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Título	Clonal propagation of <i>Psychotria leiocarpa</i> , an alkaloid producing understory species of the Atlantic forest
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Clonal propagation of *Psychotria leiocarpa*, an alkaloid producing understory species of the Atlantic forest

Psychotria leiocarpa Cham. & Schlttdl. (Rubiaceae) is a tree that produces N, β -D-glucopyranosylvincosamide (GPV), an effective antioxidant and UV protectant alkaloid. Sustainable generation of *P. leiocarpa* biomass is required for alkaloid extraction. However, the species showed rooting recalcitrance in early experiments. To optimize rooting protocols and enable clonal propagation, cuttings with approximately 8 cm in length and containing 2-3 leaves, were harvested from a natural population.

Based on previous screening experiments for rooting protocol definition, cuttings were submitted to a hydroponic system containing 1 mg.L⁻¹ of the auxin indole-3-butyric acid (IBA - treatment) or without auxin (control). After 3.5 months, cuttings survival, rooting percentage, number of roots per rooted cutting and length of the longest root were analyzed. On average, survival rates were close to 98% and rooting rates ranged from 25% (control) to 58% (IBA). Auxin exposure significantly improved rooting percentage and root number per cutting. Moreover, differences were observed between cuttings obtained from distinct mother plants.

All transplanted individuals survived after approximately 2 months in soil and show vigorous growth to this date. The hydroponic rooting system of cuttings proved effective for clonal propagation of this native woody species. Thin layer chromatography indicated that clonal plants were able to accumulate GPV. Further analyses aim to understand the impact of clonal propagation on GPV yield through high performance liquid chromatography (HPLC).

Keywords: auxin, *Psychotria leiocarpa*, N, β -D-glucopyranosylvincosamide (GPV), rooting.

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