



## Genetic diversity of the Chinese traditional herb *Blumea balsamifera* (Asteraceae) based on AFLP markers

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**ABSTRACT.** *Blumea balsamifera* is a commercially important medicinal herb in China and other parts of Asia. It is used to produce borneol. This plant grows in the wild, but resources have diminished greatly in recent years. We examined the genetic diversity of this species to help develop conservation strategies; 35 plants from five provinces were analyzed using AFLPs. Eight AFLP primer combinations generated 1367 fragments, giving a mean of 172 fragments per primer combination. Polymorphism in the germplasm analysis was found for 1360 (99.48%) of the fragments, of which 264 (19.27%) fragments were unique (accession specific) and 423 (25.33%) of the fragments were rare (present in less than 10% of the accessions). The polymorphic

fragments were used to group the accessions in a UPGMA phenogram. Most grouping was geographical. In general, accessions coming from Guizhou and Guangxi showed higher diversities as these accessions were scattered in different groups. The genetic distance estimated by Jaccard similarity coefficient index showed low variability among genotypes (coefficient value ranged from 0.60 to 0.95). More attention should be given to the study and conservation of the biodiversity of this economically important genus.

**Key words:** *Blumea balsamifera*; Genetic diversity; AFLP; Conservation genetics