## Abstract

Plant roots are in constant contact with soil microorganisms and fungi, and they come in contact with soil fauna and the roots of other plants. All components of the soil biota communicate with each other. When it comes to plants it is often a chemical communication through root exudates, chemicals that plants release into the soil. Through root exudation, plants also affect the abiotic component of the soil, which helps them to obtain nutrients. The production of root exudates is important in attracting symbionts and beneficial organisms and, conversely, in repelling or killing pathogens and parasites. Thanks to root exudates, plants can recognize neighbouring plants, suppress the growth of competitors, or avoid competition with kin, and parasitic plants use root exudates as signals to find its host. By the action of root exudates, plants create their own community of microorganisms and fungi in the rhizosphere, adjust the availability of nutrients and thus actively change living conditions in the soil. This bachelor thesis focuses on plant interactions through root exudates and mentions the ways in which root exudation can be studied. The following diploma thesis will discuss the influence of root exudates of invasive plants on the native plant community.