



5º Congresso Odontológico de Araçatuba - UNESP
35ª. Jornada Acadêmica "Prof.ª Adjunto Mercês Cunha dos Santos Pinto"
11º. Simpósio de Pós-Graduação "Prof. Titular Celso Martinelli"
7º. Encontro do CAOE
1º. Forum de Egressos
19 a 22 de maio de 2015
UNESP – Câmpus de Araçatuba
Faculdade de Odontologia

Z-002

Comparison of tyrosol's effect on *Candida albicans* and *Candida glabrata* in different stages of biofilm development

Arias LS*, Delbem ACB, Fernandes RA, Feresin LP, Barbosa DB, Monteiro DR
Faculdade de Odontologia de Araçatuba, UNESP

Objectives

The aim of this study was to compare the effect of tyrosol on *Candida albicans* and *Candida glabrata* in different stages of biofilm development (2, 48 and 96 h).

Methods

Tyrosol was diluted in yeast inocula (107 cells/mL in artificial saliva) at 25, 50, 100 and 200 mM, and added to wells of 24-well plates containing the acrylic specimens. Then, the plates were incubated at 37 °C for 2 and 48 h. Moreover, tyrosol was applied to pre-formed biofilms (24-h old) twice a day for 1 min, during 3 days (totaling 96 h-old biofilms). Tyrosol efficacy was assessed by quantification of total biomass (TB), metabolic activity (MA) and colony forming units (CFUs). Data were analyzed by ANOVA and Holm-Sidak test ($\alpha = 0.05$).

Results

For adhesion assays (2 h), tyrosol promoted significant reductions in the TB, MA and CFUs of *C. albicans*, while for *C. glabrata* these reductions occurred only for CFUs in the group 200 mM tyrosol ($p < 0.001$). Further, for 48 h-old biofilms grown in the presence of tyrosol, it was possible to note dose-dependents inhibitory effects for both *Candida* species. Regarding 96 h-old biofilms, tyrosol was more effective in reducing TB and MA on *C. glabrata* biofilms than on *C. albicans*. There were no reductions in CFUs at this stage.

Conclusions

In summary, tyrosol showed better results on the less advanced stages of biofilm development. Thus, this compound has potential to contribute at preventing oral infections caused by *Candida* species.

Acknowledgment: FAPESP (#2013/17767-2, 2013/10285-2 and 2013/03273-8)