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Comparison of Genus *Atractylodes* Based on AFLP and SCAR

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Genus *Atractylodes* is composed of *Atractylodes japonica* and *A. macrocephala* which are very important herbal medicines in Korea and China. The present study is paying special attention on the discrimination between *A. japonica* and *A. macrocephala* based on molecular markers, amplified fragment length polymorphism (AFLP) analyses and SCAR markers. Taxonomic character sets should be scrutinized phylogenetically in order to determine what information they provide about the relatedness of taxa within a group. The phenotypic frequency of each band was calculated and used in estimating genetic diversity (H) within populations. The mean H of *A. japonica* (0.211) was higher than that (0.129) of *A. macrocephala*. The DNA sequence from *AjAF-1* consists of 168 bp nucleotide sequences and was specific in *A. japonica*. The DNA sequence from *AmAF-1* consists of 138 bp nucleotides and was specific in *A. macrocephala*. The molecular data allowed us to resolve well-supported clades in Korean and Chinese populations.