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In vitro propagation response of *Rosmarinus officinalis* L. to biotic and abiotic elicitors on phenolic content and photosynthetic pigments

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Micropropagation protocol was modified to evaluate the best procedure to induce multiple shoots from *Rosmarinus officinalis* L. sterilized seedlings obtained from seeds which vitality is always very low. Aseptic shoots (1-1.5 cm) were cultured on full strength Murashige and Skoog medium modified with several growth regulators (abiotic elicitors): Benzyladenine (BA), Kinetin (Kin) and coconut water (biotic elicitors). Data was indicated that BA at the concentration of 3 mg/L encouraged shoot multiplication. The highest number of leaves and plant length also was obtained with medium modified with 3 mg/L BA and coconut milk at 5 ml/L. All treatments were significantly different from the control. Total phenolics content, anthocyanins, chlorophylls were extracted and spectrophotometrically determined as secondary products. Data was concluded the highest content of phenolic 10.45 (mg/g) and chlorophyll b 0.67 (mg/g) when BA was 3.0 mg/L. Whereas chlorophyll a reached to 0.64 mg/g in presence of 5.0 mg/L BA and 5.0 ml/L coconut milk. Anthocyanin scored high level when BA was 3.0 mg/L combined with 5.0 ml/L coconut milk.

Biography

Aisha Abdullah Alayafi is an assistant professor in Biology department and Faculty of Science from University of Jeddah, Saudi Arabia.

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