

**Z6 15 Functional Characterization of Calreticulin, a Calcium Binding Protein
In *Caenorhabditis elegans***

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C. elegans crt-1 encodes calreticulin, a multi-functional calcium binding protein which consists of 395 amino acids. *Ce-crt-1* shows 61% amino acid sequence identity with mouse calreticulin. We characterized the spacio- temporal pattern of the *crt-1* gene expression by northern analysis, *in situ* hybridization, western analysis, and whole-mount immunostaining. The mRNA transcripts and proteins were abundant during early embryonic stages and mostly restricted to intestinal precursor cells during later stages. The blocking of calreticulin gene function by RNA interference (RNAi) showed little or no effect on the survival of the worms. Currently, we are investigating the function of calreticulin with a *crt-1* deletion mutant which was obtained from TMP/UV mutagenesis using nested PCR detection method.

**Z6 16 Y-Chromosome Short Tandem Repeat Haplotype Profiling in the
Korean Population**

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We analyzed variations at seven Y-chromosome short tandem repeat (STR) loci (DYS19, DYS389I/II, DYS390, DYS391, DYS393, and DXYS156Y) in 330 unrelated males in the Korean population. Allele and haplotype frequencies were determined by polymerase chain reaction amplification followed by non-denaturing polyacrylamide gel electrophoresis. A total of 275 different haplotypes were found, 233 of them being unique. Gene diversity varied from 0.4332 at DYS391 to 0.7505 at DYS389II. The haplotype diversity value (which is the same as the discrimination index) calculated from all seven loci combined was 0.9987, which is informative. These loci form a useful system for forensic analysis in the Korean population, and provide information not normally available from autosomes.