

Taxonomic Revision of six Astragalus Sections That Native to Turkey based on three non-coding *trn* regions of cpDNA

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Aim of the study: *Astragalus*, belonging to the legume family *Fabaceae*, is a large genus with about 3,000 species of herbs and small shrubs in Northern Hemisphere. The aim of this study is to revise *Macrophyllum*, *Hymenostegis*, *Poterion*, *Megalocystis*, *Halicacabus* and *Hymenocoleus* sections of genus *Astragalus* naturally found in Turkey by using three non-coding *trn* regions from chloroplast DNA.

Material and Methods: Twenty-nine different species that belongs to six *Astragalus* sections native to Turkey were studied. Samples were collected from natural habitats of each species in Turkey. All DNA isolations were done by using optimized CTAB method (Doyle&Doyle). Universal primers from *Taberlet* et. al. were carried out for amplifying *trnL3'-5'*, *trnL-F* and *trn Val* regions. For molecular data analysis MEGA software were used and Neighbour Joining method with bootstrap test analysis was used for constructing phylogenetic trees.

Results: Totally regions were aligned as 1238 base pairs in length and 43 of them were variable. 22 of these variables were parsimony informative. Overall genetic diversity among species were 0,0060. According to phylogenetic tree there were 2 different main clades. *Hymenostegis* section composed one of this clade and the others were located in other main clade. *Poterion* section was distinct than other sections and *Hymenocoleus* section stayed in one different branch in the tree. Moreover, species of *Megalocystis* and *Halicacabus* sections were located closed to each other.

Acknowledgements: This study was support by TUBITAK with TBAG-110 T 911 numbered project.

Keywords: *Astragalus*, non-coding *trn* regions, chloroplast DNA, phylogenetic relationship