

## Protein Electrophoretic Profiles Associated with Somatic Embryo Maturation in Sugarcane

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Brazil is the major world producer and exporter of refined sugar and ethanol biofuel from sugarcane (*Saccharum* sp.). Some biotechnological tools, such as somatic embryogenesis, have a great potential for application to the improvement of the sugarcane sector. This work aimed to study the effects of activated charcoal (AC) and 2,4-dichlorophenoxyacetic acid (2,4-D) in the morphogenesis and protein electrophoretic profile during somatic embryo maturation in sugarcane. Embryogenic cultures were induced from transversal sections of young leaves of variety CB45-3 by inoculation in MS culture medium supplemented with 10 mM 2,4-D. Cultures were inoculated to maturation treatment with different concentrations of AC (0, 1.5 and 3.0 g.L<sup>-1</sup>) combined with 2,4-D (0 and 10 µM). The profiles of proteins were obtained from samples of different treatments at 21 days of culture. Samples of 3 µg of soluble and insoluble proteins were used to perform protein electrophoresis in 12% SDS-PAGE. Protein profiles showed different profiles to treatments with distinct capacity to somatic embryo maturation. The gel SDS-PAGE from soluble proteins showed the lack of proteins around 66 kDa and 27 kDa in treatments that allowed somatic embryo maturation. Insoluble SDS-PAGE profile showed a specific 18 kDa protein in all treatment with somatic embryo maturation. These differentially expressed proteins, in either treatments that allowed or not the somatic embryo maturation, show a great potential to be used as biomarkers to during somatic embryogenesis in sugarcane. (Supported by FAPERJ, CAPES, CNPq and TECNORTE)