

## CHAPTER VII

## CONCLUSION

### 7.1 The hypothesis that hydroxylase plant cytochrome P450 might catalyzed the geranygeraniol (GGOH) to forms plaunotol.

Both the plant cytochrome P450s and cytochrome P450 reductase were isolated based on the criteria of the primer designation. The P450 was classified as CYP97 families. The CsCYP97 could be catalyze GGOH to form the plaunotol as a product on the TLC plate had a chromatogram closed to plaunotol authentic standard and confirm the molecular mass of the plaunotol using the LC-ESI-MS. It might be that the CsCYP97 is directly involved in the conversion of GGOH to plaunotol (Figure 50). It might have many steps or many cytochrome P450s involvement.

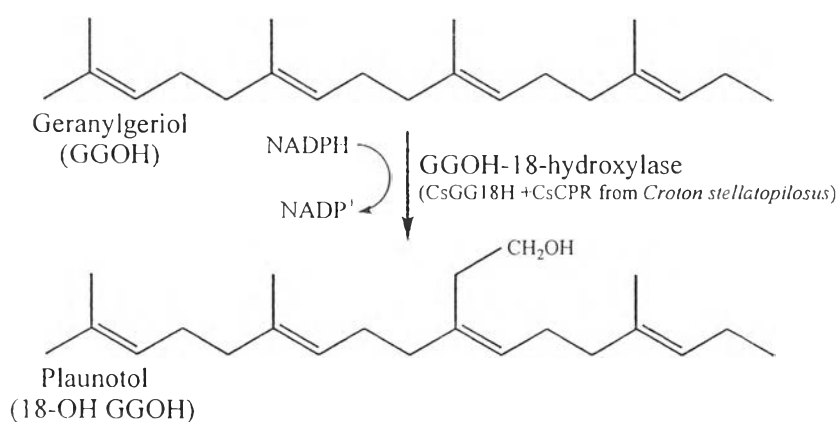


Figure 50 CsGG18H and CsCPR involved in last step of the Plaunotol biosynthetic pathway.

### 7.2 Application from this study

We could construct and produced P450 and associated CPR gene in *E. coli* and if these enzymes directly produce the plaunotol its will easy to control the production of the plaunotol even in the fermentation using the *E. coli* and make a value cost of the production.