

## Yeast Strains and Media

**Purpose:** To look at different mutants and measure growth under various conditions



## Medias used for Growth Experiments

Media	Purpose
Standard yeast media	Used for growing up cells for mutagenesis assays
Rich (YEPD)	Growth media used to measure RNA levels in all strains
Synthetic complete (SC)	Comparable growth rates of different mutant strains (Quantitative assay)
Minimal media	Qualitative and Quantitative growth estimates of mutant strains
Limiting nitrogen media	Qualitative and Quantitative growth estimates of mutant strains
Histidine limiting media	Used for assaying H3 transcription in yeast cells

Yeast cells were grown on plates (for qualitative and quantitative growth assays) and in liquid media (to measure optical density (quantitative))



## Methods for Growing Yeast

Make up different media types

↓  
Autoclave media

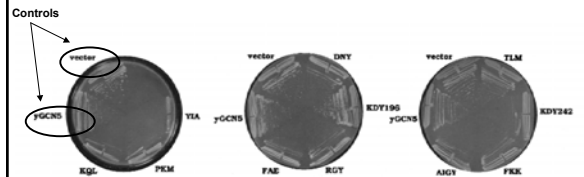
↓  
Inoculate broth or streak plate with yeast strain

↓  
Incubate at 30° C

↓  
Analyze Results



## Growth assay for Gnc5 HAT mutants



Wildtype Gcn5, the Gcn5 mutants and the vector alone were transformed into yeast strain bearing wildtype Gcn5

The transformants were streaked onto galactose plates to induce expression of transformed Gcn5 proteins

## Yeast Strains Used for Experiments

Several strains of *S. cerevisiae* harboring various mutations to both the Gcn5 HAT domain and to the Histone H3 were used in these studies

The FY1370 strain was used for the integration of wildtype and mutant Gcn5 into yeast

FY1370	Wildtype strain used for integration of the Gcn5 substitutional mutations
YIA	A double substitution mutant that eliminates a tyrosine side chain on the Gcn5 protein that makes specific contact with the histone peptide
R164A	Substitutes an Alanine for the Arginine-164 residue within the Gcn5 HAT domain, which may effect phosphorylation of Serine-10 of the histone H3 peptide
E173Q	Substitutes a Glutamic acid for Glutamine, which inactivates a key catalytic residue in the Gcn5 enzyme
JHY90 & JHY91	Involved in the substitution of Serine-10 in histone H3 to alanine