The aim of the work was to establish the effective culture medium for the regeneration of Physalis peruviana for further micropropagation and obtaining of adult plants from regenerants in vitro conditions. After conducting series of experiments, effective culture media for the regeneration
DIRECT PLANT REGENERATION FROM *Physalis peruviana* L. EXPLANTS  O. M. Yaroshko, M. V. Kuchuk

of *P. peruviana* was established. The most effective media for shoot regeneration from leaf explants were MS supplemented with 1 mg/l Kin and 3 mg/l BAP; MS supplemented with 2 mg/l Kin and 1 mg/l BAP (33.33% of regeneration on both media). Good results were obtained on the media MS supplemented with 1 mg/l Kin and 2 mg/l BAP (28.57% explants regenerated) and MS supplemented with 2 mg/l Kin and 3 mg/l BAP (26.31% of regeneration). Root induction from stem and leaf explants were obtained of medium MS with NAA (0.2 mg/l; 0.5 mg/l), IAA (0.2 mg/l; 0.5 mg/l). Root induction frequency of these media was 100%. The obtained regenerants were separated from the explants and were transferred on the medium MS with 1 mg/l of BAP for elongation, and then on a medium MS or MS with 0.2 mg/l NAA for subsequent rooting. After one month of cultivation on mediums MS or MS with 0.2 mg/l NAA were successfully received adult plants.

**Key words:** *Physalis*, regeneration.

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{spoiler title=References}

1. Zachary H. Lemmon, Nathan T. Reem, Justin Dalrymple, Sebastian Soyk, Kerry E. Swartwood, Daniel Rodriguez-Leal, Joyce Van
Eck, Zachary B. Lippman.
Rapid improvement of domestication traits in an orphan crop by genome editing.


3. Ramar K., Ayyadurai V. In vitro regeneration of *Physalis maxima* (Mill) an important medicinal plant.


5. Ramar K., Ayyadurai V., Arulprakash T. *In vitro* shoot multiplication and plant regeneration of *Physalis peruviana* L. An important medicinal plant.

6. Bergier K., Kuźniak E., Skłodowska M. Antioxidant potential of *Agrobacterium* transform ed and non-transformed
Physalis ixocarpa plants grown in vitro and ex vitro.


*roc. Ind. Acad. Sci. (Plant Sci.)*.