

Pathogenic yeasts of the genus *Candida* and the bacterium *Pseudomonas aeruginosa* are opportunistic pathogens and they often occur in the human microflora as harmless commensals. They do not mean a threat for healthy humans but they can represent a true hazard for a person with suppressed immunity.

Cystic fibrosis (CF) is an incurable genetic disease and among others, it causes suppression of immunity. Most of the patients with CF suffer from the chronic lung infections caused by the bacterium *Pseudomonas aeruginosa*. The pathogenic yeasts can coexist with the bacteria both in lungs of the CF patients, and on various surfaces, e.g. catheters used in hospitals. Therefore it is important to explore the mode of their interaction in the host body, as well as in vitro.

Both *Candida* and *Pseudomonas* secrete a range of proteins that act as virulence factors, and also small molecules, which mediate the interaction and communication between microorganisms. We therefore tested cocultivation of two *Candida* species (*C. albicans* and *C. parapsilosis*) with *P. aeruginosa* in three different chemically defined liquid media. We monitored viability and survival of the individual species and analyzed the proteins secreted to the media. We found that *P. aeruginosa* secreted several hydrolytic enzymes, for example aminopeptidase, keratinase or elastase. We found only one protein secreted by *C. albicans* in presence of *P. aeruginosa*: hypothetical LDG family protein 8, which has not been characterized as yet. This study will provide a starting point for a more extensive project focused on various aspects of interactions between *P. aeruginosa* and either *C. albicans* or *C. parapsilosis*.