

Molecular identification of a fungus associated with the holoparasitic angiosperm *Hydnora abyssinica* in Namibia

Chimwamurombe P., Erika M., Jacob S.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

In the present study, we have consistently observed a fungus that is in association with the fruits of the holoparasitic angiosperm *Hydnora abyssinica*. This holoparasite spends a large portion of its life cycle underground attached to the roots of its host (various *Acacia* species). This fungal-holoparasite association is intriguing in the sense that the fungus does not cause any reduction in seed viability of the holoparasite. In this study, the objective was to determine the identity of the fungus. Pure single spore cultures of the fungus were obtained and DNA was isolated from fungal mycelium to be used as templates in an internal transcribed spacer (ITS)-PCR amplification. The ITS products were electrophoresed on agarose gels and sequenced in an automated sequencer. Basic Local Alignment Search Tool (BLAST) searches revealed the identity of the fungus to be *Aspergillus niger*. We endeavour to determine the nature of the fungus-holoparasite interaction. We propose that the fungus helps in digesting the fruits to facilitate easy seed dispersal.

Keywords

Aspergillus niger, Holoparasite, *Hydnora abyssinica*, ITS