

## Taxonomical analysis of *Sarcocystis* sp. from Sika deer (*Cervus nippon centralis*)

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### **SUMMARY**

Though two species of *Sarcocystis*, *S. sybillensis* and *S. wapiti*, have been reported from Japanese Sika deer, sarcocysts having different morphological features from those of the known species were found from the cardiac muscle of Japanese Sika deer captured in Shisou-City, Hyogo Pref. in October 2010 to March 2011. These sarcocysts had at least 3 morphologically different types; an ovoid, a needle-shaped, and a red pepper-shaped ones. All of them had thin walls and no protrusions. When their small subunit (SSU) rRNA gene sequences were compared, they showed high identity to each other, suggesting that they were the same species. Phylogenetic analyses were performed by the comparison of these SSU rRNA gene sequences with the SSU rRNA gene sequences of 33 other *Sarcocystis* species. Phylogenetic trees were constructed using a neighbour-joining and a minimum evolution methods. In these trees, the species found in this study was at the same cluster with the *Sarcocystis* species which use artiodactyls as their intermediate host and canines as the definitive host. From the result, it is suggested that the present species uses a canine as its definitive host.