**Supplementary files.**

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**Supplementary figure 1.** Phylogenetic tree of the *Prototheca* genus built with the MEGA bioinformatics program using the Maximum likelihood algorithm along with the Tamura-Nei model with G+I distribution and bootstrap of 500. Tree results clustered the cytB sequences from this study within the *Prototheca* *bovis* clade. Bootstrap values of each branch within the *Prototheca* *bovis* clade consist of values of 98–99.

|  |  |  |
| --- | --- | --- |
| **Accession number** | **Species** | **Country** |
| NC\_045362.1 | Chlorella vulgaris strain NJ-7 | China |
| NC\_026009.1 | Auxenochlorella protothecoides | China |
| MT240532.1 | Prototheca bovis isolate PAR 2640 | Italia |
| MT240528.1 | Prototheca wickerhamii isolate PAR 1524-1 | Italia |
| MT240527.1 | Prototheca bovis isolate PAR 1572 | Italia |
| MT240526.1 | Prototheca ciferrii isolate 18PAR 3709 | Italia |
| MK452834.1 | Prototheca moriformis strain SAG 263-3 | Puerto Rico |
| MK452832.1 | Prototheca moriformis strain JCM 9640 | Japan |
| MK452830.1 | Prototheca xanthoriae strain JCM 9729 | Netherlands |
| MK452826.1 | Prototheca wickerhamii strain CBS 615.66 | Japan |
| MK452822.1 | Prototheca blaschkeae subsp. brasiliensis strain PR-24 | Brazil |
| MK452821.1 | Prototheca pringsheimii strain SAG 263-6 | Netherlands |
| MK452820.1 | Prototheca pringsheimii strain SAG 263-4 | Puerto Rico |
| MK452817.1 | Prototheca pringsheimii strain JCM 9351 | Poland |
| MK452815.1 | Prototheca bovis strain SAG 2290 | Portugal |
| MK452813.1 | Prototheca bovis strain JCM 9353 | Poland |
| MK452812.1 | Prototheca bovis strain E9 | Poland |
| MK452811.1 | Prototheca cerasi strain JCM 9400 | Japan |
| MK452807.1 | Prototheca zopfii strain UTEX 1434 | Poland |
| MK452799.1 | Prototheca ciferrii strain ATCC MYA-4770 | China |
| MK452796.1 | Prototheca ciferrii strain JCM 9347 | Puerto Rico |
| MK452794.1 | Prototheca cookei strain JCM 8557 | China |
| MH389238.1 | Prototheca bovis | Poland |
| MH389229.1 | Prototheca ciferrii | Poland |
| MF163469.1 | Prototheca bovis strain LZ-5 | Poland |
| MF163464.1 | Prototheca ciferrii strain RZI-3 | Poland |
| MF163463.1 | Prototheca wickerhamii strain W4 | Poland |
| MF163462.1 | Prototheca wickerhamii strain PL1 clone 2 | Poland |
| MF163455.1 | Prototheca stagnorum strain ATCC 16528 | Poland |
| MF163454.1 | Prototheca miyajii strain IFM53848 | Poland |
| MF163453.1 | Prototheca cutis strain ATCC PRA-338 | Poland |
| MF163452.1 | Prototheca blaschkeae strain BEL-7 | Poland |
| GQ339576.1 | Helicosporidium sp. ex Simulium jonesi | Canada |

**Supplementary Table 1.** Sequences retrieved from the GenBank used to develop the phylogenetic tree of the present study. Table shows the accession number of the sequence together with the species and country of origin.