Evento	Salão UFRGS 2022: SIC - XXXIV SALÃO DE INICIAÇÃO CIENTÍFICA DA UFRGS
Ano	2022
Local	Campus Centro - UFRGS
Título	Adventitious rooting of Psychotria leiocarpa cuttings for clonal propagation
Autor	PEDRO ARRUDA UBER
Orientador	ARTHUR GERMANO FETT NETO

Psychotria leiocarpa Cham. & Schltdl. (Rubiaceae) is a tree that produces N,β-D-glucopyranosylvincosamide (GPV), and 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. Two sets of experiments were assembled, involving two different harvesting times. Cuttings were submitted to 12 treatments in a hydroponic system, combining different concentrations and duration of exposure to the auxin indole-3-butyric acid and the rooting cofactor boron. After 49 days, cuttings survival, rooting percentage, number of roots per rooted cutting, length of the longest root, and total root area were analyzed. On average, survival was *circa* 80% and rooting rates ranged from 7% to 60%. Other parameters also varied, but with less significant differences. Control cuttings differed significantly in rooting percentage depending on recent rainfall received by donor plants, indicating short term weather-related changes in propagation efficiency. More than 100 individuals are being successfully cultivated after transfer to soil. The hydroponic rooting system of cuttings proved effective for clonal propagation of this species. Further experiments are examining other optimization parameters of the procedure and its impact on GPV yield.