



## Mendelian inheritance, genetic linkage, and genotypic disequilibrium at microsatellite loci in *Genipa americana* L. (Rubiaceae)

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**ABSTRACT.** *Genipa americana* is a tropical tree species that is widely distributed in the humid tropical and subtropical regions of Central and South America. This study investigated Mendelian inheritance, genetic linkage, and genotypic disequilibrium at six microsatellite loci developed for *G. americana*. Adult trees (188) and regenerants (163) were sampled and genotyped in a fragmented population of the species. We also genotyped open-pollinated seeds from 12 seed-trees during reproductive events in 2010 and 2011. Significant deviations from the expected 1:1 Mendelian segregation were detected in 29.5% of the tests. Significant genetic linkage between pairwise loci was detected

in 54.4% of the tests, but no genotypic disequilibrium was detected between pairwise loci for adult trees and regenerants. Overall, the results indicate that the six loci analyzed may be used in studies of *G. americana*'s genetic diversity and structure, its mating system, and in parentage analyses.

**Key words:** Conservation; Jenipapo; Microsatellites; Tropical tree species; Population genetics