



ID der Kurzfassung : 409

Establishing One Health surveillance across human, domestic animals, wildlife and arthropod vectors in two different Brazilian biomes.

Inhalt

Background: Integrated field data from Brazil's biodiverse, fast-changing biomes are scarce. We will investigate the human-animal-environment interface in two different Brazilian biomes: the Pantanal and the Cerrado.

Methods: In a cross-sectional One Health survey, following ethical approval for both human and animal research, 147 rural residents underwent a sociodemographic questionnaire and dermatoneurological examination with active leprosy screening. In parallel, samples were obtained from domestic dogs (sentinels), free-ranging six-banded armadillos (*Euphractus sexcinctus*) captured by a specialised veterinary team, and *Amblyomma sculptum* ticks; whole blood, serum, nasal swabs and ticks were cryopreserved under a standardised protocol. Animal and vector samples will be analysed by untargeted next generation metagenomic sequencing, with host depletion and phylogenetic assignment of divergent viruses.

Results: Ten leprosy cases were clinically diagnosed, illustrating the burden of a neglected disease with recognized zoonotic host/reservoir at the study sites. We assembled a paired, cross-biome biobank of 124 canine, 34 armadillo and 62 tick samples alongside the human cohort forming an integrated One Health biobank.

Conclusions: By coupling wildlife and vector virome discovery with paired host sampling across both biomes, this platform provides a foundation to detect emerging infectious agents and anticipate spillover in threatened Brazilian ecosystems.

Keywords

One Health, Epidemiology, Virology, Public Health

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Professional Status of the Speaker

PhD Student

Junior Scientist Status

Yes, I am a Junior Scientist.

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