

Response of 6-benzylaminopurine on organogenesis of protocorm-like bodies in *Phalaenopsis* under different light emitting diodes

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Light is one of the most important abiotic factors, acting on plants as the sole source of energy for plants growth and development. In this study, protocorm-like bodies (PLBs) of *Phalaenopsis* were cultured in modified MS medium to see the potential effect of BAP on organogenesis of PLBs under blue, green and red light emitting diodes (LEDs) and responses were compared with explants grown under fluorescent light at 16 h photoperiod. The maximum average number of PLBs (14.27) and fresh weight (0.22 g) per explant was found in the medium containing 0.01 mg/L BAP under red LEDs. Whereas, shoot formation was maximum (4.5/explant) in red LED at 1 mg/L BAP, in case of blue LED no satisfactory results were found on *Phalaenopsis* PLBs multiplication compared with white light. These results suggest that this newly developed light source could be used as an energy efficient light source for the organogenesis of *Phalaenopsis* PLBs in *vitro* and red LED would be more effective on PLBs and shoot formation.