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A *ced-4* SUPPRESSION SCREEN TO IDENTIFY NEW GENES INVOLVED IN PROGRAMMED CELL DEATH

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Many genes involved in programmed cell death in *C. elegans* have been identified by screening for mutations that allow survival of cells that are normally destined to die. The opposite approach, screening for mutations that result in an increase in the number of cell deaths, has been comparatively unexplored, in part because of the lack of efficient methods to identify such mutations. A *lin-11::gfp* reporter (generated by Scott Cameron) expresses in the Pn.aap cells of the ventral cord. In wild-type animals, the six Pn.aap cells of the P3-P8 lineages survive, differentiate into VC neurons, and express *lin-11::gfp*. In strong cell-death defective mutants, all 12 Pn.aap cells survive and express GFP. In the *lin-11::gfp* reporter strain the amount of cell death can be quantified by scoring the number of fluorescent nuclei in the ventral cord using a fluorescence-equipped dissecting microscope. Using the *lin-11::gfp* reporter, I have performed a screen for suppressors of a partial loss-of-function *ced-4* mutant by looking for mutants with a reduction in the number of GFP-positive Pn.aap cells.

To date approximately 40,500 mutagenized genomes have been screened; 5,000 were screened clonally and 35,500 non-clonally. Two strong suppressors were obtained that reduce the number of GFP-positive Pn.aap cells. The first suppressor, identified in the clonal screen, is recessive and is recessively sterile. The second suppressor, identified in the non-clonal screen, is dominant and is recessively sterile. Further characterization of these mutants will be described.