

RNA INTERFERENCE OF A MITOCHONDRIAL ALTERNATIVE OXIDASE IN *ASPERGILLUS FUMIGATUS*.

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Aspergillus fumigatus is a saprophytic fungus, responsible for over 90% of cases of invasive aspergillosis, mainly in immunocompromised hosts. Fungal respiration exhibits peculiar features and involves an alternative oxidase pathway not yet fully elucidated. In this sense, we have silenced an *aox* gene in *A. fumigatus* (*Afaox*) by RNA interference. Inverted repeats of a 500 bp of *Afaox* coding sequence were cloned in the pALB1 plasmid, which contain an inverted repeat sequence of *alb1* gene. The positive transformants were inoculated in minimal medium supplemented with xylose or maltose. In xylose medium, the phenotype of the *Afaox/alb1* double silenced strain was the same of the observed for the *alb1* silenced. Both strains grew in green color, as the wild-strain, indicating that the interference was not induced. However, in maltose medium the double silenced strain grew in white color indicating an entire silence. RNA of the white color strain was extracted and the *Afaox* levels were analyzed by Real time-PCR that revealed a decrease of 95%, compared with control. These evidences support the idea of the *Afaox* gene silencing, suggesting that this strain could be used for different phenotypic analysis to determine the role of this gene in *A. fumigatus*.

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