

## Genetic structure of a worldwide germplasm collection of *Prunus armeniaca* L. species

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# ABSTRACTS



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## Genetic Structure of a Worldwide Germplasm Collection of *Prunus armeniaca* L. species

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### Abstract

Analyses of genetic structure and phylogenetic relationships illuminate the origin and domestication of crop species and have important implications for plant

breeding programs and the conservation of genetic resources. We provide the first study on apricot (*Prunus armeniaca* L.) genetic resources using 25 SSR markers and collection that are widely dispersed around the world. Analysis of allelic diversity of SSR data revealed at least a double pattern of diffusion from Central Asia to the eastern and to the western countries with a clear east-west loss of genetic diversity related to the genetic bottleneck during apricot domestication. Structure and phylogenetic analysis indicated that accessions from Central Asia and China were genetically most diversified suggesting that this large region constitutes the apricot centre of origin. Starting from the centre of origin, apricot spread (i) to Central Asia up to the Irano-Caucasian region from there two apricot diffusion routes were evidenced: one through South Eastern Europe up to Mediterranean countries and one through the Central European countries and (ii) to Eastern countries with another route up to Japan. These results provide answers to apricot evolution and domestication and inform breeders on genetic structure of apricot genetic resources.