10th Brazilian Conference on Natural Products
XXXVI RESEM
4-7 November 2025, Belo Horizonte, MG, Brazil
Section: S2

# *CONSERVATION STRATEGY FOR Macrosiphonia velame (APOCYNACEAE)*

**Joanna Conde Maynié**[1,2*], Valéria Sieiro Conde Correa[1], Juliana da Silva Coppede[2]

joanna.maynie@sou.unaerp.edu.br

*1-Reserva EcoCerrado Brasil, Rod MG 262, Araxá, MG, km 715, Brazil, 2-Universidade de Ribeirão Preto, Pós-graduação em Biotecnologia, UNAERP, Av. Costabile Romano, 2201, 14096-380, Ribeirão Preto, SP, Brazil.*

Subshrub species of the Cerrado are underrepresented in seed collection due to limited fruiting and anemochoric dispersal, which hinders propagule acquisition and compromises ecological restoration by restricting the recovery of the herbaceous-subshrub layer, crucial to the biome's resilience. *Macrosiphonia velame* (white velame) exemplifies this gap: a perennial species with erect stems measuring 25 to 40 cm, covered by a woolly indumentum and tuberous roots, used ethnopharmacologically in the treatment of dermatoses, gastrointestinal disorders, and rheumatic and infectious conditions (syphilis), highlighting its potential as a source of bioactive metabolites. For this species, there are no agronomic cultivation protocols or optimized propagation methods, in addition to its rare occurrence in the field, as indicated by ethnobotanical surveys according to Campos et al. (2010). This scenario is exacerbated by the loss of approximately 51% of the Cerrado's native vegetation, jeopardizing the goals established in the Paris Agreement. Policies such as the Participatory Climate Plan (2025) and the PPCerrado (2023) provide a regulatory framework, but effective conservation requires strategies. In this study, the conservation approach involved a biotechnological strategy, the in vitro introduction of *M. velame*. Seed collection was carried out and registered in SisGen under the code AB63A0D. Two hundred eighty of these seeds were sequentially disinfested with cercobin (0.5%), sodium hypochlorite (0.5%), autoclaved water at 82°C, and hydrogen peroxide (0.6V/L) and subsequently grown in MS/2 medium. After the emergence of the first pair of post-cotyledonary leaves, the seedlings were acclimated in a greenhouse using a 1:1:1 substrate (Carolina:soil:sand) with daily irrigation. One hundred twenty two seeds (43,57%) germinated, and six seedlings with the truth first pairs of leaves (2,14%) were submitted to acclimatization. This six plantlets were successfully acclimated (100%). This work aligns with the 2030 Agenda objectives, contributing to climate change mitigation, biodiversity conservation, water and food security, resilience to natural disasters, and the supply of bioactive compounds for pharmaceutical development.

***Keywords:*** *biotechnology, hydrogen peroxide, in vitro culture, velame*