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Overexpression CDCscreen

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Classic screens for genes that regulate the cell division cycle (*CDC* genes) in yeast have searched for temperature-sensitive mutants with a loss-of-function phenotype. In the March 27 Proceedings of the National Academy of Sciences, Stevenson *et al.* describe an alternative approach to identifying novel *CDC* genes (*Proc Natl Acad Sci USA* 2001, **98**:3946-3951). They screened for genes whose overexpression affects cell-cycle progression. They used a *Saccharomyces cerevisiae* expression library under the control of a galactose-inducible promoter. By screening 180,000 clones, Stevenson *et al.* identified 113 genes that alter the phases of the cell cycle. The isolated clones include many genes that have been previously implicated in cell cycle control, as well as 19 'hypothetical' uncharacterized open reading frames. These results serve to validate the overexpression approach and it's ability to identify genes missed by previous loss-of-function *CDC*screens.

References

- 1. Proceedings of the National Academy of Sciences, [http://www.pnas.org]
- 2. Construction of a GAL1-regulated yeast cDNA expression library and its application to the identification of genes whose overexpression causes lethality in yeast.

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