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The study of the genetic resemblance of cat and human *Giardia* with PCR-RFLP method

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Giardia duodenalis is the most common intestinal parasite with cosmopolitan distribution. This parasite has been found in the intestine of humans and other mammalian hosts including cats, dogs, cattle, sheep, deer, pigs and muskrats. It is postulated that animals maybe reservoir for human infection and, vice versa. In present study, the possible genetic similarity between cat and humans *Giardia* and its probable zoonosis were investigated. Direct examination and formalin-ether concentration techniques were performed on stray and semi stray cat fecal specimens. Gradient sucrose method was applied for the collection and purification of cysts, and DNA extraction was performed by phenol-chloroform method. DNA of cysts could hardly be extracted after repeated freezing and thawing. Polymerase chain reaction (PCR) was performed for DNA amplification. In this study, triosephosphate isomarase (*tpi*) gene was selected as a molecular marker. Two sets of primers (PM290 and PM924) were considered. Two restriction enzyme RsaI and AvaI were also used to determine restriction fragment length polymorphism (RFLP) for PCR fragments amplified by both primer sets. Ten samples from 166 samples were positive for *Giardia* cysts which were examined for molecular investigation. Four cat isolates were amplified by PM290. PCR-RFLP patterns were found to be similar to human ACAF069556 (subgroup of ACU57897) with possibility of cross-transmission. Therefore the similarity of genomic characters of isolates of cat and human *Giardia* implies possibility of zoonosis and transmission of these protozoa from cat to human and vice versa.

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Production of *Clonorchis sinensis* 7-kDa recombinant protein by using mammalian and *E. coli* systems

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Clonorchis sinensis (Cs) infection is endemic in East Asian countries including Korea. The 7-kDa antigen of *C. sinensis* was known to be localized