**THE PLASTOME OF *PERESKIA ACULEATA* REVEALS VERY SHORT INVERTED REPEATS AND SPECIFIC GENE REARRANGEMENTS**

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*Pereskia aculeata* Miller., also popularly recognized as *ora-pró-nóbis* or lemonvine (among others popular names), is a species of family Cactaceae. This plant has great importance for developing countries as high-quality food source, since its leaves have high content of essential aminoacids, minerals and other compounds of nutritional importance. Additionally, little is known about its genetic pool, so selection of elite genotypes and conservation strategies make the development of molecular markers essential to assess natural populations and germplasm collections. Moreover, the family Cactaceae has been targeted for several phylogenetic studies, but the relationship between some lineages remains unclear. Therefore, we sequenced and characterized in detail the plastome of *Pereskia aculeata*, which is a circular DNA molecule of 139,622 bp with a typical quadripartite structure including two inverted repeats (IRs) of 9,175 bp flanking a large single copy region of 87,207 bp and a small single copy region of 34,065 bp. The IRs encode only a major part of *ycf2* gene, a minor part of *ndhB* gene e the *trnL*-CAA gene. Other uncommon features of *P. aculeata* plastome are the degeneration of the *accD* gene (pseudogene), the loss of *rpl2* intron (normally highly conserved in angiosperm plastomes), the presence of ribosomal RNA genes outside of the IRs, and the duplication of *clpP* gene. Finally, the complete sequence of *P. aculeata* plastome brings new insights into the plastid evolution in the family Cactaceae and provides molecular tools for use in different genetic and evolutionary studies.

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