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RESEARCH ABSTRACT FORM

TITLE: Use of *Saccharomyces cerevisiae* for Two Hybrid Assay to Select Gal80 Variants Defective in Self-association

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The mechanism of Gal Gene Switch in *Saccharomyces Cerevisiae* is mediated by the activation of Gal4 and by interaction of Gal3 with Gal80. We don't know how this interaction occurs. We think that, in the presence of galactose and ATP, Gal80 in the monomer form binds Gal3 in the cytoplasm and leaves free the activation domain of Gal4 to active the gene because the Gal80 is a cytoplasm-nucleus shuttle protein. Also we think that the dimer of Gal80 is the form of Gal80 that binds to and inhibits Gal4. In this project we are performing a selection for new mutants of Gal80 that not show self-association.

Such mutants will be tested for ability to bind to Gal3 or Gal4AD to evaluate if Gal80 dimer binds to Gal4AD and if Gal80 monomer binds to Gal3. We use the Reverse Two-Hybrid Assay.