



Molecular Study of Cryptosporidiosis in Dogs in the Central Region of Iraq

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Abstract: *Cryptosporidium* spp are important zoonotic protozoan parasites that infect more than 280 species of vertebrate animals and can cause acute or chronic diarrhea and even death. For the purpose of determining the *Cryptosporidium* species that infect dogs, this study was designed. One hundred dogs fecal samples were collected from both sexes and different age groups, in Babylon and Al-Qadisiyah provinces / central of Iraq, from November 2020 to Jun 2021. Each sample was subject to nested PCR assay method using two sets of primers to amplify small subunit ribosomal RNA gene, followed by sequencing and phylogenetic analysis to determine the *Cryptosporidium* species. The prevalent rate of infection with *Cryptosporidium* spp was 12%, where the females (14.81%) and youngsters (25%) recorded the highest rate. The sequencing and phylogenetic assay identified two *Cryptosporidium* species *C. parvum* and *C. canis*. *Cryptosporidium* in these two referred species are an endemic protozoan in study area, the sex and age have no significant effect on infection occurs.

Keywords: *Cryptosporidium* species, Dogs, Molecular study, *C. parvum* and *C. canis*
