

Clinical Image

SEM Image of *Candida Albicans* Biofilms on Plastic Coupons

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Candida is a genus of human fungal opportunistic pathogens implicated in localized infections of the oral mucosa, and oral colonization has been associated with pneumonia [1] and sepsis [2]. *Candida* is the fourth leading cause of nosocomial bloodstream infections in hospitalized patients [3]. Approximately 80% of infections are associated with biofilm formation, and *Candida* in biofilms demonstrate increased resistance to antifungal therapies [4,5].

Fungal biofilms were prepared on custom-made, pre-sterilized coupons. An inoculum of *Candida albicans* was transferred onto the coupons and incubated for 1.5 h at 37°C with agitation. After the adhesion phase, the coupons were washed twice, fresh YNB medium added, and further incubated for 24 h at 37°C. Thereafter, the coupons were washed twice and placed in 1% osmium tetroxide for 1 h. Samples were subsequently washed with distilled water, dehydrated in a series of ethanol solutions (70% for 10 min, 95% for 10 min and 100% for 20 min), and air-dried overnight in a desiccator prior to

sputter coating with gold (JFC1 100; JEOL). The surface topographies of the *C. albicans* biofilms were viewed with a scanning electron microscope (Philip XL30CP).

References

1. Barkauskas CE, Perfect JR. "Candida pneumonia: What we know and what we don't." *Current Fungal Infection Reports*. 2009; 3: 21-31.
2. Dongari-Bagtzoglou A. "Pathogenesis of mucosal biofilm infections: challenges and progress." *Expert Rev Anti Infect Ther*. 2008; 6: 201-208.
3. Gautam H, Kaur R. "Oral thrush to candidemia: a morbid outcome." *J Int Assoc Physicians AIDS Care (Chic)*. 2010; 9: 325-327.
4. Lewis RE. "Overview of the changing epidemiology of candidemia." *Curr Med Res Opin*. 2009; 25: 1732-1740.
5. Tsang PW, Bandara HM. "Purpurin suppresses *Candida albicans* biofilm formation and hyphal development." *PLoS One*. 2012; 7: 50866.

