Abstract

The ability to cope with an unusual stressful environment is one of the most important aspects of survival. In the plant family Brassicaceae, there are several species with an unusual ability to hyperaccumulate heavy metals. This ability gives them a significant advantage in colonising habitats with soil rich in heavy metals. This bachelor thesis explores the diversity of nickel (Ni) hyperaccumulating species from the Brassicaceae family and provides a summary of current knowledge from both a physiological and molecular, as well as a genetic and evolutionary perspective. The rapid development of genomic and transcriptomic methods makes it possible to further identify the processes involved in the ability of hyperaccumulation. This knowledge paves the way for us to apply new mechanisms in caring for our environment and deepens our understanding of evolution.

Key words: hyperaccumulation, nickel, Brassicaceae, adaptation, evolution, diversity