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**Molecular genotyping of *Giardia duodenalis* in preschool children**Molouk Beiromvand<sup>1</sup>, Raziye Kasaei<sup>1</sup>, Ali Jelowdar<sup>1</sup> and David Carmena<sup>2</sup><sup>1</sup>Ahvaz Jundishapur University of Medical Sciences, Iran<sup>2</sup>Carlos III Health Institute, Spain

*Giardia duodenalis* is an intestinal flagellated protozoan that infects humans and several animal species. Based on molecular studies mainly targeting the small subunit (SSU) rRNA gene locus of the parasite, 8 assemblages (A to H) have been identified in humans and other animal species. The aim of the current study was to evaluate the frequency and molecular diversity of *Giardia* in pre-school children from rural and urban day care centers from Behbahan, Southwestern Iran. This cross-sectional study was based on a concentration method for the microscopic detection of *G. duodenalis* in stool samples of 450 children, aged 1-7 years. The survey was conducted from December 2015 to May 2016. PCR-methods targeting the SSU rRNA and triose phosphate isomerase (*TPI*) genes of *G. duodenalis* were used for the identification and genotyping of the parasite isolates. Based on sucrose flotation and microscopy techniques, 2.7% (12/450) of children were infected with *G. duodenalis*, of which six (50.0%) were males and the other six (50.0%) were females. Overall, 91.7% (11/12) of the infections were detected in children from rural areas. The SSU rRNA and *TPI* genes were amplified successfully in nine and eight, respectively of the *Giardia*-positive samples at microscopy. Among the eight *TPI* sequences, assemblage A, sub assemblage AII, was identified in five of the isolates. The sequences of the three remaining samples were untypable. Although no significant statistical difference between genotype and clinical symptoms was found, five out of the eight isolates identified as assemblage A were obtained in asymptomatic children. *Giardia* infections were more prevalent in children from rural day care schools and the predominant assemblage was A, sub-assemblage AII. The higher prevalence of giardiasis in rural areas might be related to differences in personal hygiene habits, parents' education level, source of drinking water and inadequate hygienic toilet facilities in rural areas.

**Biography**

Molouk Beiromvand has completed her PhD at Tehran University of Medical Sciences, Tehran, Iran. She is an Assistant Professor in the Department of Parasitology, School of Medicine at Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

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