Serbian Plant Physiology Society

Institute for Biological Research „Siniša Stanković", University of Belgrade

2nd International Conference on Plant Biology

21th Symposium of the Serbian Plant Physiology Society

COST ACTION FA1106 QUALITYFRUIT Workshop

Petnica Science Center, June 17-20, 2015

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PETNICA SCIENCE CENTER 17-20 JUNE, 2015

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cies, while polymorphism within species was observed in *V. narbonensis, V. sativa* ssp. nigra and *V. grandiflorum*. Our results suggest that tested SSR and ISSR markers can be transferred and employed within *Vicia* genus.

Keywords: *Vicia*, SSR, ISSR, transferability

Effect of osmotic stress conditions on *BvSTI*-expressing *Lotus corniculatus*

PP1-16

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Plant proteinase inhibitors (PIs) constitute a large and complex widely distributed group of small proteins involved in the regulation of the plant protein turn-over required in multiple physiological processes. Beside the roles regarding development and physiology, PIs are known to act in defense against herbivore insect pests. In recent years, the new intriguing role of plant PIs in abiotic stress tolerance has been implied. Inhibitor of serine type proteinases, *BvSTI* isolated from sugar beet pest resistant genotype was introduced into Bird's foot trefoil (*Lotus corniculatus* L.). To determine the effect of osmotic stress on *BvSTI*-expressing *L. corniculatus, in vitro*-grown shoots were exposed to elevated concentration of sucrose (5%, 7% and 9%). After 15 days of treatment, the growth response of sucrose-treated transformed lines 21, 73 and 109, as well as of nontransformed (NTC) line was determined by measuring the fresh weight and the length increment. Also shoots were scored for visible symptoms of osmotic stress-induced injuries by visual inspection. In order to avoid influence of observed phenotypic differences among lines on parameters analyzed under stress conditions, all values were presented relative to the controls (shoots grown under the same conditions on regular 3% sucrose) of each line. Additionally, the activities of antioxidant enzymes peroxidases (POD) and catalases (CAT) were determined spectrophotometrically.

Keywords: plant proteinase inhibitor**,** sugar, *Lotus corniculatus*

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The effect of antibiotics on the shoot regeneration in apple cultivar "Golden Delicious"

PP1-17

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The effect of antibiotics hygromycin, cefotaxime and meropenem on shoot regeneration in apple cultivar "Golden Delicious" was evaluated to optimize the protocol for *Agrobacterium tumefaciens*-mediated ge-