ENDOGENOUS AUXIN AND CYTOKININ LEVELS IN SHOOTS OF A NONROOTING TOBACCO MUTANT

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The rooting recalcitrant *rac* mutant of *Nicotiana tabacum* cv Xanthi (Muller *et al*, 1985) has been micropropagated *in vitro* under the form of shoots in parallel to its wild homologous. The mutant shoots grew at a lower rate and did not root whatever the treatments contrary to the wild shoots (Faivre-Rampant *et al*, 1998). They were characterized by a higher endogenous auxin (free and conjugated) levels during their culture and presented the same evolution along the culture than in the wild shoots. However, in the basal parts of the *rac* stems, the peak of auxin was delayed in comparison with the wild-type.

Endogenous cytokinin contents were also determined in shoots of the two tobaccos at the end of the growth cycle. The *rac* shoots contained higher levels of benzyladenine and isopentenyladenosine compared to the wild shoots, whereas zeatin riboside was found at a higher level in the wild-type. The relationship between these biochemical aspects and absence of root formation is an open question.

References

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