IDENTIFICATION OF INTROGRESSED LINE OF BC_1F_1 FROM MALAYSIAN RICE VARIETY

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Final Year Project Report Submitted in Fulfillment of the Requirements for the Degree of Bachelor of Science (Hons) Biology In the Faculty of Applied Sciences Universiti Teknologi MARA

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This Final Year Project Report entitled "**Identification of Introgressed Line of BC_1F_1 From Malaysian Rice Variety**" was submitted by Nur Aqilah Binti Alias in fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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TABLE OF CONTENTS

ABSTRACT

IDENTIFICATION OF INTROGRESSED LINE OF BC_1F_1 FROM MALAYSIAN RICE VARIETY

Rice blast disease is mostly caused by the fungus, *Magnaporthe oryzae*. Marker-assisted backcrossing (MAB) is one of the reasonable approaches to develop a new resistant variety to confront with this challenge. The objective of the study is to identify the introgressed lines from BC_1F_1 population. A total of 80 seeds from BC_1F_1 families were obtained from Agrotechnology and Bioprocess Division, Malaysian Nuclear Agency, Bangi, Selangor, Malaysia. Based on the result there are 82.5% of seeds were successfully germinated meanwhile 17.5% seeds were unsuccessfully germinated. DNA was extracted by following the modified CTAB method. PCR analysis showed a pattern of band generated by using RM413 and RM206 primers. Marker RM 413 was tightly linked with *pi*-21 demonstrated 4 heterozygous (score as "H") out of 18 backcrossed plants. RM 413 marker can be further used as a foreground marker selection in future generation in development of rice blast resistant variety in Malaysia.