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Inhibitory effect of gibberellic acid on micropropagation of *Acanthostachys strobilacea* (Schult. f.) Klotzsch via nodal segments

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Acanthostachys strobilacea (Schult. F.) Klotzsch is an unusual and ornamental bromeliad, and the development of efficient protocols of micropropagation will increase its supply for commerce and reduce harvesting of plants from the natural environment. The exogenous application of gibberellic acid is generally used to promote the stem elongation on shoots cultured *in vitro*, although this plant hormone may inhibit cell division. The aim of this study was to verify the effect of gibberellic acid on the growth of *A. strobilacea* plants cultured *in vitro*. Seeds of *A. strobilacea* were surface sterilized and transferred aseptically to flasks containing modified Murashige & Skoog medium. The flasks were placed in growth room adjusted to 26 ± 2 °C at irradiance $14 \mu\text{mol m}^{-2}\text{s}^{-1}$. After 3 mo, nodal segments of the *in vitro* elongated plants were isolated from the stem axis and transferred to culture medium containing the following concentrations of gibberellic acid (GA_3): 0.5, 1.0, 1.5 mg l^{-1} and a control without GA_3 . Each treatment included 3 flasks containing 15 nodal segments each. After 3 mo, plants were evaluated for the number of nodes, leaves and roots; the length of the internodes, leaves and roots; and fresh and dry mass of shoots and roots. It was noted an inhibitory effect caused by the GA_3 concentrations on the length of the leaves, number of roots and on the fresh and dry mass of the shoots. However, there were no alterations on the number of leaves and nodes, the length of the internodes and fresh and dry mass of the roots. The root elongation was solely promoted by the concentrations of 0.5 and 1.0 mg l^{-1} . The results show that GA_3 can inhibit the growth of *A. strobilacea* plants cultured *in vitro*, therefore its use is not recommended to promote this bromeliad's propagation.

Palavras-Chave: bromeliad, ornamental, elongation.

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