

STUDY ON DESIGNING FUNCTIONAL MARKERS TO DETERMINE BROWN PLANTHOPPER RESISTANCE CANDIDATE GENE *BPH26* IN VIETNAMESE NATIVE RICE VARIETIES

**Nguyen Truong Khoa, Nguyen Thuy Diep, Nguyen Thai Duong,
Dang Thi Thanh Ha, Kieu Thi Dung, Tran Thi Thuy,
Tran Dang Khanh, Khuat Huu Trung, Pham Xuan Hoi**

Summary

The Bph26 gene is dominant, was cloned and mapped from indica variety, ADR52 which located on chromosomes 12. Bph26 encodes a CC-NB-LRR protein that mediates antibiosis to brown planthopper. The rice varieties susceptible to brown plant hoppers that are pyramided with Bph26 could significantly improve brown planthopper resistance, suggesting a valuable application in rice resistance breeding. In this study, based on the sequence data of 48 native rice varieties, we have we have screened and designed Bph26del24 marker to determine this candidate gene. The results of sixteen native rice varieties which carrying homozygote candidate gene Bph26. These are significant genetic sources and molecular marker in and breeding programs with marker assisted selection.

Keywords: brown planthopper, candidate gene Bph26, rice, marker design