Construction of a cDNA library and preliminary analysis of expressed sequence tags in *Piper hainanense*

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**ABSTRACT.** Black pepper is a perennial climbing vine. It is widely cultivated because its berries can be utilized not only as a spice in food but also for medicinal use. This study aimed to construct a standardized, high-quality cDNA library to facilitate identification of new *Piper hainanense* transcripts. For this, 262 unigenes were used to generate raw reads. The average length of these 262 unigenes was 774.8 bp. Of these, 94 genes (35.9%) were newly identified, according to the NCBI protein database. Thus, identification of new genes may broaden the molecular knowledge of *P. hainanense* on the basis of Clusters of Orthologous Groups and Gene Ontology categories. In addition, certain basic genes linked to physiological processes, which can contribute to disease resistance and thereby to the breeding of black pepper. A total of 26 unigenes were found to be SSR markers. Dinucleotide SSR was the main repeat motif, accounting...
for 61.54%, followed by trinucleotide SSR (23.07%). Eight primer pairs successfully amplified DNA fragments and detected significant amounts of polymorphism among twenty-one piper germplasm. These results present a novel sequence information of *P. hainanense*, which can serve as the foundation for further genetic research on this species.

**Key words:** EST; Expressing; *Piper hainanense*