Abiotic stress effect on growing and production of physalins  
*Physalis angulata* L.

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**Introduction:** Despite the large number of scientific papers on the therapeutic action of sec-steroids extracted from *P. angulata* L. nevertheless still a complete lack on the knowledge of regulatory mechanism of physalins biosynthesis and how the environment fluctuation could have some influence on those metabolites production.

**Experimental:** Plants obtained from 1-month-old primed (P) and no-primed (NP) seeds followed by saline stress, water restriction and control test were analysed. After 13 days under these assays expositions, the stems and leaves length were measure and dried at 45ºC. This material was submitted to Mabry’s modified technique (TOMASSINI, T. et. al., Europ. J. Pharm. V 10; 459(1) p107, 2003), furnishing physalins’ pool B, D, F, G that was quali and quanti analysed by HPLC/DAD.

**Results and Discussion:** In water restriction assay the biomass from leaves, stems and roots were reduced as well as plant height and diameter of stems. However there was no expressive difference between the results obtained from plant control and those from saline solution. Water restriction and saline stresses manage the decrease of water absorption from roots, inhibition of the meristematic activity, resulting on cellular extending and thereafter decrease on the growing and on the development (FLOWER, T.J., J Exp Bot 55, p. 307, 2004; ALARCÓN,J.J. et al. J. Hortic. Sci. Biotechno. V.81, p. 845, 2006). Concerning to physalins analyses the stems irrigated with salt solution induced the production of physalins B and F (71,50 and 23,95µg/mg) while leaves in water restriction expend G (72,15µg/mg). Plants either from (P) or (NP) seeds increased physalins’ production.

**Conclusion:** The concentration of bioactive metabolites, physalins that are described as immunosupressor, antimalarial and antileishmanial, was increased in leaves and stems.

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