



Supplementary Figure S1: Different stages of the microsporidian parasite *Dictyocoela duebenum*.

In A, B, C and E, host and microsporidia nuclei are stained blue (DAPI staining), and hybridization of the probe Dd04 on ribosomal RNA of *D. duebenum* in red. In B and F, the spore wall is evidenced by autofluorescence.

A: binucleate meronts (P) at the proximity of the host nucleus (H). The microsporidian nucleolus (arrow) owing to the FISH staining. B, C, D: spores. E, F, G: sporophorous vesicle containing 8 octospores. In most of the cases, only one of the 8 spores was stained by FISH.

A, B, C, E, F: confocal fluorescence microscopy; D, G: Differential Interference Contrast (DIC).