

Evaluation of *Dendrocalamus asper* in different types of media with 6-benzyaminopurine (BAP) hormone

Nur Afiqah Mohd Isa & Norrizah Jaafar Sidik

Structured Abstract

Background: *Dendrocalamus asper* (*D. asper*), known as giant bamboo, have many advantages with higher economic value (Schroder, 2010). However, *D. asper* took several years for regeneration. Based on the reported research, full strength Murashige and Skoog (MS) media were the most frequently used for plant tissue culture and there were very limited studies on the use Vacin and Went (VW) media in *D. asper* tissue culture. Therefore, this study was intended to overcome the limitation by investigating the height of *D. asper*, the numbers of leaves and shoots formation in different types of basal media with the presences of BAP hormone.

Methods: In this study, MS media and VW media which are half and full strength with and without BAP hormone were prepared and autoclaved. The nodes of *D. asper* were transferred onto the different types of basal media. The height of *D. asper*, the number of leaves and the number of shoots formation were observed within 12th week of culture.

Results: The mean height of *D. asper* in full-strength MS+1.0 mg/mL BAP hormone was the higher (2 cm \pm 0.24 cm) compared to the height of *D. asper* in $\frac{1}{2}$ MS media without BAP hormone (0.75 cm \pm 0.21 cm). The mean number of leaves in MS media + 1.0 mg/mL BAP hormone was higher (6 \pm 4) compared to the mean number of leaves in VW media + 1.0 mg/mL BAP hormone (5 \pm 2). The mean number of shoots in full-strength of MS media+1.0 mg/mL BAP hormone was the higher (4 \pm 1) compared to the number of shoots in $\frac{1}{2}$ MS media without BAP hormone (2 \pm 1).

Conclusion: In conclusion, the maximum height of *D. asper*, the highest number of leaves and the highest number of shoots formation was obtained in full-strength of MS media containing 1.0 mg/mL of BAP hormone.

Keywords: MS media, VW media, BAP hormone

*Correspondence: nurafiqahmohdisa0110@gmail.com

Faculty of Applied Sciences, Universiti Teknologi MARA, Shah Alam, Malaysia