

Cystic fibrosis (mucoviscidosis) is an incurable genetic disease caused by mutations in the CFTR (Cystic Fibrosis Transmembrane Conductance Regulator Gene). The most common causes of increased mortality and morbidity of patients include bacterial respiratory infections which may occur even due to less frequent pathogens. Bacterial species of the *Ralstonia* and *Achromobacter* genera are not considered pathogenic for healthy people, but they have been established as pathogens in the sputum of patients with CF. However, due to their phenotypic similarity to other bacterial pathogens encountered in patients with CF, microbiologists often do not pay attention to them.

The aim of this thesis was to propose some methods of identification of the genus *Ralstonia*, to determine both quantitative and qualitative susceptibility towards antibiotics, and to make a bibliographical search focused on the issue of the *Achromobacter* genus.

Strains of *Ralstonia* spp. were identified using phenotypic and genotypic methods and were tested for the susceptibility towards antibiotics. The thesis also proposes a new method of genotypic identification of *R. respiraculi*.