

## Assessment of Genetic Diversity among Wild Bulgarian Berries as Determined by Random Amplified Polymorphic DNA (RAPD)

**Authors :** Ilian Badjakov, Ivayla Dincheva, Violeta Kondakova, Rossitza Batchvarova

**Abstract :** In this study, we present our initial results on the assessment of genetic diversity among wild Bulgarian berry accessions (*Rubus idaeus* L. *Fragaria Vesca* L., *Vaccinium vitis-idaea* L., *Vaccinium myrtillus* L.) using Random Amplified Polymorphic DNA (RAPDs) markers. Leaves and fruits were collected from two natural habitats - the Balkan Mountain and the Mountain of Orpheus - Rhodope Mountain. All accessions were screened for their polymorphism using five RAPD primers. The phylogenetic distances calculated from RAPD data ranged from 0.29 to 0.82 thus indicating that a high level of gene diversity is present in the selected genotypes. In order to characterize further the structure and grouping of berry accessions, a dendrogram deriving from UPGMA cluster analysis based on the genetic similarity (GS) coefficient matrix was designed. RAPD analysis provided to be efficient for discrimination of accessions within the same species with similar morphological characters

**Keywords :** Bulgarian wild berries, genetic diversity, RAPD, UPGMA

**Conference Title :** ICMPPNP 2016 : International Conference on Medicinal Plants and Natural Products

**Conference Location :** Paris, France

**Conference Dates :** July 25-26, 2016