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In memoriam Dr. Julia Marina Oterino

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69. INFLUENCE OF *Lactobacillus casei* CRL 1505 ON HEMOSTATIC AND HISTOLOGICAL ALTERATIONS IN A PNEUMONIA MODEL IN MALNOURISHED MICE

Zelaya H¹, Haro C¹, Laiño J¹, Alvarez S^{1,2}, Agüero G¹.
¹Instituto de Bioquímica Aplicada. UNT. Balcarce 747; ²CERELA. Chacabuco 145. (4000) S.M.de Tucumán.
 E-mail: gaguero@unt.edu.ar

Aim: to evaluate if the oral (Lc_{Oral}) or nasal (Lc_{Nasal}) addition of *Lactobacillus casei* CRL 1505 contributes to the modulation of the hemostatic and histological alterations in a pneumonia model in malnourished mice. Malnourished mice received for 7d a balanced conventional diet (BCD) or BCD with Lc_{Oral} or Lc_{Nasal}, during the last 5d. These animals and malnourished controls (MNC) were infected with *Streptococcus pneumoniae* (10⁵ CFU/mouse). On d 0, 1, 5 and 10 post-infection the animals that received different diets showed: increase in number of white cells (nx10⁷ cells/L) in bronchoalveolar lavage (BAL) (5dpi: MNC=13±0.8; BCD= 19.5±1.2; Lc_{Nasal}=60±1.3; Lc_{Oral}=40±1.2); lower albumin concentration in BAL; lower histological alterations in lung; diminution in Fibrinogen (F) deposition in lung; partial recovery of prothrombin activity (5dpi: MNC=28.81±3.53%; BCD=53.3±5.77%; Lc_{Nasal}=80±4.95%; Lc_{Oral}=56±4.55%), lower alteration of activated partial thromboplastin time, increment in F levels and platelets count with respect to MNC. Conclusions: All diets limited the damage induced by the pathogen, but the treatment with *Lactobacillus casei* was more effective, especially when administered intranasally.

70. CRY GENES PROFILE AND PROTEOLYTIC ACTIVITY OF NATIVE *Bacillus thuringiensis* STRAINS AGAINST *Spodoptera frugiperda*

Alvarez A, Pera L, Virla E, Baigorí M.
 PROIMI. Belgrano y Caseros. (4000) SM de Tucumán. E-mail: alvarez_analia@hotmail.com

Introduction: *Bacillus thuringiensis* (*Bt*) produces entomopathogenic Cry proteins which are activated to pathogenic form by proteases. **Objective:** Determination of *cry* genes and proteolytic activity in three native *Bt* strains. **Material and methods:** Total DNA was isolated with the CTAB technique. *Cry* 1 and 2 genes were amplified with general and specific primers. Proteolytic activity was assayed by using azocasein as substrate. **Results and Discussion:** Specific *cry* genes and the biomass-bound protease activity are showed in the table. *Bt* RT displayed different *cry* specific content than the others strains. In addition to Cry protein, *Bt* is also an excellent source of protease activities. *Bt* RT has a proteolytic activity significantly different to that achieved for the reference strain *Bt* 4D1 ($P > 0.05$, Tukey test).

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Strains	Specific Protease activity (U/g _{dry wt}) ± SD	Cry profile
<i>Bt</i> RT	1987,76 ± 98,33 b	<i>cry1Ab, Ac, cry2Ab</i>
<i>Bt</i> LSM	1808,94 ± 92,57 b	<i>cry1Aa, Ab, Ac and cry2Aa, Ab</i>
<i>Bt</i> LQ	1139,69 ± 25,31 a	non-amplified DNA
<i>Btk4D1</i>	945,86 ± 14,34 a	<i>cry1Aa, Ab, Ac and cry2Aa, Ab</i>

71. SEED GERMINATION OF CITRIC ROTSTOCK INCUBATED IN NaCl SOLUTION

Meloni DA, David RN, Abdala G, Legname C.
 UNSE. Av. Belgrano (S) 1912, 4200- Santiago del Estero, Argentina. E-mail: dmeloni@unse.edu.ar

Citrus are cultivated in semi-arid regions where irrigation is required. In those areas high concentration of salts in soil or irrigation water may inhibit their growth and production. Citric species are generally considered as sensitive to salinity so it is important to detect cultivars with high tolerance to salinity. In this study we determined the tolerance to salinity of citric rootstock at the germination stage such as 61AA3, Agrio, Cleopatra, Citrumelo and 79AC rootstock. Batches of 25 seeds were placed to germinate between paper towels wetted with 10 ml of 30 and 60 mM NaCl in a germination chamber adjusted to 25°C and a photoperiod of 12 hours. Distilled water was used as a control. The number of germinated seeds was counted every 24 hours for 41 days. The % de PG of Citrumelo was not affected. The 61AA3 and 79AC were inhibited by the 60 mM concentration but not by the 30 mM solution. Agrio and Cleopatra were inhibited by both treatments, proving to be sensitive to salinity. Accordingly, the time of germination became longer in Agrio and Cleopatra with the treatments. These results demonstrated the tolerance of Citrumelo at the germination stage. A more complete evaluation of this rootstock should include similar experiments at the level of seedling and adult plants.

72. CYTOMIXIS IN ANGIOSPERMS OF THE NW OF ARGENTINA

Andrada AR, Páez VA, Toranzo MI, Lozzia ME, Cristóbal ME.
 Inst. Genética. Fun. M. Lillo; M. Lillo 251. 4000 Tucumán. E-mail: rubenan03@yahoo.com.ar

Cytomixis is a phenomenon observed especially during microsporogenesis in genetically non balanced plants, diploids and polyploids. It was observed in wall cells of both anther and ovary (Koul, 1990) and it is considered as such the chromatin and cytoplasmic organelles passage through plasmodesms. This phenomenon has been amply studied but its role in the evolution and possible genetic control is still unknown. In this paper we showed Angiosperms presenting cytomixis with cytological chromosomal and ecological traits, which would contribute to the understanding of the phenomenon. The genuses studied were: *Cuscuta*, *Begonia*, *Polygala*, *Talinum*, *Castilleja*, *Piper* and *Indigofera*. Cytomixis was observed in pachytene, one to multiple channels; in diakinesis, one to three channels; in MI and AI, one to multiple channels; in TI, one channel. The MII in the second division had one to multiple channels; in tetrads, one or two channels. The hypothesis of the incidence was studied in the cytomixis of environmental factors such as temperature, hydric stress, solar radiation, herbicides, chemical agents, etc. We agree with Mantu and Sharma's proposition (1983) that cytomixis is a natural phenomenon with genetic control and physiological factors that influence its manifestation.