

Molecular detection of *Sarcocystis* in horse meat eaten raw,  
associated with undiagnosed foodborne illness

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**SUMMARY**

Recently, there are the increasing cases of uncertain food poisoning that occurs by eating raw horse meat (basashi) and flounder (hirame sashimi) in Japan. The studies on etiology of the uncertain food poisoning revealed that *Sarcocystis fayeri*, a coccidian parasite infecting horses, is closely associated with the cases eating basashi. Interestingly, it has been known that *S. fayeri*, is non-human infecting species. In this study, we developed a method of molecular detection of *Sarcocystis* in horse meat samples by using PCR. DNA was prepared from the meat samples of food poisoning cases in which *Sarcocystis* was confirmed, as well as the meat commercially available. The 18SrDNA of *Sarcocystis* was partially amplified and sequenced for identification of the parasites. The samples of all cases of food poisoning were positive by PCR test. Positive results were also found in the samples of the meat commercially available. The results of sequence analysis showed that PCR products from the different samples were identical and the sequence was unique to the parasite of horse meat.