ANNOTATION
of report on Research Practice of a two-year student, group BT-51m
specialty 8.05140101 - Industrial Biotechnology
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on the topic "Creating transgenic plants producers to accumulate recombinant vaccine antigens"

Report on Research Practice is written on 19 pages of printed text. The report consists of: introduction, two chapters, conclusion, list of references and contains 4 figures and 1 tables.

The report on Research Practice includes:

1. Review of the literature on the topic " Obtaining transgenic plants to accumulation of recombinant proteins by transient expression";

2. Experimental part.

The introduction proved the relevance of the chosen topic of the research, described the goal of practice and its problems.

The object of the research was to conduct genetic transformation of carrot seed (*Daucus carota*).

The paper used materials and methods that allow you to get kalusni and suspension cultures initiated from plants of carrot cultivar "Autumn Queen", namely sterilization of seeds, genetic transformation using agrobacteria, visual and chemical selection.

The main results are developed and optimized conditions for recombinant proteins in plants carrots by *Agrobacterium*-mediated transient expression and carrots obtain transgenic plants containing the gene for the protein Ag85B, one of the surface antigens of Mycobacterium tuberculosis - *Mycobactrium tuberculosis*.

According to the results of Research Practice the following conclusion was made:

- processed genetic transformation technique using agrobacteria for hypokotel explants of carrot for the purpose of carrying recombinant genes in plant tissue system;

- optimized conditions for genetic transformation. It is shown that the optimal concentration is 0.8 agrobaktery wholesale. units. cocultivation duration of callus agrobacteria for 24 hours and the use of the antibiotic cefotaxime at a concentration of 500 mg/l;

- conducted a visual selection on the basis of *in vitro* GFP fluorescence in the regeneration of transgenic lines, allowing producers to select efficient recombinant protein;

- obtained cell suspension cultures from callus loose hypokotyl origin, has high regenerative capacity for biotechnology and medical purposes;

- as a result of transformation agrobacterial sowing carrots were obtained from transgenic plants salad selective gene resistance to phosphinotricin, as well as genes and GFP-6His Ag85B-GFP, stimulating the immune defense against TB.