



***Psychotria viridis* (Ruiz & Pav): LIGHT QUALITY ON CELL MASS FORMATION**

Francisco Kimerling Campos¹, Vinicius Martins Gandra², Thaís Teixeira Valério Caetano³, Camila Moreno Lopes de Andrade⁴; Maurício Yonamine⁵; Jaime Eduardo Cecilio Hallak⁶; José Alexandre De Souza Crippa⁷; Fernando Henrique Ferrari⁸; Vanessa Cristina Stein⁹

¹ Graduando - Engenharia Florestal, Universidade Federal de Lavras, francisco.campos1@estudante.ufla.br

² Graduando - Engenharia Florestal, Universidade Federal de Lavras, vinicius.gandra@estudante.ufla.br

³ Doutoranda - Programa de Pós-graduação em Botânica Aplicada - Departamento de Biologia, Universidade Federal de Lavras, thais.caetano1@estudante.ufla.br

⁴ Mestre - Programa de Pós-graduação em Botânica Aplicada - Departamento de Biologia, Universidade Federal de Lavras, camila.andrade3@estudante.ufla.br

⁵ Professor Associado - Departamento de Análises Clínicas e Toxicológicas da Faculdade de Ciências Farmacêuticas da Universidade de São Paulo, yonamine@usp.br

⁶ Professor titular - Departamento de Neurociências e Ciências do Comportamento da FMRP da Universidade de São Paulo - jhallak@fmrp.usp.br

⁷ Professor titular - Departamento de Neurociências e Ciências do Comportamento da FMRP da Universidade de São Paulo - jcrippa@fmrp.usp.br

⁸ Professor associado - Campus São Sebastião do Paraíso, Universidade Federal de Lavras, fernando.ferrari@ufla.br

⁹ Professora associada - Programa de Pós-graduação em Botânica Aplicada, Departamento de Biologia, Universidade Federal de Lavras, vanessastein@ufla.br

Resumo: *Psychotria viridis* (Ruiz & Pav) is an Amazonian shrub (Rubiaceae), known for its biologically active metabolites such as alkaloids and anthraquinones. This species is of great economic, social, and medicinal interest in the Amazon region due to its use in religious rituals through the hallucinogenic ayahuasca tea. It has also been researched as an important source of metabolites with potential antidepressant properties. Therefore, the aim of this study was to analyze the callus formation of *Psychotria viridis*, established *in vitro*, under different light qualities. For this purpose, leaf explants were taken and inoculated in test tubes with CBPP1 medium, solidified with 6 g/L agar, with the pH adjusted to 5.8 ± 0.02 , and autoclaved at a temperature of 120°C and a pressure of 1 atm for 20 minutes. The experiment was conducted with 6 treatments and 36 replicates maintained in a cultivation room on shelves with LEDs: CBPPLW, CBPPLB, CBPPLP, CBPPLR, CBPPLQ, and CBPPLG. After 7 days, contaminated samples were discarded, and the analysis of callus formation, oxidation and total area were performed 45 days after inoculation. All analyzed parameters were tested with Tukey (5%) test. Callus formation occurred in treatments with CBPPLQ, CBPPLG and CBPPLB light, CBPPLB treatment had the greatest area and 0% of oxidation. Moreover, CBPPLR light induced oxidation in 100% of the calluses and had no calluses formation, like the other treatments. *P. viridis* callus is influenced by the quality of light.

Palavras-chave: alkaloids, ayahuasca, oxidation



24° Congresso Brasileiro de Floricultura e Plantas Ornamentais (24° CBFPO)

11° Congresso Brasileiro de Cultura de Tecidos de Plantas (11° CBCTP)

Bento Gonçalves-RS

20 a 23 de novembro de 2023

ISBN

978-65-88904-08

Apoio Financeiro: This study was financed in part by the CAPES, CNPQ, FAPEMIG, INCT-MT