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A106
IDENTIFICATION AND GENOMIC ORGANIZATION OF THE GLUTATHIONE TRANSFERASE (GST) GENE FAMILY IN *Fragaria vesca*

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Plant Glutathione Transferases (GSTs) are proteins encoded by a large gene family, expressed in stress response. The woodland strawberry *Fragaria vesca* shares sequence identity with the cultivated strawberry *Fragaria x ananassa*, and a draft of its genome is available in public databases of the GenBank. The aim of this study was to identify and analyze the genomic organization of the GST gene family in *Fragaria vesca*. A total of 49 full length GST genes were identified and the proteins encoded were divided into 8 classes according to the Conserved Domain DataBase (CDD) of NCBI. The tau class, with 32 members, is the most numerous; the classes phi and theta are represented by 6 and 5 members respectively. The DHAR class has 3 members, the zeta and lambda classes 2, and the classes TCHQD and microsomal are represented by only one member. They present a conserved N-terminal, GSH binding domain, and a variable C-terminal domain for binding to hydrophobic substrates. The tau class GSTs identified in the stress response in *F. ananassa* share 92% identity at the amino acid level with members of *Fragaria vesca* class tau GSTs. The analysis of the GST gene family in *Fragaria vesca* provides a starting point to reveal the roles of these proteins in strawberry.

A107
NATIVE *Bacillus thuringiensis* RT DELTA-ENDOTOXIN PRODUCTION IN A LOW-COST CULTURE MEDIUM FOR *Spodoptera frugiperda* CONTROL IN CORN SEEDLINGS

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Bacillus thuringiensis (*Bt*) is a bacterium that produces insecticidal crystal inclusions targeted to particular groups of insects. *Spodoptera frugiperda* (*Sf*) (Lepidoptera: Noctuidae) is a major corn pest in northwestern Argentina so it is important to produce these toxins as an alternative to chemical pesticides since they have no adverse effects on man, animals or beneficial insects. The aim of this study was to assess delta-endotoxin production in a low-cost medium and to test protection of corn seedlings. The *Bt* RT strain was grown in a 3 l fermentor using an optimized medium containing cerelose, whey, powdered milk, vinasse, sucrose, starch and soybean meal. Three treatments were evaluated: healthy seedlings (T1), infested seedlings with *Sf* (T2) and infested seedlings with the formulation (T3). Dry weight of shoots was determined on the 7th day. The estimated delta-endotoxin (mg/L) during fermentation was: 361.62 (24 h), 418.92 (48 h), 567.57 (72 h), 560.72 (96 h) and 664.32 (120 h). The average dry weights (g) were: 0.32 (T1), 0.26 (T2) and 0.29 (T3). For semifield assays, significant differences between T1 and T2 (α =0.05) were detected while no significant differences were observed between T1 and T3. CIUNT 26/D409, PIP 297

A108
STUDY OF THE TOXICITY OF IONIC DISSOLUTION PRODUCTS FROM NEW BIOACTIVE GLASSES

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The discovery of bioactive glasses (BGs) has yielded a family of biomaterials of great relevance for regenerative medicine. The aim of the present study was to assess the toxicity effects of the ionic dissolution products (IDPs) from new BGs based on 4S5S-type glass containing (wt %): 2% SrO (45S5.2Sr), 1% or 5% Li_2O (45S5.1Li, 45S5.5Li). The IDPs were obtained by incubating 1% w/v particles (<5 μm) of BGs in egg water at 37ºC for 72 h. The determination of soluble ions lixiviated from the BGs was conducted through ICP-MS. The toxicity assays were carried out on dechorionated zebrafish embryos (*Danio rerio*) at 48 h post fertilization (hpf). The embryos were incubated at 28.5°C in 6-well culture plates containing either 5 mL of egg water (control) or egg water enriched with the IDPs. We carried out 2 replicates with 30 embryos per treatment. The survivorship percentage was recorded at 120 hpf. The embryos were anesthetized and fixed in PFA. No significant differences were observed in the survivorship of the embryos treated with IDPs compared to the control. In all cases we found the embryonic development expected for the incubation time assessed. The results obtained here evidence the biocompatibility of the IDPs released by microparticles of 4S5S BG doped with 2% SrO (45S5.2Sr), 1% or 5% Li_2O (45S5.1Li, 45S5.5Li).