

Arbuscular mycorrhizal symbiosis is one of the oldest and still most common interactions. This relationship between small soil fungi and plant roots, especially herbs, is the subject of research with, among other things, a promising use in sustainable agriculture. However, intensive research is also taking place at the cellular and molecular level, as the exact mechanisms of functioning of this symbiosis are still shrouded in mystery. Understanding these processes is desirable not only in the boom of genetic engineering.

A commonly used model organism for the research of plant symbioses is a smaller legume of the genus medick - *Medicago truncatula*. Using a microarray for all known *M. truncatula* genes and by comparing mycorrhizal and non-mycorrhizal plants, the author identified several genes that could participate in symbiosis and he wrote a thesis from these results. In a follow-up experiment with an intervention in plant physiology, the authors of the article (Konečný et al., 2019) point to the probable involvement of some previously unreported genes in symbiosis, but also to different modes of regulation in genes whose probable symbiotic function is already published.

This rigorous thesis focuses on the introduction of the first-author publication, a closer explanation of the experiment, which is not part of the diploma thesis and is key information in the peer-reviewed article, and comments on literature, which cite this publication.