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Topic: AS03.1 *Diagnostics, phylogeny and genomics*

MOLECULAR ANALYSES OF TAENIID LARVAL CESTODES IN WILD RODENTS FROM SERBIA

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Introduction: Rodents play an important role as intermediate hosts in the transmission of many taeniid species, some of which have great zoonotic potential. Their larval stages develop in the host's body cavities or internal organs. This study aimed to investigate wild rodent populations for cystic parasitic lesions and give insights into taeniid diversity.

Methods: A total of 770 wild rodents belonging to the species *Apodemus flavicollis* (469), *Apodemus agrarius* (152), *Apodemus sylvaticus* (33), *Myodes glareolus* (51), *Microtus arvalis* (48), and *Microtus subterraneus* (17) were captured from 42 sites in Serbia, from 2013-2021, dissected, and examined for cysts and lesions. For confirmation of parasite species, DNA was extracted and mitochondrial marker 12S rDNA was amplified and sequenced.

Results: The total number of rodents that contained cysts or visible lesions were 47 (6.1%). 12S rDNA fragments amplified successfully in 13 larval samples, and three *Taenia* species were identified. *Taenia taeniaeformis* (1.03%;8/770) was dominantly present, followed by *Taenia martis* (0.51%;4/770), and *Taenia crassiceps* (0.12%;1/770). No cysts were found in *A. sylvaticus* and *M. subterraneus*.

Conclusions: We present here the first molecular identification of *Taenia* species in Serbia from larvae found in rodents. Since the applied mitochondrial marker did not amplify successfully in all samples, additional analyses using other genetic markers are needed, as well as further phylogenetic analyses. Acknowledgements This study was financially supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia, Contract Nos. 451-03-68/2022-14/200007

Keywords: *Taenia*, Rodents, larval, PCR, Serbia

