

Yeast Molecular And Cell Biology

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[Aging Research in Yeast](#) - Michael Breitenbach 2011-11-19

This volume includes contributions by the leading experts in the field of yeast aging. Budding yeast (*Saccharomyces cerevisiae*) and other fungal organisms provide models for aging research that are relevant to organismic aging and to the aging processes occurring in the human body. Replicative aging, in which only the mother cell ages while the daughter cell resets the clock to zero is a model for the aging of stem cell populations in humans, while chronological aging (measured by survival in stationary phase) is a model for the aging processes in postmitotic cells (for instance, neurons of the brain). Most mechanisms of aging are studied in yeast. Among them, this book discusses: mitochondrial theories of aging, emphasizing oxidative stress and retrograde responses; the role of autophagy and mitophagy; the relationship of apoptosis to aging processes; the role of asymmetric segregation of damage in replicative aging; the role of replication stress; and the role of the cytoskeleton in aging. Modern methods of yeast genetics and genomics are described that can be used to search for aging-specific functions in a genome-wide unbiased fashion. The similarities in the pathology of senescence (studied in yeast) and of cancer cells, including genome instability, are examined.

[The Rise of Yeast](#) - Nicholas P. Money 2018

"[The author] argues that we cannot ascribe too much importance to yeast, and that its discovery and controlled use profoundly altered human history"--Amazon.com.

Guide to Yeast Genetics and Molecular and Cell Biology, Part C - 2002-06-14

This volume and its companion, Volume 350, are specifically designed to meet the needs of graduate students and postdoctoral students as well as researchers, by providing all the up-to-date methods necessary to study genes in yeast. Procedures are included that enable newcomers to set up a yeast laboratory and to master basic manipulations. Relevant background and reference information given for procedures can be used as a guide to developing protocols in a number of disciplines. Specific topics addressed in this book include cytology, biochemistry, cell fractionation, and cell biology.

[Yeast Physiology and Biotechnology](#) by Graeme M. Walker 1998-04-08

Yeasts are the world's premier industrial micro-organisms. In addition to their wide exploitation in the production of foods, beverages and pharmaceuticals, yeasts also play significant roles as model eukaryotic cells in furthering our knowledge in the biological and biomedical sciences. In order for modern biotechnology to fully exploit the activities of yeasts, it is essential to appreciate aspects of yeast cell physiology. In recent years, however, our knowledge of yeast physiological phenomena has lagged behind that of yeast genetics and molecular biology. *Yeast Physiology and Biotechnology* redresses the balance by linking key aspects of yeast physiology with yeast biotechnology. Individual chapters provide broad and timely coverage of yeast cytology, nutrition, growth and metabolism - important aspects of yeast cell physiology which are pertinent to the practical uses of yeasts in industry. The final chapter reviews traditional, modern and emerging biotechnologies in which roles of yeasts in the production of industrial commodities and their value in biomedical research are fully discussed. Relevant aspects of classical and modern yeast genetics and molecular biology are fully integrated into the appropriate chapters. This up-to-date and fully referenced book is aimed at advanced undergraduate and postgraduate bioscience students, but will also prove to be a valuable source of information for yeast researchers and technologists.

The Molecular and Cellular Biology of the Yeast *Saccharomyces*: Genome dynamics, protein synthesis, and energetics - James R. Broach 1991

The burgeoning appreciation of yeasts as model systems for the study of fundamental cellular processes has highlighted the need for an update of

the seminal 1981 monograph *The Molecular Biology of the Yeast *Saccharomyces**. This need is now met by the publication of a three-volume series to serve as the authoritative sequel. The first volume focuses on the genome organization of the yeast *Saccharomyces* as well as protein translation and its regulation and energy metabolism. Subsequent volumes emphasize such topics as the cell cycle, secretion, and transcription. Together, these volumes provide a comprehensive survey of the molecular and cellular biology of *Saccharomyces* and *Schizosaccharomyces*, serving not only as a current summary of every significant area of investigation, but also as a thorough reference source. These volumes are required reading for every-one in the field and anyone curious about the state of the art of molecular and cellular biology.

[Metabolism and Molecular Physiology of *Saccharomyces Cerevisiae*](#) - J Richardson Dickinson 1998-12-09

This text emphasises the importance of staying informed about *Saccharomyces cerevisiae* as it provides the intellectual basis for much of the molecular and cellular biology of eukaryotes. It offers yeast users a concise account of the metabolism and physiology of this organism.

Chapters include: life cycle and morphogenesis; carbon metabolism, nitrogen metabolism; lipids and membranes; protein trafficking; and phosphorylation and dephosphorylation of protein and stress response.

This book is for second and final year undergraduates in microbiology, biotechnology and applied biology, postgraduate and doctoral researchers working on yeast, and researchers and managers in industries which use and exploit *Saccharomyces cerevisiae*.

Molecular Biology of the Fission Yeast - Anwar Nasim 1989

This highly researched yeast, which represents a system used by cell biologists, geneticists and molecular biologists, has been given only minimal coverage in the literature. Its properties make it an excellent organism for DNA and related biotechnology research. This book, which is the first attempt to collate existing information in one source, will be an invaluable aid to those initiating projects with this organism.

Guide to Yeast Genetics and Molecular and Cell Biology, Part C - Gerald R. Fink 2002

This volume and its companion, Volume 350, are specifically designed to meet the needs of graduate students and postdoctoral students as well as researchers, by providing all the up-to-date methods necessary to study genes in yeast. Procedures are included that enable newcomers to set up a yeast laboratory and to master basic manipulations. Relevant background and reference information given for procedures can be used as a guide to developing protocols in a number of disciplines. Specific topics addressed in this book include cytology, biochemistry, cell fractionation, and cell biology.

[The Nucleolus](#) - Mark O. J. Olson 2011-09-15

Within the past two decades, extraordinary new functions for the nucleolus have begun to appear, giving the field a new vitality and generating renewed excitement and interest. These new discoveries include both newly-discovered functions and aspects of its conventional role. The Nucleolus is divided into three parts: nucleolar structure and organization, the role of the nucleolus in ribosome biogenesis, and novel functions of the nucleolus.

Yeast Intermediary Metabolism - Dan G. Fraenkel 2011

In recent years, the eukaryotic microbe baker's yeast, *Saccharomyces cerevisiae*, has been used in many studies of cell biology common to multicellular organisms. This single-volume handbook explains metabolism as based on *Saccharomyces*.

[Yeast Genetics](#) - Jeffrey S. Smith 2014-10-14

Yeast Genetics: Methods and Protocols is a collection of methods to best study and manipulate *Saccharomyces cerevisiae*, a truly genetic powerhouse. The simple nature of a single cell eukaryotic organism, the relative ease of manipulating its genome and the ability to interchangeably exist in both haploid and diploid states have always

made it an attractive model organism. Genes can be deleted, mutated, engineered and tagged at will. *Saccharomyces cerevisiae* has played a major role in the elucidation of multiple conserved cellular processes including MAP kinase signaling, splicing, transcription and many others. Written in the successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols and notes on troubleshooting and avoiding known pitfalls. Authoritative and easily accessible, *Yeast Genetics: Methods and Protocols* will provide a balanced blend of classic and more modern genetic methods relevant to a wide range of research areas and should be widely used as a reference in yeast labs.

Yeast Protocols - Ivor Howell Evans 1996

Yeast Protocols contains many key techniques for studying the biology of yeasts at both the cellular and molecular levels. Working primarily from *Saccharomyces cerevisiae*, the expert contributors explain step-by-step how to successfully isolate, identify, and culture yeasts; the secrets of meiotic mapping; how to use PFGE in karyotyping and gene localization; the methods for purification and analysis of various cell components; and the construction and exploitation of genomic DNA clone banks. They also cover the latest methods for chromosome engineering, insertional mutagenesis by Ty elements, mRNA abundance and half-life

measurements, the use of reporter gene systems, genotoxicity testing, and more. *Yeast Protocols* follows the widely applauded *Humana Methods in Molecular Biology* style: brief introductions putting the particular method in context, comprehensive lists of materials, cookbook style instructions, and troubleshooting notes to avoid common pitfalls and solve problems. The techniques can be used with confidence and success by both inexperienced newcomers and established researchers.

Guide to Yeast Genetics: Functional Genomics, Proteomics, and Other Systems Analysis 2010-02-27

This fully updated edition of the bestselling three-part *Methods in Enzymology* series, *Guide to Yeast Genetics and Molecular Cell Biology* is specifically designed to meet the needs of graduate students, postdoctoral students, and researchers by providing all the up-to-date methods necessary to study genes in yeast. Procedures are included that enable newcomers to set up a yeast laboratory and to master basic manipulations. This volume serves as an essential reference for any beginning or experienced researcher in the field. Provides up-to-date methods necessary to study genes in yeast. Includes procedures that enable newcomers to set up a yeast laboratory and to master basic manipulations. This volume serves as an essential reference for any beginning or experienced researcher in the field.

Guide to Yeast Genetics and Molecular Cell Biology - 2002-06-12

This volume and its companion, Volume 351, are specifically designed to meet the needs of graduate students and postdoctoral students as well as researchers, by providing all the up-to-date methods necessary to study genes in yeast. Procedures are included that enable newcomers to set up a yeast laboratory and to master basic manipulations. Relevant background and reference information given for procedures can be used as a guide to developing protocols in a number of disciplines. Specific topics addressed in this book include basic techniques, making mutants, genomics, and proteomics.

Yeast Cytokinesis - Alberto Sanchez-Diaz 2015-11-09

This volume presents protocols on yeast cytokinesis that will help *Molecular and Cellular Biology* researchers in the use of these microorganisms to approach the study of general or specific key questions in cytokinesis. Written for the *Methods in Molecular Biology* series, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, *Yeast Cytokinesis: Methods and Protocols* provides practical and step-by-step detailed protocols useful for a wide audience ranging from experienced researchers to beginners in the use of yeasts.

Guide to Yeast Genetics and Molecular and Cell Biology - Christine Guthrie 2004

Guide to Yeast Genetics and Molecular Biology presents, for the first time, a comprehensive compilation of the protocols and procedures that have made *Saccharomyces cerevisiae* such a facile system for all researchers in molecular and cell biology. Whether you are an established yeast biologist or a newcomer to the field, this volume contains all the up-to-date methods you will need to study "Your Favorite Gene" in yeast. * Basic Methods in Yeast Genetics * Physical and genetic mapping * Making and recovering mutants * Cloning and Recombinant

DNA Methods * High-efficiency transformation * Preparation of yeast artificial chromosome vectors * Basic Methods of Cell Biology * Immunomicroscopy * Protein targeting assays * Biochemistry of Gene Expression * Vectors for regulated expression * Isolation of labeled and unlabeled DNA, RNA, and protein

Yeast Protocols-sWei Xiao 2016-09-17

Yeast Protocols, Third Edition presents up-to-date advances in research using yeasts as models. Chapters cover topics such as basic protocols in yeast culture and genomic manipulation, protocols that study certain organelles such as mitochondria and peroxisomes and their functions in autophagy and assays commonly used in yeast-based studies that can be adapted to other organisms. As the first sequenced living organism, budding yeast *S. cerevisiae* and other model yeasts have helped greatly in life science research. The easy switch between the haploid and diploid state makes yeast a paradigm of genetic manipulation. Written in the successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols and notes on troubleshooting and avoiding known pitfalls. Authoritative and easily accessible, *Yeast Protocols*, Third Edition seeks to serve both professionals and novices with newly-developed protocols to study this essential model organism.

From a to [alpha] - Hiten D. Madhani 2007

From a to [alpha] is a short supplemental textbook that uses control of yeast mating type as a model for many aspects of cell determination in general. Topics covered include gene silencing; genetic recombination; differentiation; combinatorial gene regulation; mRNA transport to establish asymmetric cell division; signal transduction; evolution of genetic networks; and various aspects of cell biology, including action of cytoskeleton and bud site selection. The book includes a foreword by Mark Ptashne, author of *A Genetic Switch*.

The Molecular and Cellular Biology of the Yeast Saccharomyces, Volume 3 - John R Pringle 2010-05

The Molecular and Cellular Biology of the Yeast Saccharomyces: Cell cycle and cell biology - James R. Broach 1991

Molecular Genetics of Yeast - John R. Johnston 1994

The yeast *Saccharomyces cerevisiae* is used extensively in academic research as a model eukaryote, and is also one of the most important industrial organisms. It is easy to manipulate, and has a great many parallels with higher organisms, making it ideal for studies in molecular biology, genetics, and biotechnology. This book describes current experimental procedures, written by internationally recognized experts, for working with this organism. Topics covered include DNA isolation, cloning and expression vectors, construction and use of DNA libraries, Ty insertional mutagenesis, high-efficiency transformation, cell-free translation of mRNAs, virus-like particles, and aspects of industrial strains. *Molecular Genetics of Yeast: A Practical Approach* provides a comprehensive compendium of detailed, clearly presented protocols, with additional practical tips, for all researchers working with this organism.

Yeast Genetics J.F.T. Spencer 2011-10-08

During the past few decades we have witnessed an era of remarkable growth in the field of molecular biology. In 1950 very little was known of the chemical constitution of biological systems, the manner in which information was transmitted from one organism to another, or the extent to which the chemical basis of life is unified. The picture today is dramatically different. We have an almost bewildering variety of information detailing many different aspects of life at the molecular level. These great advances have brought with them some breath-taking insights into the molecular mechanisms used by nature for replicating, distributing and modifying biological information. We have learned a great deal about the chemical and physical nature of the macromolecular nucleic acids and proteins, and the manner in which carbohydrates, lipids and smaller molecules work together to provide the molecular setting of living systems. It might be said that these few decades have replaced a near vacuum of information with a very large surplus. It is in the context of this flood of information that this series of monographs on molecular biology has been organized. The idea is to bring together in one place, between the covers of one book, a concise assessment of the state of the subject in a well-defined field. This will enable the reader to get a sense of historical perspective - what is known about the field today - and a description of the frontiers of research where our knowledge is increasing steadily.

Molecular and Cell Biology of the Plant Cell J. Cydonia
2012-12-06

Considerable advances have been made in our understanding of the eukaryotic cell cycle at the molecular level over the past two decades or so, particularly in yeast and in animal systems. However, only in the past three or four years has progress been made in plants at the molecular level. The present volume brings together molecular biologists, cell biologists and physiologists to discuss this recent progress and how it relates to our understanding of the regulation of plant growth and development. The opening paper summarises the progress which has been made with fission yeast. Subsequent papers explore what is known about cell cycle control at the molecular level in plants, and about cell cycle regulation in specific physiological systems, ending with summary papers on cell division in roots and shoots. The book comprises up-to-date findings on a fundamental aspect of plant growth and development, and as such will be of particular interest to advanced undergraduates, postgraduates and research scientists in the fields of molecular biology, cell biology and physiology.

Molecular Biology of the Fission Yeast - 2012-12-02

This highly researched yeast, which represents a system used by cell biologists, geneticists and molecular biologists, has been given only minimal coverage in the literature. Its properties make it an excellent organism for DNA and related biotechnology research. This book, which is the first attempt to collate existing information in one source, will be an invaluable aid to those initiating projects with this organism.

The Yeast Two-hybrid System Paul L. Bartel 1997

This volume, part of the Advances in Molecular Biology series, presents work by pioneers in the field and is the first publication devoted solely to the yeast two-hybrid system. It includes detailed protocols, practical advice on troubleshooting, and suggestions for future development. In addition, it illustrates how to construct an activation domain hybrid library, how to identify mutations that disrupt an interaction, and how to use the system in mammalian cells. Many of the contributors have developed new applications and variations of the technique.

Molecular Biology and Genetic Engineering of Yeasts - Henri Heslot
2018-01-18

Molecular Biology and Genetic Engineering of Yeasts presents a comprehensive examination of how yeasts are used in genetic engineering. The book discusses baker's yeast, in addition to a number of unconventional yeasts being used in an increasing number of studies. 175 figures help illustrate the information presented. Topics discussed include yeast transformation, yeast plasmids, protein localization and processing in yeast, protein secretion, various aspects of *Saccharomyces cerevisiae*, and heterologous expression and secretion.

Molecular Biology of the Cell - Bruce Alberts 2004

The Molecular and Cellular Biology of the Yeast *Saccharomyces*: Gene expression - James R. Broach 1991

Molecular Cell Biology Harvey F. Lodish 2000

With its acclaimed author team, cutting-edge content, emphasis on medical relevance, and coverage based on landmark experiments, "Molecular Cell Biology" has justly earned an impeccable reputation as an authoritative and exciting text. The new Sixth Edition features two new coauthors, expanded coverage of immunology and development, and new media tools for students and instructors.

Yeast Systems Biology - Stephen G. Oliver 2019-10-04

This second edition volume expands on the previous edition with a look at the latest advances in techniques to study yeast and its core set of interactions, modules, architectures, and network dynamics that are common in all eukaryotes. The chapters in this book are organized into Four Parts: Part One provides readers with an update on the development of novel experimental and computational approaches to yeast systems biology; Part Two explores high-throughput methods used to study yeast epigenome, transcriptome, proteome, and metabolome; Part Three talks about computational systems biology, and focuses on data management, dynamic modeling, constraint-based models of metabolic networks, and multi-level 'omics data; while Part Four looks at experimental platforms that utilize yeast to model systemic human diseases such as Alzheimer's and Parkinson's diseases. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics; lists of the necessary materials and reagents; step-by-step, readily reproducible laboratory protocols; and tips on troubleshooting and avoiding known pitfalls. Cutting-edge and comprehensive, *Yeast System Biology: Methods and*

Protocols, Second Edition is a valuable tool for graduate students, post-doctoral researchers, and experts who are interested in learning about the latest developments in the study of yeast.

Yeast Cell Surface Engineering - Mitsuyoshi Ueda 2019-04-23

This book provides a detailed and up-to-date overview of all aspects of yeast cell surface engineering, including fundamental principles, practical strategies for the construction of engineered yeasts, as well as medical and industrial applications. The technique makes it possible to add eukaryotic modifications to the surface-displayed proteins/peptides, which is of significant value in basic and applied research. Generally referred to as an arming (molecular display) technology, it allows yeast to be used as a whole-cell biocatalyst for a range of purposes, including bio-energy production, pollutant removal, recovery of rare metal ions, and preparation of functional cells, all of which are comprehensively covered in the book. Among the medical applications discussed are in vitro antibody preparation and the production of oral vaccines. In addition, it presents the latest advances in protein engineering and high-throughput screening for directed evolution of enzymes. The book enables graduate students and researchers to gain a deeper, comprehensive understanding of the technology, and offers further inspiration for researchers and industrial experts in this rapidly evolving field.

Yeast Genetics - J.F.T. Spencer 2012-12-06

During the past few decades we have witnessed an era of remarkable growth in the field of molecular biology. In 1950 very little was known of the chemical constitution of biological systems, the manner in which information was transmitted from one organism to another, or the extent to which the chemical basis of life is unified. The picture today is dramatically different. We have an almost bewildering variety of information detailing many different aspects of life at the molecular level. These great advances have brought with them some breath-taking insights into the molecular mechanisms used by nature for replicating, distributing and modifying biological information. We have learned a great deal about the chemical and physical nature of the macromolecular nucleic acids and proteins, and the manner in which carbohydrates, lipids and smaller molecules work together to provide the molecular setting of living systems. It might be said that these few decades have replaced a near vacuum of information with a very large surplus. It is in the context of this flood of information that this series of monographs on molecular biology has been organized. The idea is to bring together in one place, between the covers of one book, a concise assessment of the state of the subject in a well-defined field. This will enable the reader to get a sense of historical perspective - what is known about the field today - and a description of the frontiers of research where our knowledge is increasing steadily.

Non-conventional Yeasts: from Basic Research to Applications
Sibirny 2019-08-12

This volume scopes several aspects of non-conventional yeast research prepared by the leading specialists in the field. An introduction on taxonomy and systematics enhances the reader's knowledge on yeasts beyond established ones such as *Saccharomyces cerevisiae*.

Biotechnological approaches that involve fungal utilization of unusual substrates, production of biofuels and useful chemicals as citric acid, glutathione or erythritol are discussed. Further, strategies for metabolic engineering based on knowledge on regulation of gene expression as well as sensing and signaling pathways are presented. The book targets researchers and advanced students working in Microbiology, Microbial Biotechnology and Biochemistry.

Metabolism and Molecular Physiology of *Saccharomyces*

Cerevisiae - J. Richard Dickinson 2004-04-27

Since the publication of the best-selling first edition, much has been discovered about *Saccharomyces cerevisiae*, the single-celled fungus commonly known as baker's yeast or brewer's yeast that is the basis for much of our understanding of the molecular and cellular biology of eukaryotes. This wealth of new research data demands our attention and

Yeast - Horst Feldmann 2012-09-06

Finally, a stand-alone, all-inclusive textbook on yeast biology. Based on the feedback resulting from his highly successful monograph, Horst Feldmann has totally rewritten the contents to produce a comprehensive, student-friendly textbook on the topic. The scope has been widened, with almost double the content so as to include all aspects of yeast biology, from genetics via cell biology right up to biotechnology applications. The cell and molecular biology sections have been vastly expanded, while information on other yeast species has been added, with contributions

from additional authors. Naturally, the illustrations are in full color throughout, and the book is backed by a complimentary website. The resulting textbook caters to the needs of an increasing number of students in biomedical research, cell and molecular biology, microbiology and biotechnology who end up using yeast as an important tool or model organism.

The Early Days of Yeast Genetics - Michael N. Hall 2008-09

Yeast genetics began with Winge's 1935 studies of *S. cerevisiae* in Copenhagen, and afterwards was pursued by Lindegren in the U.S. and Ephrussi in France. Genetic studies in *S. pombe* were pioneered by Leupold in the 1940s in Switzerland. Within four decades, not without controversies, both yeast species were recognized as essential models in eukaryotic molecular cell biology. In this remarkable volume, Hall and Linder have assembled the reminiscences of many early investigators whose pioneering studies in the years before 1975 brought yeast biology to its current maturity. These illustrated essays about the science, the events and the personalities involved capture a fascinating era, in the informal style made famous by Phage and the Origins of Molecular Biology. This is a book that all scientists interested in the development of modern genetics and molecular biology should have on their shelves.

Cell Biology by the Numbers - Ron Milo 2015-12-07

A Top 25 CHOICE 2016 Title, and recipient of the CHOICE Outstanding Academic Title (OAT) Award. How much energy is released in ATP hydrolysis? How many mRNAs are in a cell? How genetically similar are two random people? What is faster, transcription or translation? Cell Biology by the Numbers explores these questions and dozens of others provided

Fission Yeast: A Laboratory Manual - Iain Hagan 2016-08-31

Fission yeast are unicellular, rod-shaped fungi that divide by medial fission. Studies using fission yeast were instrumental in identifying fundamental mechanisms that govern cell division, differentiation, and epigenetics, to name but a few. Their rapid growth rate, genetic malleability, and similarities to more complex eukaryotes continue to make them excellent subjects for many biochemical, molecular, and cell biological studies. This laboratory manual provides an authoritative collection of core experimental procedures that underpin modern fission yeast research. The contributors describe basic methods for culturing and genetically manipulating fission yeast, synchronization strategies for probing the cell cycle, technologies for assessing proteins, metabolites, and cell wall constituents, imaging methods to visualize subcellular structures and dynamics, and protocols for investigating chromatin and

nucleic acid metabolism. Modifications to techniques commonly used in related species (e.g., budding yeast) are noted, as are useful resources for fission yeast researchers, including various databases and repositories. The well-studied fission yeast *Schizosaccharomyces pombe* is the focus throughout, but the emerging model *S. japonicus*-a larger, dimorphic species with several desirable characteristics-is also covered. This manual is an important reference for existing fission yeast laboratories and will serve as an essential start-up guide for those working with fission yeast for the first time.

Yeast - Horst Feldmann 2011-09-19

Yeast is one of the oldest domesticated organisms and has both industrial and domestic applications. In addition, it is very widely used as a eukaryotic model organism in biological research and has offered valuable knowledge of genetics and basic cellular processes. In fact, studies in yeast have offered insight in mechanisms underlying ageing and diseases such as Alzheimers, Parkinsons and cancer. Yeast is also widely used in the lab as a tool for many technologies such as two-hybrid analysis, high throughput protein purification and localization and gene expression profiling. The broad range of uses and applications of this organism undoubtedly shows that it is invaluable in research, technology and industry. Written by one of the world's experts in yeast, this book offers insight in yeast biology and its use in studying cellular mechanisms.

The Molecular Biology of Schizosaccharomyces pombe - Richard Egel 2013-03-14

The fission yeast *Schizosaccharomyces pombe* is the favoured tool of many productive research groups throughout the world, serving as a useful model for fundamental principles and mechanisms, such as genome organization, differential gene regulation, cell-cycle control, signal transduction, or cellular morphogenesis. This book collates the current state of knowledge derived from molecular studies in this simple eukaryotic microorganism. The entire sequence of its genome has been completed, emphasizing the comparative value and model status of this yeast. The individual chapters, highlighting up-to-date views on prominent aspects of molecular organization, were written by active research scientists, presenting the results of their investigations to other workers in neighbouring fields. This book intends to serve the fission yeast community as a handy source of reference for years to come. It will also be of particular value to the ever-increasing number of researchers starting to look into fission yeast affairs for comparative reasons from other platforms of molecular genetics and cell biology.