Ability of Explants from Cotyledons, Leaves and Epicotyls of *Crambe abyssynica* Weedlings to Callus Formation and Embryogenesis

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C. abyssinica is an oilseed crop cultivated currently on small areas in few countries. Due to a special composition of fatty acid in storage lipids (high content of erucic acid), its oil can neither be used for food nor for feed production. *C. abyssinica* is not crossing with other oil crops and with most of its wild relatives therefore is an ideal oilseed crop for genetic manipulation.

The aim of presented work was to develop a method of the callus *in vitro* production and further plant regeneration from produced callus cells. It constitutes the first step for development of transformation protocol.

The mature seeds of *C. abyssinica* cv. Mayer were sterilized with different sterilization solutions and germinated on solid Murashige & Skoog (MS) medium. After 10 days, the seedlings were used to prepare explants: from cotyledons, leaves and epicotyls. The explants were transferred to agar containing MS medium supplemented with different compositions and amounts of growth factors and vitamins. The primary callus was transferred to a new fresh agar with MS medium (with different combinations of growth factors and vitamins) and used for observation of callus embryogenesis. The germination, explants growth and callus incubation were carried out in growth chamber with 23^{o}C and 16/8 hrs photoperiod.

The best sterilisation effect was achieved after 5 min treatment with 0.1% solution of NaOCl with 1 drop (approximately 20 µl) of Tween 20 / 100 ml. Addition of 6-benzylamino-purine (BAP) and α-naphthalene acetic acid (NAA) in 0.1 and 0.4 mg/dm^3 respectively, gave the best callus formation on the explants. The best formation of roots and leaves from the callus was observed when 0.2 mg/dm^3 of BAP and 0.6 mg/dm^3 NAA was added. The explants from the cotyledons gave the best formation of embryogenic callus followed by explants from leaves and than by explants from epicotyls.