Animal Bioresource in Japan

Pentatrichomonas hominis in laboratory-bred common marmosets

Takashi Inoue, Nobuhito Hayashimoto, Masahiko Yasuda, Erika Sasaki, and Toshio Itoh
Central Institute for Experimental Animals, 3-25-12 Tonomachi, Kawasaki-ku, Kawasaki, Kanagawa 210-0821, Japan

Abstarc :

Trichomonadid protozoa have been found in the intestinal tracts of common marmosets (Callithrix jacchus). However, there is little information available on species identification and the pathogenicity of these trichomonads. In this study, we conducted a fecal survey of a common marmoset colony maintained as laboratory animals in Japan and identified the trichomonad species. Screening using a fecal smear examination revealed that 66% (58/88) of the marmosets had trichomonadid trophozoites in their feces. The trichomonads were found in both normal feces (31/49, 63%) and diarrhea (27/39, 69%), with no significant difference in frequency. The protozoa were identified as Pentatrichomonas hominis using morphological characters and the 100% identity of the nucleotide sequence of the partial 18S rRNA gene (297 bp). The intraspecific genetic variability between P. hominis from the marmosets in this study and P. hominis from other reported mammal hosts was ?1% in the nucleotide sequence, including the internal transcribed spacer (ITS)-1, 5.8S rRNA gene, and ITS-2 (293 bp). P. hominis inhabits the large intestine of various mammalian hosts, including primates, and is considered nonpathogenic. These results suggest that P. hominis is transmitted among marmosets and other mammals but is not a primary cause of bowel disease in marmosets.

Key Word :
marmoset, Pentatrichomonas hominis, protozoa, Trichomonas

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