

CANDIDATUS MIDICHLORIA SP IN A RHIPICEPHALUS SANGUINEUS S.L. NYMPHAL TICK COLLECTED FROM A CAT IN THAILAND

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Abstract. *Candidatus* Midichloria mitochondrii is a bacterial endosymbiont found in multiple tick species. It is released in tick saliva increasing the opportunity for it to spread to and cause disease in vertebrates, including humans. We report here finding *Candidatus* Midichloria sp in a *Rhipicephalus sanguineus* s.l. nymphal tick collected from a cat (*Felis catus*) in Surat Thani Province, southern Thailand. Tick was removed from a cat and identified to species level by molecular taxonomy. PCR and sequencing were conducted and confirmed the presence of *Candidatus* Midichloria sp. A phylogenetic tree was constructed to see the evolutionary relationship of this bacterium with other similar species. Phylogenetic analysis of the 16S rRNA of the isolated *Candidatus* Midichloria sp revealed it is closely related to *Candidatus* Midichloria sp found in a *Haemaphysalis wellingtoni* tick found on a chicken and is related to *Candidatus* Midichloria sp found in several tick genera. Our bacterium was from a branch different from that *Candidatus* Midichloria sp found in a *Rhipicephalus sanguineus* tick reported from Israel. This is the first report of *Candidatus* Midichloria sp found in the nymphal stage of a *Rhipicephalus sanguineus* s.l. tick found on a cat. This is also the first report of *Candidatus* Midichloria mitochondrii in Thailand.

Keywords: *Candidatus* Midichloria sp, *Rhipicephalus sanguineus* s.l., tick, Thailand

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