

Morphogenesis of *Dracocephalum moldavica* L. *in vitro*

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Aim of the study: *Dracocephalum moldavica* L. (dragonhead) is medicinal plant with an analgesic, tranquilizing, soothing, antioxidant effects. This plant has a pleasant lemon scent. The vegetative part of dragonhead contains 0,05 - 0,63% of essential oil. The main components of essential oil are citral, geraniol, thymol, nerol. When the external conditions change, the composition and content of secondary metabolites varies. Culture *in vitro* is characterized by consistency and controlled conditions. The purpose of the research was introduction callus of *Dracocephalum moldavica* *in vitro*.

Material and Methods: There were 2 varieties in study: Gorynych and Limonnyi aromat. For introduction *in vitro* culture, the seeds were sterilized in mercury chloride, in sodium hypochlorite, in hydrogen peroxide. Seeds were placed on the nutrient medium of Murashige and Skoog. 4-week-old seedlings were used as a material for explants (pieces of leaves, petioles of leaves and internodes). They were placed on a nutrient medium containing various phytohormones and plant growth regulators such as 6-benzylaminopurine (BAP), kinetin, 2,4-dichlorophenoxyacetic acid (2,4-D), indole-3-acetic acid (IAA), indole-3-butyric acid (IBA), 1-naphthaleneacetic acid (NAA). Observations were conducted for one and a half months.

Results: Mercury chloride is better suited for sterilizing Gorynych seeds, and sodium hypochlorite for Limonnyi aromat. On a medium containing 2,4-D, 2,4-D in combinations with kinetin and BAP, a callus of yellow color was formed on explants from internodes and petioles of leaves. Green callus with white impregnations was produced under the influence of IBA in combination with BAP and kinetin. From leaf explants, callus was formed only on media with 2,4-D in combination with kinetin and BAP. Rhizogenesis was observed on media with IAA, IBA.

Keywords: morphogenesis, phytohormones and plant growth regulators, *in vitro*.