Abstract

This work is focused on multidrug resistance transporters (MDR) and their role in the drug resistance of yeast biofilms. Biofilms are structured microbial communities that are markedly different from planktonic cells. Biofilm cells produce extracellular matrix and display other typical characteristics related to their enormous resistance to antimicrobial agents. MDR pumps contribute to higher resistance of biofilms only during early phases of biofilm development; later, MDR pumps are substituted by many other mechanisms. Cdr1p, Cdr2p and Mdr1p are the most important MDR transporters of *Candida albicans*. Cdr1p and Cdr2p cause resistance to azoles – fluconazole, ketoconazole and itraconazole, which have been widely used as drugs against yeast infections. Mdr1p contributes also to the resistance to fluconazole. Drug resistance causes considerable problems in the treatment of fungal infections. For this reason, it is so important to understand drug-resistance mechanisms of yeast communities.

Keywords: resistance, MDR transporters, *Candida albicans*, biofilms