

Yeast Biology Reference Guide

There are many sources of information for learning about the role of yeast in molecular and cell biology, genetics, and biochemistry. This document is an attempt to organize some of those available sources such that a person with an interest in yeast research would have some idea about where to start (or continue).

Introductory Information

Many of the articles listed below have a lot of overlap regarding their content, though each also has some unique points/perspectives.

Botstein D and Fink GR, 1998, Yeast: an experimental organism for modern biology. *Science*. 240: 1439 – 1443.

Botstein D and Fink GR, 2011, Yeast: an experimental organism for 21st century biology. *Genetics*. 189: 695 – 704.

Duina AA *et al.*, 2014, Budding yeast for budding geneticists: a primer on the *Saccharomyces cerevisiae* model system. *Genetics*. 197: 33 - 48.

Hampsey M 1997, A review of phenotypes in *Saccharomyces cerevisiae*. *Yeast*. 13: 1099 – 1133.

Hartwell LH *et al.*, 2008, *Saccharomyces cerevisiae*: genetic portrait of a yeast. From *Genetics: From Genes to Genomes*, 3rd edition, McGraw-Hill.

Forsburg SL, 2001, The art and design of genetic screens: yeast. *Nature Reviews Genetics*. 2(9): 659 – 668.

Liti G, 2015, The fascinating and secret wild life of the budding yeast *S. cerevisiae*. *eLife*. 4: e05835.

Mell JC and Burgess SM, 2002, Yeast as a model genetic organism. From *Encyclopedia of Life Sciences*, p. 1-8, John Wiley and Sons.

Sherman F, 2002, Getting started with yeast. *Methods in Enzymology*. 350: 3-41.

Silverman SJ, 1987, Current Methods for *Saccharomyces cerevisiae*. *Analytical Biochemistry*. 164: 271 - 277.

Saccharomyces Genome Database (yeastgenome.org)

Bionumbers (bionumbers.hms.harvard.edu)(search for *Saccharomyces cerevisiae*)

If you are specifically interested in understanding tetrad analysis in yeast, there are a couple of great resources available:

Yeast Genetics by Fred Winston (From Lewin B, *Genetics*, at ergito.com)

Classical Genetics: Tetrad Analysis and Recombination by Hiten Madhani (from a course “Genetics 200 A: Fall 2009”)

Historical Information

The Early Days of Yeast Genetics

Edited by Michael Hall and Patrick Linder (CSHL Press, 1993)

Yeast Research: A Historical Overview

By James A. Barnett and Linda Barnett (ASM Press, 2011)

New Beer in an Old Bottle: Eduard Buchner and The Growth of Biochemical Knowledge

By Athel Cornish Bowden (Universitat de Valencia, 1997)

Landmark Papers in Yeast Biology

Edited by Patrick Linder, David Shore, and Michael Hall (CSHL Press, 2005)

“The Yeast Genetics Course at Cold Spring Harbor Laboratory: Thirty Years and Counting”

By Peter W. Sherwood (*Genetics* 157: 1399-1402, 2001)

Molecular and Cell Biology

YeastBook

This is currently an online-only project by the Genetics journal to compile review articles covering the field of yeast cell biology (<http://www.genetics.org/content/yeastbook>)(2011 - present)

Yeast Molecular and Cell Biology (Second Edition)

Edited by Horst Feldmann (Wiley-Blackwell, 2012)

Metabolism and Molecular Physiology of *Saccharomyces cerevisiae* (Second Edition)

Edited by J. Richard Dickinson and Michael Schweizer (CRC Press, 2004)

The Molecular Biology of the Yeast *Saccharomyces* (CSHL Press)

Life Cycle and Inheritance (vol. 11A; 1981)

Metabolism and Gene Expression (vol. 11B; 1982)

Edited by Jeffrey Strathern, Elizabeth Jones, and James Broach

The Molecular and Cellular Biology of the Yeast *Saccharomyces* (CSHL Press)

Genome Dynamics, Protein Synthesis, and Energetics (vol. 21A; 1991)

Gene Expression (vol. 21B; 1992)

Cell Cycle and Cell Biology (vol. 21C; 1997)

Edited by John Pringle, Elizabeth Jones, and James Broach

The Yeasts (Second Edition)

Biology of Yeasts (vol. 1; 1995)

Yeasts and the Environment (vol. 2; 1987)

Metabolism and Physiology of Yeasts (vol. 3; 1989)

Yeast Organelles (vol. 4; 1991)

Yeast Technology (vol. 5; 1993)

Yeast Genetics (vol. 6; 1995)

Edited by Anthony H. Rose and J. Stuart Harrison (Academic Press)

The Life of Yeasts (Second Edition)

By H.J. Phaff, M.W. Miller, and E.M. Mrak (Harvard University Press, 1978)

Methods

Methods in Yeast Genetics: A Cold Spring Harbor Laboratory Course Manual

Multiple editions exist, each with different authors (depending on who taught that summer)

Methods in Enzymology (Academic Press)

Guide to Yeast Genetics and Molecular Biology (vol. 194; 1991)

Edited by John Abelson, Melvin Simon, Christine Guthrie, and Gerald R. Fink

Guide to Yeast Genetics and Molecular Cell Biology, Part B (vol. 350; 2002)

Edited by Christine Guthrie and Gerald R. Fink

Guide to Yeast Genetics and Molecular and Cell Biology, Part C (vol. 351, 2002)

Edited by Christine Guthrie and Gerald R. Fink

Guide to Yeast Genetics: Functional Genomics, Proteomics, and Other Systems Analysis (vol. 470, 2010)

Edited by Jonathan Weissman, Christine Guthrie, and Gerald R. Fink

Current Protocols in Molecular Biology (John Wiley and Sons, Inc.; online)

Chapter 13: Yeast (*Saccharomyces cerevisiae* and *Schizosaccharomyces pombe*)(Units 13.1 – 13.17; 2010)

Budding Yeast: A Laboratory Manual (Cold Spring Harbor Laboratory Press)

Edited by Brenda Andrews, Charles Boone, Trisha N. Davis, and Stanley Fields (2016)

Specialized Topics

Yeast Intermediary Metabolism

By Dan G. Fraenkel (CSHL Press, 2011)

Yeast Stress Responses

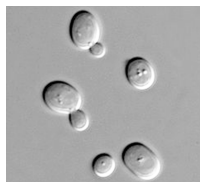
Edited by Stefan Hohmann and Willem H. Mager (Springer, 2003)

From a to alpha: Yeast as a Model for Cellular Differentiation

By Hiten Madhani (CSHL Press, 2006)

The Yeasts: A Taxonomic Study (Fifth Edition)

Edited by Cletus Kurtzman, J.W. Fell, and Teun Boekhout (Elsevier Science, 2011)



Schizosaccharomyces pombe

Molecular Biology of the Fission Yeast

Edited by Anwar Nasim, Paul Young, and Byron Johnson (Academic Press, 1989)

Experiments with Fission Yeast: A Laboratory Course Manual

By Caroline Alfa, J. Hyams, and M. McLeod (CSHL Press, 1993)

The Molecular Biology of *Schizosaccharomyces pombe*: Genetics, Genomics, and Beyond

Edited by Richard Egel (Springer, 2010)

