CALLUS INDUCTION FROM THE SEED OF *ARCHIDENDRON PAUCIFLORUM* (JERING)

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Final Year Project Report Submitted in Partial Fulfillment of The Requirement for the Degree of Bachelor of Science (Hons.) Biology In The Faculty of Applied Science University Technology MARA

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This Final Year Project Report entitled "Callus Induction From The Seed Of *Archidendron pauciflorum* (Jering)" was submitted by Nuur Hidayatulsyimah Binti Mohd Naser in partial fulfillment or the requirements for the Degree of Bachelor Science (Hons.) Biology, in the faculty of Applied Sciences, and was approved by

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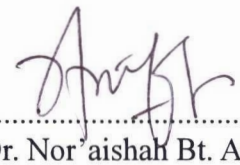

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ABSTRACT

CALLUS INDUCTION FROM THE SEED OF *ARCHIDENDRON PAUCIFLORUM* (JERING)

Archidendron pauciflorum (Jering) is the traditional medical plant from the family of *Leguminosae* that is native in Southeast Asia. It has been used traditionally to treat a various range of ailments. Genetic improvement is vital in the development of plants in order to increase their yield and quality, however there is no local data on plant tissue culture of *Archidendron pauciflorum* available. A protocol for successful callus induction from the seed of *Archidendron pauciflorum* was developed by using the embryo and cotyledon. The explants were inoculated onto Murashige and Skoog (MS) media supplemented with different levels (1.0 - 5.0 mg/L) of 2,4-dichlorophenoxyacetic acid (2,4-D), indole-3-acetic acid (IAA) and naphthalene acetic acid (NAA). After 21 days, compact white callus was obtained from the embryo supplemented with 2 mg/L of 2,4-D and friable white callus from 5 mg/L of NAA and 1 mg/L of IAA. Overall results showed that the presence of 2,4-D is the most suitable auxin to induce the callus on the seed of *Archidendron pauciflorum*.