

Phenazine from *Pseudomonas aeruginosa* UPMP3 outperforms hexaconazole for induced resistance in oil palm (*Elaeis guineensis* Jacq.)-*Ganoderma boninense* pathosystem

Waheeda Parvin^{1,2*}, Nisha Govender³, Radziah Othman⁴, Hawa Jaafar⁵,
Mahbubur Rahman^{2,6} and Mui-Yun Wong^{1,7*}

¹Department of Plant Protection, Faculty of Agriculture, Universiti Putra Malaysia, Serdang, Malaysia.

²Bangladesh Forest Research Institute, Chittagong, Bangladesh

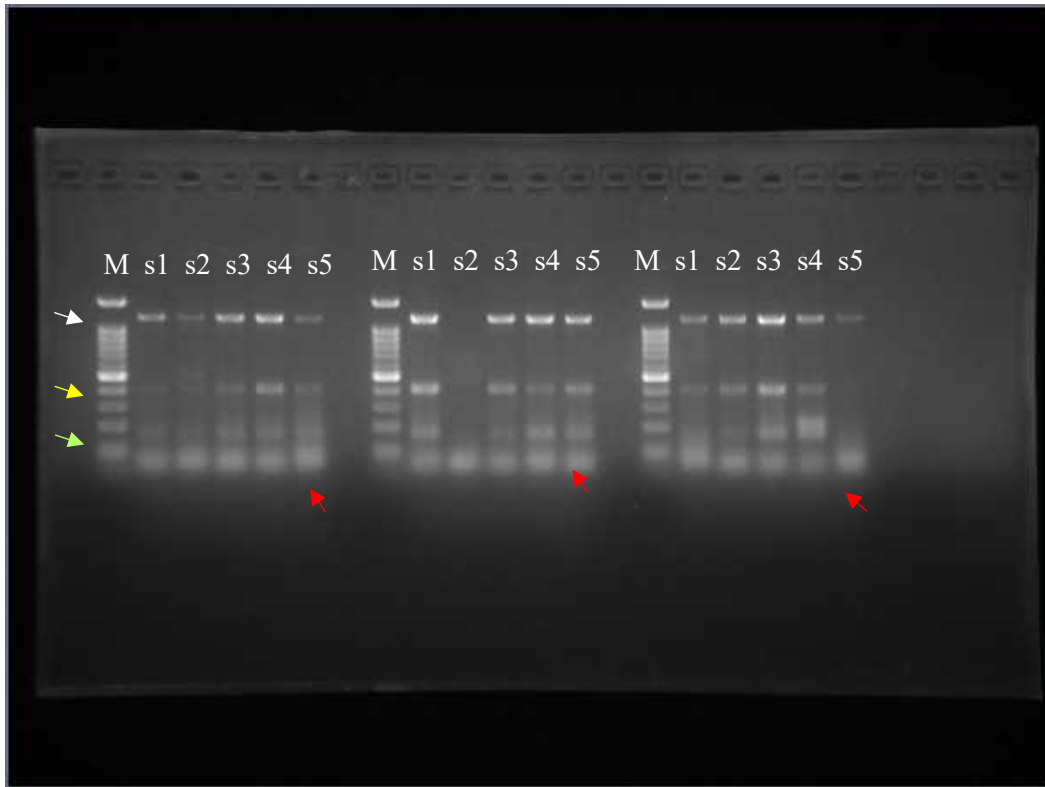
³Institute of Biology Systems (INBIOSIS), Universiti Kebangsaan Malaysia, Bangi, Malaysia

⁴Department of Land management, Faculty of Agriculture, Universiti Putra Malaysia, Serdang, Malaysia

⁵Department of Crop Science, Faculty of Agriculture, Universiti Putra Malaysia, Serdang, Malaysia

⁶Department of Biochemistry, Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, Serdang, Malaysia

⁷Institute of Plantation Studies, Universiti Putra Malaysia, Serdang, Malaysia



Supp 4: PCR amplification of pathogenesis related genes (*chitinase* and β -1,3 *glucanase*) and a house keeping gene (*glyceraldehyde phosphate dehydrogenase*) from oil palm root tissues challenged against *Ganoderma boninense*. M denotes a 100 bp DNA ladder marker and each individual lane (s1-s5) with bands denotes sample: root tissues subjected to various treatment conditions. Yellow and green arrows show *chitinase* and β -1,3 *glucanase* gene amplicons, respectively at 820 and 419 bp. Green arrow shows the *glyceraldehyde phosphate dehydrogenase* gene amplicon at 109 bp and the red arrows indicate formation of primer-dimer.