

D-15 Characterization of protein phosphorylation in accessory gland and ejaculatory duct of *Drosophila Melanogaster*

임점희, 조경상¹, 이정주

서울대학교 자연대학 생물학과, ¹분자생물학과

Protein phosphorylation stimulated by various protein kinases has been generally recognized to play crucial roles in the regulatory mechanism of diverse cellular functions. Most, if not all, effects of cyclic AMP are also believed to be mediated by the activation of cyclic AMP-dependent protein kinase (PKA) and the subsequent phosphorylation of specific proteins. In the present study, we identified and characterized tissue-specific phosphoproteins in accessory gland and ejaculatory duct by *in vitro* and *in vivo* phosphorylation. *In vitro*, we detected 3 phosphoproteins and these proteins were tissue-specific, cAMP-dependent, and heat stable. Especially these were dephosphorylated by mating and recovered after 4 hours. *In vivo*, 5 phosphoproteins were detected and the phosphorylated level of 2 phosphoproteins among them was induced by mating. These results imply that cAMP-dependent pathway and protein phosphorylation might be deeply correlated with physiological processes of these organs, including mating.

D-16 Genetic Variations of the Cardiovascular Disease-Associated Enzyme Genes in Korean Hypertensives

오 주형, 홍 승호, 강 병용¹, 어 현선¹, 오 문유², 이 정주¹
서울대학교 자연대 분자생물학과, 생물학과¹, 제주대학교 자연대 생물학과²

Essential hypertension is a complex polygenic disease belonging to a cluster of metabolic disorders which include dyslipidemia and cardiovascular disease. Strong correlations have been noted between untreated hypertensive states and plasma lipid levels. To assess the effects of enzyme genes associated with cardiovascular risk on the hypertension, we investigated the genotype distributions of 3 candidate genes (lipoprotein lipase, paraoxonase/arylesterase, endothelial nitric oxide synthase genes) in Korean hypertensive population. Our results showed no significant differences in allele frequencies between hypertensives and normotensives. The *PvuII* RFLP of lipoprotein lipase gene showed the considerable deviation from Hardy-Weinberg equilibrium ($P < 0.05$). In conclusion, The genotype distributions at the three candidate gene, at least koreas, may not be associated with essential hypertension. Further studies would be needed to uncover any roles of there candidate genes in the pathogenesis of essential hypertension.