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Going for a triple play: Making a GLH-1; GLH-4; KGB-1 triple mutant
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Essential to the germline determination of the nematode Caenorhabditis elegans are RNA-protein complexes found in germ cell cytoplasms known as P granules. Germline RNA helicase (GLH) proteins are components of P granules that are fundamental in germline proliferation. Of particular interest are GLH-1 and GLH-4, which are vital for the development of fertile worms. The laboratory has previously shown that a double mutant glh-1;glh-4 results in sterile worms with smaller than normal gonads and no oocytes. A mutation in the kgb-1 (kinase that GLHs bind) gene results in higher concentrations of GLH-1, when compared to wild-type worms. The phenotype of loss of KGB-1 is temperature sensitive sterility and results in worms with normal sized gonads and large endoreplicating oocytes. To further understand the interactions between GLH-1, GLH-4, and KGB-1, as well as their effects to the germline, a triple glh-1;glh-4;kgb-1 strain is being generated to study the outcome of such a genotype. Currently, the plans have been progressing rather smoothly, we have been able to generate the initial cross. We are anxious to see the phenotype of the triple.