

Molecular of Cloning of Cytochrome P450 from *Spodoptera exigua* Midgut

**Pyeongjae Lee, Iksoo Kim, Jae-Sam Hwang, Eun-Young Yun, Mi Young Ahn,
Namjung Kim**

Department of Agricultural Biology, NIAST, RDA, Suwon 441-100, Korea

Cytochrome P450 (CYP) makes compounds more hydrophilic by adding hydroxyl group to them, and then facilitates secretion of hydrophobic toxic agents. In insect, CYP plays significant roles in detoxification of lethal plant compounds and resistance to various types of insecticide. Because *Spodoptera exigua* (*S. exigua*) is known to be strong polyphagous insect and resist exposure to chemical, research on CYP of *S. exigua* is believed to demonstrate the defense mechanism of insect to exogenous chemical attack. In this study, we isolated 6 partial CYP cDNA fragments from *S. exigua* midgut by using 3' RACE. Four out of six fragments was included in CYP 4 family, and the others in CYP 6 family. Interestingly, Clone#1 showed 76% homology with CYP4L4 that is reported to be mainly expressed in antennae of adult *Mamestra brassicae*.