

ISOLATION OF *KALANCHOE DAIGREMONTIANA* KNOTTED-LIKE GENES

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Kalanchoe daigremontiana (*Crassulaceae*) forms epiphylous buds on leaf margin notches. In an attempt to identify knox genes involved in epiphylly, leaf tissue was collected before buds formation. Following RNA extraction and cDNA synthesis, semi-nested PCR was performed using anchored oligo-dT primer and degenerated primers designed on homeodomain sequence (Kobayashi et al., 2000). PCR products were cloned and sequenced. Based on their sequence, twenty cDNA fragments were classified in five groups. In order to identify full length coding sequence, nested 5' RACE was carried out using whole or digested cDNAs adaptor libraries. Work is still in progress. Preliminary results show that predicted proteins from sequenced genes fit in KNOTTED-like homeobox (KNOX) protein family. These proteins are transcription factors belonging to three-amino acid loop extension (TALE) superclass homeobox proteins, and can be discriminate by their conserved DNA binding homeodomains, MEINOX domains and ELK domains. KNOX proteins are further classified into two subgroups (Kerstetter et al., 1994; Bürglin, 1997). To class 1 KNOX protein belong several well known transcription factor as KNOTTED1 (KN1) from maize, SHOOT MERISTEMLESS (STM), KNAT1 and KNAT2 from Arabidopsis, that play an important role in meristem formation and maintenance. Class 2 KNOX genes are expressed in all tissue and their function are not clear. Four of the knotted-like genes identified in *K. daigremontiana* belong to class 2 and one to class 1 KNOX genes.