

---

# ESTABLISHMENT OF AN *IN VITRO* PROPAGATION PROTOCOL FOR *Ardisia sylvestris* Pitard

Doan Thi Thu Huong<sup>1</sup>, Nguyen Van Viet<sup>2</sup>, Nguyen Thi Huyen<sup>3</sup>, Tran Viet Ha<sup>4</sup>  
<sup>1,2,3,4</sup> Vietnam National University of Forestry

## SUMMARY

*Ardisia sylvestris* is a highly medicinal medicinal plant currently overexploited, leading to a depleted genetic resource. Complete the breeding process of *Ardisia sylvestris* by *in vitro* culture techniques has been successfully researched. The results showed that the optimal method for buds sterilization was soaked in ethanol 70% for 1 minutes, by HgCl<sub>2</sub> 0.1% solution for 8 minutes and then culturing the sample with Murashige and Skoog (MS) medium with 0.2 mg/l 6-Benzylaminopurine (BAP) provided the proportion of reached survival rate was 80.92%; MS medium supplemented with BAP 1 mg/l, Kinetin 0.3 mg/l,  $\alpha$ -naphthyl acetic acid ( $\alpha$ -NAA) 0.2 mg/l, sucrose 30g/l and agar 7 g/l the rate of bud forming was 99.31% with average height of shoots is 3.7 cm and multiplication of 9.13 times/reeding cycle after 4 weeks of culture. The MS medium containing 0.5 mg/L NAA, sucrose 20 g/l and agar 7 g/l was found to be suitable for root induction which resulted in 97.63% of shoots producing roots. The average number of roots and average root length per plantlet were 4.45 and 3.25 cm, respectively. The plantlets were successfully acclimatized after 8 weeks being planted in mixture of soils and sands. This breeding process has the scientific meaning to help preserve and develop the *Ardisia sylvestris* plant, simultaneously can be applied practice to serve the production of high quality *Ardisia sylvestris* seedlings, meeting the needs of current *Ardisia sylvestris* seedlings.

**Keywords:** *Ardisia sylvestris*, *in vitro* culture, multi-shoot regeneration.

Ngày nhận bài	: 22/8/2018
Ngày phản biện	: 11/01/2019
Ngày quyết định đăng	: 20/01/2019