Symbiotic germination of the seeds and the seedling development of *Serapias vomeracea* subsp. *laxiflora*

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Serapias vomeracea subsp. *laxiflora* is one of the orchid species that collect tubers to make salep and all orchid species are under threat of extinction due to the collection of tubers and the destruction of natural areas in Turkey. For germination of orchid seeds in natural habitats, a suitable fungus is required. The suitable fungus/fungi are *Rhizoctonia*-like fungi that participate in mycorrhizal associations at the roots of adult orchid plants. For the production of orchids from seed, fungi stimulating germination should be determined. In this study, the fungi participating in mycorrhizal association in *Serapias vomeracea* subsp *laxiflora* roots were isolated and the effects of these fungi on seed germination in sterilized culture media have been determined. The isolations were done monthly for two years from the roots of three plants of *S. vomeracea* subsp. *laxiflora*. The fungi participating in mycorrhizal association with the roots were described by morphological and molecular methods and revealed that dominant fungus of mycorrhizal association was *Tulasnella.* In addition to, *Fusarium tricinctum, Aspergillus spelaeus* and *Talaromyces pinophilus* were isolated from the roots. All the fungi were used to symbiotic germination tests. *Tulasnella* spp. promoted the seed germination and seedling development, the other fungi did not.

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