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## Cultivation Conditions, Histological and Biochemical Analysis of the Callus Culture of a Licorice *Glycyrrhiza glabra* L.

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The conditions of induction and periodic cultivation of callus culture from root explants of *Glycyrrhiza glabra* L. are selected. The main difference between the selected media and those already described in the literature was the application of a mixture of phytohormones IAA (indolilacetic acid) (1.5 mg/L), NAA (naphthylacetic acid) (1.5 mg/L) and kinetin (1 mg/L). The resulting callus was complex and capable of synthesizing secondary compounds. Spherical cellular complexes that make up calluses are considered to be xylems nodules. Histochemical study of the localization of flavonols and terpenes has revealed cells of callus and cellular organelles of secondary metabolites. The glycyrrhizic acid content in callus of the end passage was by the 74.65 mg/g dry weight, phenol compounds 19.65 ± 0.8 mg/g dry weight, flavonols 3.46 ± 0.07 mg/g dry weight. The resulting callus culture *Glycyrrhiza glabra* L. can be used to produce valuable biologically active substances.

**Keywords:** licorice, callus culture, glycyrrhizic acid, phenolic compounds, flavonols, DPBA, NADI