

## **Expressed Sequence Tags (ESTs) Analysis of the Silk-Gland from Larval Caddisflies, *Hydropsyche* sp.; *Trichoptera***

**Jaihoon Eum<sup>1</sup>, Taewon Goo<sup>2</sup>, Jaesam Hwang<sup>2</sup>, Seok-Woo Kang<sup>2</sup>, and Sung-Sik Han\*<sup>1</sup>**

*<sup>1</sup>Graduate school of biotechnology, Korea University, Seoul 136-701, Korea and <sup>2</sup>Department of Sericulture and Entomology, NAIST, RDA Suwon 441-100, Korea*

Expressed sequence tags (ESTs) constitute a rapid and informative strategy for studying gene-expression profiles of specific stages and tissues. To date, information on *Trichoptera* is insufficient to understand the biology and development of this species. In this report, a cDNA library constructed from late larval *Hydropsyche* sp. was used to generate ESTs. Caddis larval silk-gland produce silk which are used in constructing their retreats and cases in the aquatic situation. The expression products of those tissue-specific genes can potentially be useful in the medical and industrial fields. In our study, 397 cDNA clones were sequenced from 5' end of the cDNAs. Cluster analysis identified 48 groups of sequences and 174 singletons indicating that the database represents a total of 222 genes. Putative functions say that 101 ESTs (26%) matched known genes, while 295 ESTs did not match with any known genes. Expression analysis which shows silk gland specificity and intensity represent that only 104 ESTs were expressed in the silk gland.