

Effect of itraconazole on *Candida glabrata* biofilm matrix

Rosário Oliveira, Joana Azeredo, Mariana Henriques, Sónia Silva, Melyssa Negri and Tatiana Lourenço, IBB/CEB, Universidade do Minho, Portugal

Number: 14

The emergence of non-*Candida albicans* *Candida* (NCAC) species as a common cause of fungal infection is often associated with the increasing number of immunocompromised patients, the widespread use of indwelling medical devices and the decreased susceptibility to azoles. The ability of *Candida* species to adapt to a variety of different habitats and to form biofilms is also of major contribution to this increased incidence. Thus, the aim of this work was to study the influence of the antifungal agent itraconazole on the matrix composition of *Candida glabrata* biofilms.

Biofilms of *Candida glabrata* vaginal strain 534784 were formed in 6-well plates for 24h. Then, fresh RPMI1640/MOPS medium (control biofilms) and itraconazole (256µg/mL) were added to the previously formed 24h biofilms. After 48h of exposure to these components, biofilms were scraped from the 6-well plates and the extracellular matrix extracted by sonication. The protein and carbohydrate content of the biofilm matrix were determined using a BCA kit and the Dubois method, respectively. The analysis of matrix composition of biofilms exposed to itraconazole showed an increase in both protein and carbohydrate content comparatively to the control.

The results indicate that the presence of itraconazole leads to an increase in the production of extracellular matrix components in *Candida glabrata* biofilms.