The genus Lippia (Verbenaceae) comprise around 160 species spread out mainly in South and Central Americas with few African species, some of them with potential medicinal use. Brazil is one the most important centers of diversity with approximately 75% of the species described so far. Innumerable species are endemic and poorly studied especially at a cytological level. Here, chromosomal length, karyomorphology and chromosome asymmetry of twelve Brazilian species of Lippia were evaluated [L. alba (Miller) N.E.Brown, L. diamantinensis Glaz., L. florida Cham., L. hermanioides Cham., L. lacunosa Mart. & Schauer, L. lupulina Cham., L. pohliana Schauer, L. pseudothea (St. Hil) Schauer, L. rosella Moldenke, L. rotundifolia Cham., L. rubella Moldenke and L. sidoides Cham.]. The analysis suggested that the genus has a variable chromosome number (from 2n = 20 to 2n = 56) originated by dysploidy and polyploidy. This is the first description of chromosome morphology for 11 of the 12 Lippia species studied.

**Keywords**
Chromosomes, cytology, dysploidy, karyology, Lippia, polyploidy.