

## Detection of pinworms in conventionally maintained laboratory mice

### ABSTRACT

The laboratory mice (*Mus musculus*) are commonly utilised for research purposes. Despite strict biosecurity, they potentially harbour parasites which may compromise the experimental study. Parasite intensity differs among strains of mice. This study aims to identify the presence of parasites between two strains of laboratory mice. A total of 48 mice (n= 48) obtained from the UPM Animal Resource Unit (ARU), consisting of 24 animals for each group of inbred strain Bagg Albino (BALB/c) and outbred Institute Cancer Research (ICR) mice were used for detection of helminths, ectoparasites and blood parasites. Based on parasitological distinct characteristics, *Syphacia obvelata* (*S. obvelata*) and *Aspiculuris tetraptera* (*A. tetraptera*) were detected. Both helminths were seen in 8.33% of BALB/c and 20.83% of ICR mice, respectively. Single infection by *S. obvelata* was detected in 33.33% of BALB/c mice while 12.5% of ICR mice were manifested merely by *A. tetraptera*. The findings revealed an optimal method to identify *S. obvelata* through perianal tape test while *A. tetraptera* is best detected by the faecal flotation technique. Statistically, the type of helminth was significantly associated with the strains of mice ( $P=0.043$ ). Overall, there were low amounts of opportunistic helminths and ova with the absence of ectoparasites and blood parasites for both strains of laboratory mice which is suggestive of appropriate management practised.

**Keyword:** Laboratory mice; Parasitological methods; Pinworms; Strains