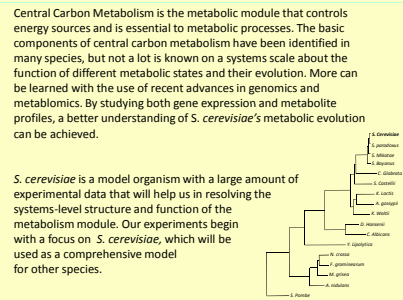


Introduction

Motivation: understand functional metabolic modules of *S. cerevisiae* at the systems-level

[illegible]

Pentose Phosphate Pathway
 produces NADPH and Pentose
 in preventing oxidative stress

- Mls1: malate synthase
- Is a key enzyme in the glyoxylate cycle
- Is required for glycine biosynthesis from glyoxylate

Zwf1: Glucose-6-phosphate dehydrogenase

- Catalyzes the First step of pathway
- Is Involved in adapting to Oxidative stress

Venn diagram showing the overlap of genes between *mls1Δ* and *zwf1Δ* strains. The *mls1Δ* strain has 38 unique genes, the *zwf1Δ* strain has 170 unique genes, and they share 106 genes.

Figure 3 consists of three line graphs showing the fold change (log2) of Hsp70, Hsp90, and act in HxT2 and HxT13 cells over time points LL, OS, PS, and PL. The y-axis represents fold change (log2) and the x-axis represents time points. The legend indicates Hsp70 (green), Hsp90 (red), and act (blue).

HxT2-hexose transport

Time Point	Hsp70	Hsp90	act
LL	~4.5	~4.5	~4.5
OS	~5.5	~4.5	~3.5
PS	~5.5	~4.5	~3.5
PL	~4.5	~4.5	~4.5

HxT13-hexose transport

Time Point	Hsp70	Hsp90	act
LL	~4.5	~4.5	~4.5
OS	~5.5	~4.5	~3.5
PS	~5.5	~4.5	~3.5
PL	~4.5	~4.5	~4.5

Time Point	replaid (log2)	paf1 (green) (log2)	paf1 (blue) (log2)
LL	-0.1	0.2	-0.1
DS	-0.2	0.35	-0.2
PS	-0.3	-0.1	-0.2
P	-0.45	-0.05	-0.1

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