

# ANIMAL RABIES IN THE STATE OF CEARÁ, BRAZIL: POSITIVITY PATTERN OVER A 21-YEAR PERIOD

**Authors:** Katariny Michelle de Araújo Pinheiro Tavares<sup>1</sup>, Ana Maria Peixoto Cabral Maia<sup>2</sup>, Luiz Osvaldo Rodrigues da Silva<sup>2</sup>, Jarier de Oliveira Moreno<sup>3</sup>, Carlos Henrique Alencar<sup>1</sup>

1. Graduate Program in Public Health - School of Medicine - Federal University of Ceará

2. Health Department of Ceará

3. Agricultural Defense Agency (ADAGRI - CE)

Thanks: Central Public Health Laboratory from Ceará's State

## INTRODUCTION

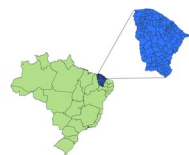
Despite being known since ancient times, rabies remains a public health issue.

## OBJECTIVE

To describe the temporal trend of positive rabies cases in animals in the state of Ceará between 2003 and 2023.

## METHODS

Ceará is located in Northeast Brazil. Secondary data from the Ceará Health Department and the Ceará Agricultural Defense Agency were used. Absolute and relative frequencies of confirmed cases by direct immunofluorescence and biological testing of species per year were calculated. Segmental logarithmic regression with the Joinpoint Program and the Poisson model with



## RESULTS

- 19,249 samples; 1,377 (7.27%) positive.

- Positivity in dogs and cats (138; 10.0%); in wild animals (825; 59.9%) and herbivores (414; 30.1%).

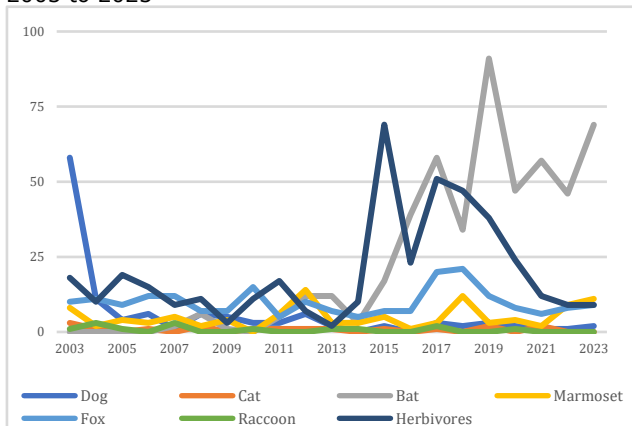
- 2003 to 2005 - decline in dogs (APC=-69.33%,  $p<0.001$ ), followed by stability (APC=7.35%,  $p=0.63$ ) and a modest increase in cats (APC=7.58%,  $p=0.025$ ).

- Bats - continuous increase (APC=8.78%,  $p=0.03$ )

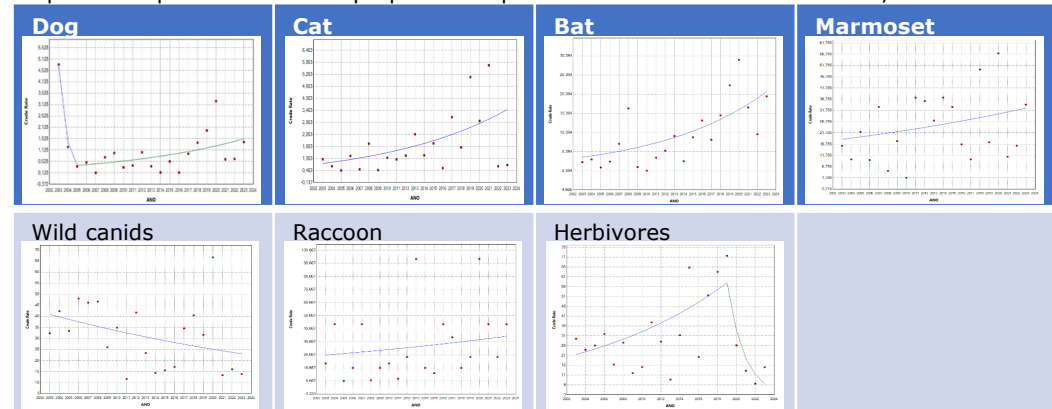
- Herbivores - increase from 2003 to 2019 (APC=6.42%,  $p=0.01$ ) and a decrease from 2019 to 2023 (APC=-42.05%,  $p=0.005$ ).

- Marmosets, wild canids, raccoons - stable.

Graph 1. Positivity pattern for animal rabies in Ceará, 2003 to 2023



Graph 2. Temporal trend of the proportion of positives for animal rabies in Ceará, 2003 to 2023.



## CONCLUSION

- There were changes in the positivity dynamics.
- Since 2015, non-hematophagous bats have been the primary reservoirs of the virus. The increase in cases among herbivores is also noteworthy.
- The rise in positivity in wild animals increases the risk of transmission to other animal species and humans.