Title: The Chytrid-like Parasites of Algae *Amoeboradix gromovi* gen. et sp. nov. and *Sanchytrium tribonematis* Belong to a New Fungal Lineage<!–<RunningTitle>Two Chytrid-like parasites of Algae Belong to a New Fungal Lineage</RunningTitle>–>

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PII: S1434-4610(17)30093-7
DOI: https://doi.org/10.1016/j.protis.2017.11.002
Reference: PROTIS 25598

To appear in:

Received date: 15-3-2017
Accepted date: 13-11-2017

Please cite this article as: Karpov, Sergey A., López-García, Purificación, Mamkaeva, Maria A., Klimov, Vladimir I., Vishnyakov, Andrey E., Tcvetkova, Victoria S., Moreira, David, The Chytrid-like Parasites of Algae Amoeboradix gromovi gen.et sp.nov.and Sanchytrium tribonematis Belong to a New Fungal Lineage.Protist https://doi.org/10.1016/j.protis.2017.11.002

ORIGINAL PAPER

The Chytrid-like Parasites of Algae *Amoeboradix gromovi* gen. et sp. nov. and *Sanchytrium tribonematis* Belong to a New Fungal Lineage

Running title : Two Chytrid-like parasites of Algae Belong to a New Fungal Lineage

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Submitted March 15, 2017 ; Accepted November 14, 2017

Monitoring Editor : Alastair Simpson

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Fungi encompass, in addition to classically well-studied lineages, an ever-expanding diversity of poorly known lineages including zoosporic chytrid-like parasites. Here, we formally describe *Amoeboradix gromovi* gen. et sp. nov. comprising a set of closely related strains of chytrid-like parasites of the yellow-green alga *Tribonema gayanum* unusually endowed with amoeboid zoospores. Morphological and ultrastructural features of *A. gromovi* observed by light and transmission electron microscopy recall previous descriptions of *Rhizophydium anatropum*. *A. gromovi* exhibits one of the longest kinetosomes known in eukaryotes, composed of microtubular singlets or doublets. To carry out molecular phylogenetic analysis and validate the identification of different life cycle stages, we amplified 18S rRNA genes from three *A. gromovi* strains infecting *T. gayanum* cultures, single sporangia and single zoospores. Molecular phylogenetic analyses of 18S+28S rRNA concatenated genes of the type strain revealed that *A. gromovi* is closely related to the