CONSTRUCTION AND TRANSFORMATION OF EXPRESSION VECTORS CONTAINING GENE *OsNAC10* INVOLVED DROUGHT STRESS TOLERANCE INTO RICE

Pham Xuan Hoi, Nguyen Thi Thu Ha, Dam Quang Hieu,
Pham Thu Hang, Nguyen Duy Phuong

Summary

Plants response to adverse environment by initating a series of processes including activation of transcription factors that can regulate expression of various stress-responsive and adaptive genes.*OsNAC10* belongs to *NAC* family (NAM, ATAF1/2, CUC2), which is the largest plant transcription factor family, plays a important role in development and stress responses in plant at both the vegetative and reproductive stages.In this study, the recombinant expression vectors containing OsNAC10 encoding sequence, including both sense and anti-sense sequence,under the control of promoters *Ubiquitin*were designed. The constructs pCAM-Ubi/OsNAC10-sense and pCAM-Ubi/OsNAC10-antisensewas transformed into J02 rice variety using *Agrobacterium tumefaciens*. The present of transgenes inthe regeneration plant genomes were identified by PCR. These results provide a basis for the study of the function of *OsNAC10*in abioticstress responses in plant and for the development of stress tolerant crops.

Key words:Drought tolerance, gene transformation, OsNAC10, transcription factor, Ubiquitin.