



Induction of the embryogenesis process in anther and microspores cultures at the *Lupinus albus* species

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Lupine breeding, and vegetable breeding generally, is constrained by the inability of producing double haploid (DH) plants, which would accelerate the selection and release of new varieties. This technology is still in the developmental phase for vegetables, although other major grain crops such as wheat, barley, and canola successfully use DHs on a commercial scale. The most used technique is the anther culture with microspores at the mono nucleate stage which are being isolated from flower buds and grown in vitro. Recently good results had been obtained using the microspore culture technique. The aim of this study is to evaluate the possibilities of obtaining somatic embryos using both of these techniques on the *Lupinus albus* species. We have obtained embryo - like structures on MS culture medium supplied with 2,4 D and BAP in both cases, but we consider that for the microspore culture, this technique is more efficient.