



Effect of Extracts of the Reproductive Organs of *Brassica Oleracea* L. On Morphogenesis *in vitro*

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Currently, cabbage is the most common vegetable. The reason is very tasty and chemical composition. It contains 2,6-5,7% sugar, 1,1-2,3% of the proteins, minerals phosphorus, potassium, magnesium, zinc, manganese, iodine, etc. The most important problem of selection is still reducing the time to development new varieties.

Broad prospects in the intensification of the selection process opens the application of modern techniques of applied genetics and applied biotechnology, combined with hybridization and selection. Great theoretical and practical interest, in particular, the use of haploidy. Method dihaploids allows significant acceleration of the process of selection of all cultivated plants.

Work carried out on varieties and F1 hybrids of the genus *Brassica*: cabbage (*B. oleracea* L.): F1 hybrid Jubilei, line ET1 and AMF 3L. Plants - donors were grown in a greenhouse of the Breeding Timofeev-station of RSAU-MTAA during the year. Objects of our research were isolated anthers, microspores, ovaries and ovules of cabbage.

Studied the effects of extracts derived from the reproductive organs of cabbage. As the solvent used: DMSO, acetone, alcohol and water. The extracts were added to a sterile medium. For cabbage we have optimized steps of obtaining regenerated plants by direct embryogenesis from microspores of isolated anthers. Found that the presence of hormones in MS medium at a concentration of NAA 1 mg / l, Dropp - 0.01 mg / l stimulated the process of direct embryogenesis. In these conditions the microspores in anther maintain their viability for a long growing in *in vitro*. The addition of DMSO-based extracts and acetone resulted in the induction of development of the ovaries and ovules. This was manifested in the growth of the ovaries and the formation of larger ovules. In variants with water and alcohol, this effect was not observed.

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