# Abstract

Charles University in Prague
Faculty of Pharmacy in Hradec Králové
Department of Biological and Medical Sciences

Candidate: Bc. Šárka Fenclová
Supervisor: MUDr. Pavla Paterová
Title of diploma thesis: Occurence of multidrug-resistant *Pseudomonas aeruginosa* in University Hospital Hradec Králové

Multidrug-resistant strains of *Pseudomonas aeruginosa* are increasingly frequent threat especially among nosocomial pathogens. Therapy of infections caused by the microbe becomes a problem has occurred and even when there is no effective antibiotic.

The content of this thesis is a summary of knowledge of the bacterium, its diagnosis, treatment and epidemiology of infections. The experimental part focuses on the overall incidence of multidrug-resistant *Pseudomonas aeruginosa*, and as multiresistant this bacterium was evaluated in resistance to at least 3 of the 6 anti-pseudomonas used antibiotics, for the years 2012 - 2014. It is also evaluated the number of new cases of multidrug-resistant *Pseudomonas aeruginosa* for the years 2012-2014 which is divided according to the type of material, according clinics, by subject, age and sex of the patient and the period of coverage. The final character was observed phenotypic antibiotic resistance for the years 2008 - 2014, together with the consumption of antibiotics in the University Hospital in Hradec Králové.

At the University Hospital in Hradec Králové was for the years 2012 - 2014 a total of 2,923 bacterial rods positive isolates of multidrug-resistant *Pseudomonas aeruginosa* from 685 patients. As most risky workplace, as regards the occurrence of multiresistant *Pseudomonas aeruginosa* was evaluated Clinic gerontology and metabolic particular ICU B department. The most commonly affected older males. For new incidences dominated as clinical material from the urinary tract and particularly urinary catheter and a permanent urinary catheter. The most frequently antibiotic resistance phenotype was ceftazidime, ciprofloxacin, gentamicin, meropenem and piperacillin / tazobactam.