HISTOLOGICAL ANALYSIS OF THE CALLUS CULTURE OF EGYPTIAN HENBANE (HYOSCYAMUS MUTICUS L.)

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Conducted histological studies of the callus culture of *Hyoscyamus muticus* L. showed that callus have characteristics of organogenic nodular cell cultures. Nodules represent a spherical structure, in the center of which a vascularization center is surrounded by elongated parenchymal cells and phloem elements. Callus biomass increases as a result of nodule differentiation from procambial cells. The accumulation of alkaloids is found in the vacuoles of superficial parenchymal cells. The presence of alkaloid-accumulating cells in calluses of *Hyoscyamus muticus* L. opens up possibilities for the production of tropane alkaloids in cell culture.

Keywords: Hyoscyamus muticus L., Egyptian henbane, callus formation, HPLC, alkaloids, histological analysis