

# Expression Analysis of ESTs Derived from the Leaf of Chunpoong (*Panax ginseng* C.A. Meyer)

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Expressed sequence tags (EST) are help to quickly identify functions of expressed genes and to understand the complexity of gene expression. In order to analyze gene expression of the leaf development in *Panax ginseng*, which is one of the most important medicinal plant, expressed sequence tags (EST) analysis was carried out. We constructed a cDNA library using the immature leaf of Chunpoong. Partial sequences were obtained from 3,170 clones. The ESTs could be clustered into 1,624 (56.1%) non-redundant groups. Similarity search of the non-redundant ESTs against public non-redundant databases of both protein and DNA indicated that 1,137 groups show similarity to genes of known function. These ESTs clones were divided into sixteen categories depending upon gene function. Most abundant transcripts in immature ginseng leaf were photosynthesis related protein, such as chlorophyll a/b binding protein LHCII type I (128), chlorophyll a/b binding protein (53), ribulose-1,5-bisphosphate carboxylase (41), and photosystem I psaH (26). The EST data from immature leaf generated in this study is useful in dissecting gene expression in leaf organ of ginseng.