Phytochemical studies on tissue culture of Ambrosia maritima: an Egyptian medicinal plant for renal diseases

Abstract

Successful induction and maintenance of hairy root culture of *Ambrosia maritima*, a system to study the biosynthetic machinery of this species on the organ level. Induction and maintenance of the static and cell cultures were also achieved. Optimization of the growth conditions, concerning the growth regulators and ammonium ion for the static culture were carried out. Still we have the following questions not answered yet: are any of the established cultures able to produce sesquiterpene lactones, the biologically active components of this species. Whether or not, the hairy root culture can be successfully elicited to produce polyacetylene phytoalexins, previously isolated from *Ambrosia artemisifolia*. What are the optimum media composition and other culture conditions for high production of the biologically active compounds as well as high growth rate.