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## Protein-protein interaction important for cytokinesis

During cytokinesis a ring containing actin and myosin forms and contracts, pinching the cell into two daughter cells. In budding yeast cells the gene *lqg1* is a gene necessary for proper actin ring formation and contraction. We have shown that *lqg1* interacts with the yeast formin proteins. This project will determine which domains of *lqg1* mediate the protein-protein interactions, which is important to understand the function of the binding between *lqg1* and formins in cytokinesis. We will use a GST pull down assay to study the binding of *lqg1* to the yeast formins Bni1 and Bnr1. We will compare binding of formins to full length *lqg1* to the ability of formins to bind deletion mutants of *lqg1*. The expected outcome is that using the assay, we will identify which region or regions of the *lqg1* protein are required for binding to the formins. This area of research is important for new therapeutic targets in cancer treatment.

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*Bethany Huinker is a sophomore in Biological Sciences at Missouri S&T. She is from St. Louis, Missouri. She is involved in the genetic engineering design team on campus. After graduation, Bethany is interested in working in genetic research on familial disorders.*