

## Monitoring of rabies virus circulation through tests of material from run-over animals on the roads of the state of Maranhão – Brazil

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## INTRODUCTION

The state of Maranhão is endemic for rabies and is located in a transition area between the Cerrado (64%), Amazon (35%), and Caatinga (1%) biomes. It is common to see animals being killed on the highways of the state. One form of epidemiological surveillance that can be adopted is the investigation of the rabies virus in animals that have been run over.

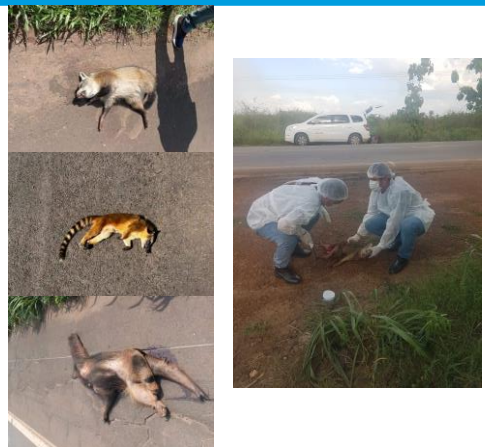
**Objective:** The objective of this study is to monitor the circulation of the rabies virus through tests of samples collected from animals run over on the roads of the state of Maranhão.

## METHODS

Brain samples from wild animals that were run over were collected by teams from the Maranhão State Agency for Agricultural Defense (Aged-MA) during field activities throughout the state. When possible, fragments of the brain are collected, stored in cooling containers, and sent to a rabies laboratory. Direct immunofluorescence and/or RT-qPCR tests are conducted. Collection takes place at the site where the carcass is found, using necropsy materials. Georeferencing is performed along with a photo of the carcass for species identification. Genetic sequencing is carried out for viral typing of positive samples.

## RESULTS

Since 2018, samples have been collected from 2 foxes (*Cercopithecus thous*), 2 coatis (*Nasua nasua*), and 2 southern tamanduas (*Tamandua tetradactyla*). The fox sample in the municipality of Matões do Norte tested positive for rabies, with viral typing identifying it as the *Cercopithecus thous* variant. The other samples tested negative for rabies.



## CONCLUSION

The collection of biological material for rabies from run-over animals is a complementary monitoring alternative for viral circulation; however, this isolated activity is not very effective, as it is not easy to find carcasses in good condition, making this action costly relative to the results obtained.