

Identification and Optimisation of Indole-3-Acetic Acid Production of Endophytic Bacteria and Their Effects on Plant Growth

## Authors:

Saowapar Khianngam, Pimjai Meetum, Pantipa Na Chiangmai and Somboon Tanasupawat\*

\*Correspondence: somboon.t@chula.ac.th

Submitted: 14 May 2022; Accepted: 24 August 2022; Published: 31 March 2023

**To cite this article:** Saowapar Khianngam, Pimjai Meetum, Pantipa Na Chiangmai, and Somboon Tanasupawat (2023). Identification and optimisation of indole-3-acetic acid production of endophytic bacteria and their effects on plant growth. *Tropical Life Sciences Research* 34(1): 219–239. https://doi.org/10.21315/tlsr2023.34.1.12

## **Highlights**

- Two endophytic bacteria, strain VR2 and MG9 isolated from the root of Chrysopogon zizanioides (L.) (Vetiver Grass) and the leaf of Bruguiera cylindrica (L.) Blume were characterised and identified as Enterobacter hormaechei and Bacillus aryabhattai, respectively.
- Bacterial endophytes, strain VR2 and MG9 produced high yield of IAA, 246.00 and 195.55 μg/mL in 1,000 μg/mL of L-tryptophan, at pH 6 for 48 h.
- The bacterial IAA exhibited potential nearby the synthetic IAA when evaluated for the root and shoot development.