

Direct shoot regeneration from cotyledon and leaf explants of *Arbutus andrachne* L.

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Arbutus andrachne L is a medicinal plant contains many useful secondary metabolites with antioxidant activity like arbutin and catechin. In Palestine, this species is endangered and difficult to propagate due to low seed germination under natural conditions and difficult rooting in cuttings. Accordingly, this study describes a simple and very effective protocol for mass propagation of *A. andrachne* through direct shoot regeneration from cotyledonary and leaf explants taken from germinated seedlings. This approach was tested by manipulating basal growth media (MS, B5 or WPM) with different hormonal concentrations and types (NAA and TDZ) from 0.1 to 2.5 mg/l. Both cotyledonary and leaf explants of *A. andrachne* have directly formed adventitious shoots from wounds within 6 weeks. Leaf explants gave higher number of shoots (12 shoots/leaf) than cotyledonary explants (6 shoots/explant). These plantlets will be rooted and transferred to acclimatization greenhouse before being transferred to the open field. In conclusion, this protocol is very useful for a large-scale propagation of this valuable medicinal plant. Development of this basic protocol will be done to investigate more types of media and other hormonal combinations.