

U.S. safety protocols stopped TB in imported lab monkeys from spreading to humans

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Rigorous safety protocols prevented an outbreak of tuberculosis last year in lab monkeys imported to the United States from spreading to humans, a new report shows.



Overall, 26 cynomolgus macaque monkeys flown in from Southeast Asia to the United States for research purposes were confirmed to be infected with the *Mycobacterium orygis* germ, which causes a form of TB, researchers at the U.S. Centers for Disease Control and Prevention reported.

The monkeys were all humanely euthanized, and were part of a shipment of over 540 animals transported from Southeast Asia in February of 2023.

Infections were swiftly detected, and no humans—handlers, airline crew or workers at labs the remaining monkeys ended up in—became infected with *M. orygis* due to contact with the monkeys.

Overall, the incident "underscores the importance of CDC's regulatory oversight of non-human primate importation and adherence to established biosafety protocols," wrote a team led by CDC veterinary researcher Dr. Samantha Swisher.

Her team said that, in this case, those protocols worked to "protect the health of the United States research animal population and the persons who interact with them."

According to the report, the incident began on Feb. 7, 2023, when an importer involved in the shipment of macaques notified the CDC that one monkey had tested positive for the TB germ.

Like all of the subsequent confirmed cases, that monkey's TB infection was confirmed via lab cultures and genomic testing.

By Feb. 21, the same importer had identified eight more infected monkeys. A total of 32 monkeys from the same shipment went on to test positive in initial testing, but the test can be wrong and after laboratory



analysis, 26 of the monkeys were confirmed to have the TB bacterium.

As is standard protocol, all of the monkeys had undergone rigorous CDC-mandated quarantines, where monkeys are divided up into groups housed in separate rooms, and workers wear <u>protective gear</u> including face respirators.

All animal handlers, airline staff and anyone working at labs that were the recipients of the remaining macaques were recommended to undergo routine and periodic testing for TB.

The CDC team noted that tuberculosis can have a long incubation period, but "as of February 2024 [eight months after the last positive macaque was detected], none of these persons" has tested positive for *M. orygis*.

People who work at labs with research monkeys are routinely tested for TB "to reduce the risk for tuberculosis spread to and from their facilities," Swisher's team added.

But the CDC is never sure whether or not similar precautions are being taken at the captive breeding sites run by suppliers of monkeys in foreign countries.

TB infections can occur in monkeys destined for export to the United States, however, and "this outbreak highlights the importance of public health oversight for imported <u>non-human primates</u>," the researchers said.

The study was published Feb. 22 in the CDC journal Morbidity and Mortality Weekly Report.

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