

Phylogenetic analysis of endosymbiotic ciliates in the horse (*Equus caballus*)

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SUMMARY

Molecular phylogenetic analysis of endosymbiotic ciliates inhabiting the cecum and colon of horses (*Equus caballus*) was performed on the nucleotide sequences of the small subunit ribosomal RNA (SSU rDNA) of six ciliate species, *Triadinium caudatum*, *Spirodinium equi*, *Blepharocorys uncinata*, *Bundleia postciliata*, *B. nana*, and *B. benbrooki*. Molecular phylogenetic trees by neighbor joining and Bayesian methods constructed from their sequence data almost corresponded with the traditional classification based on the oral ciliary zone, suggesting that ancestors of the endosymbiotic ciliates of large herbivores are of the Family Buetschliidae, and that the Families Blepharocorythidae, Cyclopos-thiidae, and Ophryoscolecidae were derived from the Family Buetschliidae.