Iran J Parasitol

# Molecular and Morphological Data Confirmed First Record of Abbreviata kazakhstanica Markov and Paraskiv, 1956 (Spirurida: Physalopteridea) in Iran

**Morteza Ghanbari Johkool [1], Aida Vafae Eslahi [2], Milad Badri [1], Elham Hooshmand [3], Majid Pirestani [2], Daniel Jablonski [4], Rasool Jafari [5], *Abdolhossein Dalimi [2]**

*1. Metabolic Diseases Research Center, Research Institute for Prevention of Non-Communicable Diseases, Qazvin University of Medical Sciences, Qazvin, Iran*
*2. Department of Parasitology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran*
*3. Department of Parasitology, Faculty of Veterinary Medicine, Rasht Branch, Islamic Azad University, Guilan*
*4. Department of Zoology, Comenius University in Bratislava, Mlynská dolina, Ilkovičova 6, 842 15 Bratislava, Slovakia*
*5. Department of Medical Parasitology and Mycology, Faculty of Medicine, Urmia University of Medical Sciences, Urmia, Iran*

## ABSTRACT

***Background:*** The genus *Abbreviata* (Spirurida: Physalopteridea) currently contains 47 species. Physalopteridae nematodes infect a large number of vertebrates, including mammals, birds, reptiles and amphibians. The current study is a report of the first morphological and molecular identification of *A. kazakhstanica* (Spirurida: Physalopteridea) in *Pseudopus apodus* in Iran.

***Methods:*** Eleven road-killed *P. apodus*, were collected from, Iran during 2016-2018. The nematodes were isolated from stomach. After morphological study, the genomic DNA of the parasites was extracted using CTAB method. The DNA was used for PCR amplification of cytochrome c oxidase subunit I (cox1). The PCR products were sequenced, the sequence data were analyzed and multiple alignments were conducted using the Clustal Omega.

***Results:*** After detailed microscopic examination, the *A. kazakhstanica* was identified. The cox1 sequences confirmed the species of helminth. The new sequences of *A. kazakhstanica* were submitted to GenBank under the accession number MK578751-2.

***Conclusion:*** Regarding the limited data on parasitological status of Iranian reptiles, more specific and comprehensive investigations are needed to identify the parasitic fauna

**Keywords** Abbreviata kazakhstanica, Molecular identification, Pseudopus apodus, Physalopteridea, Iran