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Effect of Proline in the Effective Medicinal Content of *Datura stramonium* Plant Callus Grown in Saline Media *In Vitro*

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SUMMARY. **A factorial experiment was conducted for studying effect of adding many levels of amino acid proline in production of effective compounds for *Datura stramonium* plants growing in vitro with effect of many salt levels (1 mg-L-1 2,4-D + 2 mg-L-1 NAA) originating from cut seeds as a plant part and then re-subculture in a nutrient medium supplemented with many concentrations of proline (0, 50, 75 and 100 ppm), and NaCl (0, 50, 100 and 150 mmol) for a period of eight weeks, the results showed that proline acid contributed to a significant increase in the content of callus produced from medically active compounds stressed by salt levels. The interaction (75 ppm of proline + 100 mmol NaCl) achieved a significant increase in the callus content of compounds (hyoscine, hyoscyamine and scopolamine), while the interaction achieved (75 ppm of proline + 150 mmol NaCl) a significant increase in atropine, the least results were achieved during the control treatment.**

RESUMEN. Se realizó un experimento factorial para estudiar el efecto de agregar muchos niveles de aminoácido prolina en la producción de compuestos efectivos para plantas de *Datura stramonium* que crecen in vitro con el efecto de muchos niveles de sal (1 mg.L-1 2,4-D + 2 mg.L-1 NAA) procedente de semillas cortadas como parte de la planta y luego re-subcultivó en un medio nutritivo suplementado con distintas concentraciones de prolina (0, 50, 75 y 100 ppm) y NaCl (0, 50, 100 y 150 mmol) durante un período de ocho semanas. Los resultados mostraron que el ácido de prolina contribuyó a un aumento significativo en el contenido de callos producidos a partir de compuestos médicamente activos estresados por los niveles de sal. La interacción (75 ppm de prolina + 100 mmol NaCl) logró un aumento significativo en el contenido de callos de los compuestos (hioscina, hiosciamina y escopolamina), mientras que la interacción (75 ppm de prolina + 150 mmol NaCl) logró un aumento significativo en atropina; los resultados mínimos se lograron durante el tratamiento de control.

KEY WORDS: Datura, medically active compounds, proline, salt stress, tissue callus.

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