

Influence of Light on the Effects of Polyamines and Nitric Oxide in Growth of Embryogenic Cultures of *Araucaria angustifolia*

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Studies have been carried out to demonstrate the role of polyamines (PAs) and nitric oxide (NO) metabolism in somatic embryogenesis using *A. angustifolia* as a model. The objective of this work was to study the influence of light on growth of *A. angustifolia* embryogenic cultures treated with PAs and NO. The embryogenic cultures grown in BM medium supplemented with different PAs putrescine (Put), spermidine (Spd) and spermine (Spm); and donor (SNP – sodium nitroprusside), scavenger (PTIO - 2-(4-carboxyphenyl)-4,4,5,5-tetramethylimidazoline-1- β -oxy-3-oxide) and inhibitors (tungstate and L-NAME - N(G)-nitro-L-argininemethylester) of the NO biosynthesis, in the presence and absence of light. After 21 days, the fresh weight of the embryogenic culture was measured in order to evaluate the culture growth. Spd and Put increased the growth of cultures kept in the dark, while in light they had no effects on growth. In dark, the SNP increased the growth of embryogenic cultures, and the scavenger and inhibitors of NO inhibited this response at the higher concentration used. On the other hand, there was no significant change in growth with NO treatments in the presence of light. Besides the differential effect of PAs and NO in cell growth, the light also modulates the effect of these compounds in embryogenic cultures of *A. angustifolia*. (Supported by CNPq, CAPES, FAPERJ and FAPESP).