

Molecular detection of *Strongyloides ratti* in faecal samples from wild rats in Serdang, Malaysia

ABSTRACT

Purpose: To detect *Strongyloides ratti* in faecal samples using conventional methods and to confirm the identification using a sensitive and specific method, namely, polymerase chain reaction (PCR).

Methods: A PCR method targeting the small subunit of the rRNA gene was performed in this study for the detection of DNA from *Strongyloides ratti* (an animal model of *S. stercoralis*) in faecal samples of wild Brown rats, *Rattus norvegicus*.

Results: *Strongyloides ratti* was detected in 34.2 % of collected rats by different conventional techniques and confirmed by PCR. The assay presented 100 % sensitivity with *Strongyloides* universal primer.

Conclusion: The findings of this study suggest that the application of PCR with universal primer is a very sensitive methodology to detect *S. ratti* in faecal material of wild rats infected even with very low parasite burden.

Keyword: Faecal; Parasite; *Strongyloides stercoralis*; *Strongyloides ratti*; Brown rat; DNA; Universal primer