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## Genetic engineering of turmeric

### Functional analysis of curcuminoid biosynthetic genes in *Curcuma longa*

Turmeric (*Curcuma longa* Linn.) is a rhizomatous herbaceous perennial plant of the ginger family Zingiberaceae. The rhizome of *C. longa* is an important source of natural products called curcuminoids which have been used as food additive, cosmetic and Thai traditional medicine for a long time



The main goal of this project is to clone genes involved in curcuminoid biosynthesis, expression and functional analyses, and transformation of these genes to increase curcuminoid content in the rhizome of turmeric

## Genetics of aromatic gene in coconut

### Investigation of the aromatic gene in coconut

Aromatic coconut (*Cocos nucifera* Linn.) is one of the economically important fruit crops. Coconut juice is famously used as sport drink. Its meat and juice have been widely used in some Thai foods. The aroma is caused by the major aromatic compound, 2-acetyl-1-pyrroline which is also found in pandan leaf and jasmine rice. The gene responsible for the fragrance, *Badh2* (Betaine aldehyde dehydrogenase 2), was exclusively studied in rice but not in coconut and other plants.



Source : Department of Agricultural Extension

The aim of this project is to clone the aromatic gene from coconut and other aromatic plants, evolutionary study of these aromatic genes and development of DNA marker for identification of the aromatic coconut cultivar

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