Comparing vector competence of Mepraia gajardoi and Triatoma infestans by genotyping Trypanosoma cruzi discrete typing units present in naturally infected Octodon degus

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 Chagas disease is a vector-borne disease caused by the parasite Trypanosoma cruzi, and transmitted by triatomine insects to several mammal species. In Chile, the wild triatomine species are the endemic Mepraia species, and the only domestic vector of Chagas disease is Triatoma infestans. The aim of this study was to determine the competence of M. gajardoi compared to T. infestans as a T. cruzi vector using the naturally infected rodent Octodon degus. M. gajardoi amplified T. cruzi present in all O. degus studied while T. infestans only in half of the infected rodents. Both triatomine species excrete metacyclic trypomastigotes and amplified the same three T. cruzi DTUs, however, M. gajardoi showed differences in their ability to amplify TcI. TcV and TcVI had the same probability to be amplified by both triatomine species. Both species amplified mixed infections, with TcI-TcVI as the most represented. This study reports the higher vector competence of M. gajardoi in