

ABSTRACT

Charles University in Prague
Faculty of Pharmacy in Hradec Králové
Department of Biochemical Sciences

Candidate: Bc. Tereza Foglová

Supervisor: prof. MUDr. Jaroslav Dršata CSc.

External consultant: MUDr. Jana Matonohová DiS.

Title of diploma thesis: **Assessment of microbial load in the infection wound**

The incidence of chronic wounds rises with age. The most common type of chronic wounds are chronic leg ulcers, which affect 1 – 2 % of the population in the developed countries. *Staphylococcus aureus* and *Pseudomonas aeruginosa* are the most common agents isolated from chronic wounds. Their high antimicrobial resistance and ability to form biofilm considerably prolong wound healing, in some cases make it impossible.

In this study, we compared the cultivation with real-time PCR. We used the species *Pseudomonas aeruginosa* for comparison. *Pseudomonas aeruginosa* was isolated from biofilm, which was a part of artificial wound. We collected tissue biopsies during wound healing. We determined CFU by cultivation and quantification real-time PCR.

The results of cultivation was clear downward trend in the number of bacteria in wound healing. Decline was not as pronounced for real-time PCR.

