients and their pets, and observe appropriate hygiene measures.

## Conclusion

8. There is no current evidence that domestic animals can be infected by COVID-19 virus or transmit it to humans. BSI and BSRA will continue to monitor COVID-19 and provide updates as required.

## References

1. BSI/BSRA report, 'Does the novel coronavirus that has emerged in China impact domestic animals?' Released 7 February 2020. [20200207 Domestic animals and 2019-nCoV.pdf](#)
2. Hong Kong Agriculture, Fisheries and Conservation Department press release, 'Detection of low level of COVID-19 in pet dog'. Dated 28 February 2020. [https://www.afcd.gov.hk/english/publications/publications\\_press/pr2335.html](https://www.afcd.gov.hk/english/publications/publications_press/pr2335.html)
3. OIE event report, dated 29 February 2020. [https://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&eportid=33455](https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&eportid=33455)
4. OIE informal advisory group discussion presented to WHO Global Research and Innovation Forum, 'Animal and environmental investigations to identify the zoonotic source of the COVID-19 Virus'. Dated 31 January 2020. [https://www.oie.int/fileadmin/Home/eng/Our\\_scientific\\_expertise/docs/pdf/COVID-19/COVID19\\_21Feb.pdf](https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COVID-19/COVID19_21Feb.pdf)
5. World Small Animal Veterinary Association advisory document, 'The New Coronavirus and Companion Animals - Advice for WSAVA Members'. Dated 29 February 2020. [https://wsava.org/wp-content/uploads/2020/02/COVID-19\\_WSAVA-Advisory-Document-Feb-29-2020.pdf](https://wsava.org/wp-content/uploads/2020/02/COVID-19_WSAVA-Advisory-Document-Feb-29-2020.pdf)
6. Centers for Disease Control and Prevention, COVID-19 Frequently Asked Questions. Dated 3 March 2020. <https://www.cdc.gov/coronavirus/2019-ncov/faq.html#2019-nCoV-and-animals>

## IN-CONFIDENCE

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- This Biosecurity Threat Assessment draws on intelligence from a range of sources, BSI comments when appropriate within the body of the report.
- Our assessments and judgements regarding the threat to New Zealand's biosecurity have been drawn from classified, unclassified and open sources. These sources have been assessed as accurate at the time and we have a high confidence in the material used unless otherwise stated.
- BSI notes that an incursion into New Zealand could occur, or may have already occurred, which has not been detected by available sources or agencies. BSI cautions that information on any biosecurity threat may be incomplete at the time of assessment. The Biosecurity threats to New Zealand are always developing, and an undiscovered incursion into New Zealand could occur at any time without prior warning.

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#### BIOSECURITY THREAT LEVEL DEFINITION

Threat Definition	Qualitative Statement
The biosecurity threat is assessed as <b>very unlikely</b>	Remote / Highly unlikely
The biosecurity threat is assessed as <b>unlikely</b>	Improbable / Unlikely
The biosecurity threat is assessed as <b>possible but not expected</b>	Theoretical possibility
The biosecurity threat is assessed as <b>feasible and could well occur</b>	Probable / Likely
The biosecurity threat is assessed as <b>very likely</b>	Very probable / Highly Likely
The biosecurity threat is <b>expected imminently</b>	Almost certain

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