

Methods in Enzymology

VOLUME 470

GUIDE TO YEAST GENETICS: FUNCTIONAL GENOMICS, PROTEOMICS, AND OTHER SYSTEMS ANALYSIS, 2ND EDITION

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Almost 20 years have passed since the publication of the first *Guide to Yeast Genetics* (Volume 194). The eight-year interval since the second, *Guide to Yeast Genetics and Molecular and Cell Biology* (Volumes 350 and 351), has seen even more remarkable advances, particularly in genome-wide approaches as well as in cytology. Highlights of this volume include:

Functional Genomics

- ChIP-seq of Transcription Factor Binding Sites
- Genome-wide Nucleosome Mapping
- Genome-wide Translational Profiling

Systematic Genetic Analysis

- Synthetic Genetic Array (SGA) Analysis
- Epistatic Mini-Array Profiling (EMAP) Analysis

Proteomics

- High-resolution Mass Spectrometry
- Lipid and Phosphorylation-specific Quantitative Analysis
- Metabolomics

Cytology

- Visualizing Chromosomal Loci by Immunofluorescence
- Visualization of single mRNA molecules
- Spinning Disk Confocal Microscopy

Volume 470 in the Methods in Enzymology Series

Cover figure: Single mRNA FISH for *MDN1* mRNA. Single mRNAs are detected in the cytoplasm, higher intensity spot in the nucleus. Haploid and diploid yeast cells are shown. Probes hybridize to the 5' of the mRNA. *MDN1* mRNA (red), DAPI (blue) and DIC.

Photo credit: Robert H. Singer, Department of Anatomy and Structural Biology and The Gruss-Lipper Biophotonics Center, Albert Einstein College of Medicine.



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