

Emon Rungjangsuwan 2011: Expression Study of Genes During Somatic Embryogenesis of Oil Palm, (*Elaeis guineensis* Jacq.) Master of Science (Genetics), Major Field: Genetics, Department of Genetics. Thesis Advisor: Mr. Chatchawan Jantasuriyarat, Ph.D. 83 pages.

Micropropagation of oil palm usually takes a long period of time. This research project aims to investigate genes involved in somatic embryogenesis of oil palm during tissue culture process in order to shortening the length of this process. We start with expression study of four genes of interest including *SERK* (somatic embryogenesis receptor like kinase), *LEC1* gene (*Leafy cotyledon 1-like*), *WUSCHEL* and *BBM* (*BABY BOOM*) in oil palm tissue during embryogenesis; callus, globular, torpedo, cotyledon and plantlet and male and female flowers. Results show that *SERK* constitutively expressed in all tissue types and *WUSCHEL* did not express in any tissue types examined. *LEC1* and *BBM* genes expressed at high level during somatic embryogenesis including globular, torpedo, cotyledon and plantlet stages. Our results suggested that *LEC1* and *BBM* genes are involved in the regulation of the somatic embryogenesis in oil palm during tissue culture. The information from this research will be useful for the study the mechanism of the somatic embryogenesis of oil palm during tissue culture and to shortening this process in the future.

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