

**Morphological characteristics and genetic biodiversity of *Arcangelisia flava* (L.) Merr. in South provinces of Vietnam**

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**Summary:** *Arcangelisia flava* (L.) Merr. is one of the medicinal plants with high level of berberin. This species have been discovered in Lam Dong and Dong Nai province with the different berberin levels and morphological characters. In this study, the biodiversity of *Arcangelisia flava* (L.) Merr. was identified by morphological and genetic diversity in eight accessions of this species. The characteristics of stems and leaves of *Arcangelisia flava* (L.) Merr. accessions were described and distinguished, in which one of the accessions (AR6) showed the significant difference from the others. The genetic diversity was identified by random amplified polymorphic DNA (RAPD) technique. Twenty-six selected RAPD primers generated 145 bands, in which 85 bands were polymorphic (58.62%). Four single DNA bands occurred in 3 primers had been identified as accurate markers for four different accessions. Genetic similarity coefficients of eight accessions of *Arcangelisia flava* (L.) Merr. in each pair ranged from 0.66 to 0.86 with an average of 0.76. The phylogenetic tree derived from the RAPD results were complemented with morphological characteristics. These results have been useful for studying the genetic relationships between accessions of *Arcangelisia flava* (L.) Merr.