

RFLP ANALYSIS OF cpDNA OF *SALVIA OFFICINALIS*. L OF NORTHERN ALBANIA CAN SERVE TO ELUCIDATE GENETIC DIVERSITY AMONG CLOSE NATURAL POPULATIONS

Stela PAPA^{1*} & Ariola BACU²

^{1,2} Department of Biotechnology, Faculty of Natural Sciences, University of Tirana, Albania, Blv “Zogu I”.
TIRANA, ALBANIA

ABSTRACT

In higher plants in the plastid takes place the non-mevalonic acid pathway, which synthesizes among others the monoterpenoids, with specific roles in plant defense against biotic and abiotic stresses, or treated as signal molecules to attract the insects of pollination. Restriction analysis of cpDNA fragments amplified with universal primers has been used in a variety of plant species identification, genetic diversity and phylogenetic studies. In present study the genetic diversity of 43 genotypes of *Salvia officinalis* of Northern Albania were analyzed based on a methodology, which used the RFLP-PCR on the inter-genic region trnL-F of the cpDNA (Walker *et al.*, 2004). PCR products were separately digested with two restriction enzymes (AluI and TaqI), which were used to cut the amplicons, and NTSYS software to build dendrograms of similarity among genotypes based on binary matrices (presence/non-presence of restriction bands). Results show that 43 genotypes could be grouped in 6 main clusters, and that genotypes of Kruja and Torovec are quite distinctive from the rest. The most unique genotypes will be used to further study possible diversity of monoterpene synthase coding genes, which are located in the cpDNA.

Keywords: cpDNA, monoterpene synthases, RFLP-PCR.