Emergence of fungal pathogen rhodotorula mucilaginosa and real- time pcr assay for future detection

Abstract :

Rhodotorula species have shown significant worldwide prevalence emerged as fungal pathogen, mainly Rhodotorula mucilaginosa that causes fungemia. In this study, a molecular assay based on real-time PCR using EvaGreen was developed for sensitive and accurate detection of R. mucilaginosa. A pair of primers that specifically target this yeast was designed and the amplification assay was optimized using EvaGreen as the DNA binding dye. The assay could detect and quantify up to 100 fg concentration of genomic DNA from R. mucilaginosa with amplification efficiency of 101.8%. The quantitative real-time PCR assay merits future evaluation study in order to evaluate its potential as molecular diagnosis tool for early detection of rare fungal infection caused by R. mucilaginosa.