



Contribution ID: 530

Type: Oral presentation

## Cross-species transmission of *Strongyloides fuelleborni* at the human–animal interface

Tuesday, October 6, 2026 2:45 PM (15 minutes)

Strongyloidiasis is a neglected tropical disease, yet the epidemiology of *Strongyloides fuelleborni* remains poorly understood despite its broad host range and evidence of zoonotic potential. We investigated parasite circulation among humans, domestic dogs, and non-human primates (NHPs) across African countries (Central African Republic, Guinea-Bissau, Uganda, and Rwanda). Samples were screened by qPCR, and positive samples were characterized using high-throughput sequencing. *Strongyloides fuelleborni* predominated in NHPs and was also frequently detected in humans and dogs. Identical parasite haplotypes were shared among sympatric hosts, providing evidence of parasite exchange at the human–animal interface. The high prevalence and genetic diversity of *S. fuelleborni* in dogs suggest they may act as important bridge hosts, while infections detected in breastfed puppies support vertical transmission. In contrast, mountain gorillas and dogs from Uganda and Rwanda showed low infection prevalence and no evidence of parasite sharing. Although *S. stercoralis* was absent from mountain gorillas, a fatal infection in a gorilla infant was associated exclusively with *S. fuelleborni*, highlighting its potential pathogenicity in endangered wildlife. Our findings demonstrate contrasting transmission patterns across African ecosystems and emphasize the importance of One Health surveillance to better understand parasite transmission at the wildlife–human–domestic animal interface.

### Keywords

Strongyloides, Metabarcoding, shared haplotypes

### Registration ID

2112

### Professional Status of the Speaker

Senior Scientist

### Junior Scientist Status

No, I am not a Junior Scientist.

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