E801 Mating-induced Protein Phosphorylation in Male Accessory Gland of *Drosophila melanogaster*

Kyoung Sang Cho*, Jeom Hee Lim[1], and Chung Choo Lee[1]
Dept. of Molecular Biology and [1]Biology, Seoul National University

Most of gene expressions in accessory gland are induced by mating. Juvenile hormone III (JHIII) could accurately mimic the mating-induced response of increased protein synthesis and it's action mediated by calcium and kinase C. In the present study, protein phosphorylation after mating was examined in this organ to reveal the mechanism of mating-induced gene expression. The phosphorylated level of two phosphoproteins, 30 and 18 kDa, were decreased till 0.5 hr after mating and increased after this time. Okadaic acid inhibited decreased phosphorylation after mating. The level of phosphorylation of these proteins and most of protein synthesis in this organ were increased by JHIII and staurosporin, PKC and tyrosine kinase inhibitor, and decreased by TFP, calcium/CaM inhibitor. These results suggest that phosphorylation of these proteins might be involved in the mechanism of mating-induced gene expression.

E802 Purification and Characterization of cAMP-dependent Phosphoprotein 45 in *Drosophila melanogaster*

Jeom Hee Lim *, Kyoung Sang Cho[1], and Chung Choo Lee
Dept. of Biology, [1]Dept. of Molecular Biology, Seoul National University

Tissue-specific cAMP-dependent phosphoproteins (pp45, pp40, and pp20) were detected in accessory gland. In the present study, we characterized and purified pp45. The purification procedure consisted of 3 steps including heat treatment, DEAE cellulose column chromatography and high performance liquid chromatography (HPLC). The purified protein could be phosphorylated *in vitro* by the catalytic subunit of cAMP-dependent protein kinase and derived from the lumen of the accessory gland. The partial sequences of this protein were Iso-Lys-Asn-Val-Ala-Lys-Ala-Glu-Arg-Asn-Met-His-Asn-Met-Leu-Arg and showed 6 amino acids sequence homology with Mst57Dc. Currently, we are performing cDNA library screening and making the antiserum of pp45.