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Genetic and molecular analyses of *ced-8*, which controls the time of appearance of cell corpses

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In *C. elegans* development, the timing of programmed cell deaths in the soma is essentially invariant. The molecular mechanisms that control this timing are poorly understood. Mutations in *ced-8* result in the delayed appearance of cell corpses. These mutations were originally identified in screens for mutations that cause the presence of cell corpses in late-stage embryos. *ced-8* has been cloned (G.Stanfield, M. Hengartner, and Bob Horvitz; 1995 International Worm Meeting abstract 486) and appears to encode a multiple-pass transmembrane protein.

To determine the role that *ced-8* plays in programmed cell death, we intend to use both genetic and molecular approaches. We will screen for suppressors of the *ced-8* phenotype. Specifically, using a *sem-4; ced-8* mutant background, we will screen for F2 bags that contain F3 embryos wild-type in the timing of cell deaths. This screen may elucidate the role of *ced-8* in programmed cell death and identify additional genes involved in cell-death execution. We also will generate antibodies for immunohistochemistry and perform biochemical assays to address the function of CED-8.