ABSTRACT

The main part of the thesis is focused on flagellates of the genus *Porcisia*, parasitizing Neotropical porcupines with unknown vectors. The development of two known species of this genus (*P. deanei* and *P. hertigi*) in two sand fly species (*Lu. migonei*, *Lu. longipalpis*) and biting midges *C. sonorensis* was studied using experimental infections. While *P. hertigi* did not survive defecation in females of either vector, *P. deanei* formed strong mature infections in 51–61% of *Lu. longipalpis* and in a smaller percentage in *Lu. migonei* (7 %) and *C. sonorensis* (7 %). *Porcisia* showed significantly smaller size than the control species *L. infantum* but formed the same morphological forms. The localization of *P. deanei* was exceptional; infections were detected predominantly in Malpighian tubules. Further experiments demonstrated the presence of *P. deanei* in the urine of *Lu. longipalpis* excreted during prediuresis and successful transmission of parasites to BALB/c mice by this unique route. Thus, *Lu. longipalpis* is a competent vector of *P. deanei*, but other vector species may be involved in transmission at endemic localities.

A minor part is focused on the comparison of the morphology of two *Mundinia* species - *L. martiniquensis* and *L. orientalis* – during development in biting midges *C. sonorensis* and sand flies *Ph. argentipes*. Both species formed the same morphological forms in both vectors and their relative representation and measurements were not significantly different.

Keywords

Porcisia, Mundinia, phlebotomus, biting midges, prediuresis, Malpighian tubules