POSTER PRESENTATIONS

Germacrene A synthase and oxidase promoter analysis in chicory

PP1-1

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Chicory (*Cichorium intybus* L.) is rich in sesquiterpene lactones, bitter compounds whose biosynthesis involves several recently characterized genes, namely germacrene A synthase (GAS), in chicory present as long and short form, and germacrene A oxidase (GAO, CYP71AV8). Promoters of these genes have been studied by cloning promoter regions to drive the expression of eGFP, and obtaining stable chicory transformants carrying promoter constructs. Due to incompatibility of eGFP with another fluorescent marker – DsRED, which was used for selection of transformed clones, promoter activity was detected in transgenic plants by RT-PCR and qRT-PCR techniques. Most of the obtained chicory clones were expressing GFP, in roots, leaves, stems and flowers, suggesting that cloned promoters were functional in different chicory organs. The promoters were characterized by different strengths – GAO and GAS long promoters were stronger than both GAS short promoters, judging by eGFP expression level. The promoters also showed partial tissue specificity – GAS long was active in roots, leaves, stems and flowers, while GAS short promoters were mainly active in chicory roots.

Keywords: germacrene A synthase, germacrene A oxidase, promoter analysis, eGFP

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Efficiency of different molecular markers in detection of Ogu-INRA *cms* and *Rfo* genes in NS rapeseed

PP1-2

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Development of rapeseed hybrids was enabled by the discovery and introduction of *cms* and *Rf* genes. Several cms genes have been discovered so far: *Pol*, *Nap*, *Cam*, *Ogu*, *Nsa*, *Shan 2A* and *Kos*. Ogu-INRA *cms*, derived from *Raphanus sativus*, is one of the most widely analyzed and used gene in rapeseed breeding. This gene, together with compatible *Rfo* gene (derived from line R2000), is currently being introduced in NS breeding material. During the process of development of cms and Rf lines, some deviations from expected segregation ratio were observed. In order to analyze NS breeding material, the efficiency of four markers, two for de-