MS09-5 **Difference of the sturucture and function of the carboxylesterases between human and monkey**

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Carboxylesterases (CESs) efficiently catalyze the hydrolysis of a substrate containing ester, amide or thioester bonds. Therefore CES plays an important role in the metabolic activation of prodrugs that are designed to improve bioavailability. We already isolated and characterized the genes encoding the human and murine CES1 and CES2 families, and we also characterized the transcriptional regulation of each CES promoter. However, little is known about the transcriptional regulation of monkey CES genes. In the present study, we isolated the CES gene encoding cynomolgus monkey CES1, which was tentatively designated as mk*CES1*. The 5' flanking region of *mkCES1* gene shows characteristics of a TATA-less promoter. The difference in the nucleotide sequences of the human *CES1A1* and *mkCES1* genes was 9% in the 1-Kbp 5' flanking region. The result of deletion and mutation analyses showed that *mkCES1* transcription resulted from the independent action of two *cis* acting elements, GC box (Sp1) and a C/EBP responsive element, but the degrees of contribution of these elements to the promoter activity were not equivalent. These results suggested that Sp1 and C/EBP could bind to each responsive element of the *mkCES1* promoter.