

## **442f Partial Characterization of Dihydrobenzophenanthridine Oxidase and Its Role with Elicitation**

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Sanguinarine is one of most effective material of antimicrobial and antifungal ingredients. In cell culture system of *Eschscholtzia californica*, healthy cell does not make sanguinarine but dihydrosanguinarine. It means that dihydrobenzophenanthridine oxidase (DHBO), which oxidase dihydroform benzophenanthridine alkaloids to their end product, is not expressed in normal cell culture condition. There are two ways to up-regulate DHBO expression level, one is using transformant cell and the other is elicitation. Up to now, only N-terminal sequence of DHBO was revealed. So we detected DHBO's protein spot location in 2D gel and got a N-terminal and C-terminal sequence. Many important changes in cellular metabolism and physiology of *E. californica* were identified by combined analysis of metabolome and proteome with elicitation. Using this method, we got the expression pattern of DHBO and other enzymes, which is related to dihydrosanguinarine production. In this research, we archive partial amino acid sequence of DHBO and expression pattern with elicitation.