

Advanced Molecular Genetics

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Advanced Genetic Analysis - Philip Meneely 2009-01-15

Advanced Genetic Analysis explores the question "How can the principles of genetics be used as analytical tools to solve biological problems?" Drawing on the latest experimental tools, including microarrays, RNAi, and bioinformatics approaches, it provides a state-of-the-art review of the field, but in a truly student-friendly manner.

Applied Molecular Genetics - Roger L. Miesfeld 1999-04-13

This text explains the key biochemical and cell biological principles behind some of today's most commonly used applications of molecular genetics, using clear terms and well-illustrated flow schemes. The book is divided into several sections and moves from basic to advanced topics while providing a concise overview of fundamental concepts in modern biotechnology. Each chapter concludes with a Laboratory Practicum describing a hypothetical research objective and the sequence of steps that are most often used to investigate biological questions using molecular genetic methods. In addition, the book provides informative summaries of the latest advances in molecular genetics, using attractive illustrations and a comprehensive reference list. This text also introduces the use of Internet resources through the World Wide Web as a powerful new tool in molecular genetic research. Seven appendices are included in the book, providing a convenient information resource for properties of nucleic acids, protein and restriction enzymes, a description of common *E. coli* genetic markers and gel electrophoresis parameters, as well as a list of useful Internet address sites.

Advanced Molecular Biology - Richard M. Twyman 2003

Advanced Molecular Biology-A Concise Reference Provides in-depth coverage of all major topics in molecular biology. The emphasis of the book is on unifying principles and mechanisms., with frequent use of tables and boxes to summarize experimental data and gene and protein functions. Information is presented in a very accessible and logical format with all essential terms highlighted and defined. Extensive crossreferencing between chapters is used to reinforce and broaden understanding of the core concepts. This is the ideal source of comprehensive, authoritative and up-to-date information for those who work in the field of molecular biology. It is particularly attractive for advanced undergraduates, Postgraduates and researchers.

Molecular Genetics of Immunoglobulin - F. Calabi 1987-12-01

Our understanding of the molecular genetics of immunoglobulins has been enormously advanced by the application of recombinant DNA technology. This new volume in the popular series New Comprehensive Biochemistry contains eight chapters that draw together reviews summarising the research into immunoglobulins and the arrangement, rearrangement and expression of their gene structure. Molecular Genetics of Immunoglobulin will be of particular importance to those working in the areas of genetics and molecular biology, immunology, and cell biology.

Advanced Molecular Genetics - Alfred Pühler 2012-12-06

The development of powerful new techniques and refinements of techniques in molecular genetics in recent years, and the surge in interest in biotechnology based on genetic methods, have heralded a new golden age in molecular genetics, and stimulated in diverse disciplines much interest in the technologies themselves and their potential uses in basic and applied biomedical sciences. Although some excellent specialist laboratory manuals (especially the Cold Spring Harbor Laboratory manuals by I. H. Miller; R. W. Davies et al. ; and T. Maniatis et al.) on certain chapters of molecular genetics exist, no general text that covers a broad spectrum of the subject has thus far been published. The purpose of this manual is to present most, though of necessity not all of the important methods of molecular genetics, in a series of simple experiments, many of which can be readily accomplished by the microbiologist, biochemist or biotechnologist that has had only limited exposure to genetics. The remainder of the experiments require either greater familiarity with the subject, or guidance by someone with such

experience. The book should, therefore, not only enable individuals to acquire new procedures for ongoing projects, but also serve as a basis for the teaching of molecular genetic techniques in formal predoctoral and postdoctoral laboratory courses.

Advanced Molecular Biology - Richard Twyman 2018-12-20

Advanced Molecular Biology emphasises the unifying principles and mechanisms of molecular biology, with frequent use of tables and boxes to summarise experimental data and gene and protein functions. Extensive cross-referencing between chapters is used to reinforce and broaden the understanding of core concepts. This is the ideal source of comprehensive, authoritative and up-to-date information for all those whose work is in the field of molecular biology. This book emphasises the unifying principles and mechanisms of molecular biology, with frequent use of tables and boxes to summarise experimental data and gene and protein functions.

Introduction to Genetics - Terry Brown 2012

Genetics today is inexorably focused on DNA. The theme of Introduction to Genetics: A Molecular Approach is therefore the progression from molecules (DNA and genes) to processes (gene expression and DNA replication) to systems (cells, organisms and populations). This progression reflects both the basic logic of life and the way in which modern biological research is structured. The molecular approach is particularly suitable for the large number of students for whom genetics is a part of a broader program in biology, biochemistry, the biomedical sciences, and biotechnology. Introduction to Genetics presents the basic facts and concepts with enough depth of knowledge to stimulate students to move on to more advanced aspects of the subject. The book is divided into three parts. Part 1 examines the function of the gene as a unit of biological information. Part 2 studies the role of the gene as a unit of inheritance. And Part 3 explores some of the areas of research that are responsible for the high profile that genetics has in our modern world, from agriculture and industry to medicine and forensics, and the ethical challenges that genetic knowledge imparts. Introduction to Genetics is available for purchase as an e-book in its entirety or as individual chapters, and as a 1-year or 6-month rental.

Genetics Fundamentals Notes - Debasish Kar 2022-10-06

This up-to-date and comprehensive textbook is essential reading material for advanced undergraduate and graduate students with a course module in genetics and developmental biology. The book provides clear, concise, and rigorous foundational concepts of genetics. It opens with an introductory chapter that provides an overview of genetics. The book includes separate and detailed sections on classical genetics, molecular genetics, and population genetics. It covers basic and foundational principles such as Mendelian genetics, chromosomal theory, transcription, translation, mutation, and gene regulation. It further includes chapters on advanced topics such as molecular genetic techniques, genomics, and applied molecular genetics. The concluding section includes chapters on population genetics, developmental genetics, and evolutionary genetics. The chapters are written by authors with in-depth knowledge of the field. The book is replete with interesting examples, case studies, questions and suggested reading. It is useful to students and course instructors in the field of human genetics, developmental biology, life sciences, and biotechnology. It is also meant for researchers who wish to further their understanding about the fundamental concepts of genetics.

Biochemistry and Molecular Biology of Plant Hormones - P.J.J.

Hooykaas 1999-05-13

This book provides up-to-date coverage at an advanced level of a range of topics in the biochemistry and molecular biology of plant hormones, with particular emphasis on biosynthesis, metabolism and mechanisms of action. Each contribution is written by acknowledged experts in the field, providing definitive coverage of the field. No other modern book covers this subject matter at such an advanced level so comprehensively. It will

be invaluable to university libraries and scientists in the plant biotechnology industries.

DNA Sequencing - Terence A. Brown 1994-07

This introduction to the methodology of DNA sequencing should be useful to those embarking on DNA sequencing for the first time. DNA sequencing is a very widely used technique, which has been automated to a certain degree.

Lewin's Essential Genes - Jocelyn E. Krebs 2013

Condensed ed. of: *Genes X* / Benjamin Lewin. c2011.

Advanced Molecular Plant Breeding - D.N. Bharadwaj 2018-10-29

This new volume provides a better understanding of molecular plant breeding in order to boost the quality of agriculture produce, to increase crop yields and to provide nutritious food for everyone by 2050. Scientists believe the challenge can be met by implementing new and improved techniques of quantitative trait inheritance in plant breeding. Integrating genomics and molecular biology into appropriate tools and methodologies can help to create genetically engineered plants, such as by using biotic and abiotic stress tolerance, molecular markers, '-omics' technology, and genome editing.

Molecular Methods for Evolutionary Genetics - Virginie Orgogozo 2011-11-08

We are entering a particularly fruitful period in evolutionary genetics, as rapid technological progress transforms the investigation of genetic variation within and between species. *Molecular Methods for Evolutionary Genetics* is a collection of advanced molecular biology protocols and general overviews intended to represent the essential methods currently bringing evolutionary genetics to fruition. Divided into six thematic sections, this volume covers methods for characterizing genomes, diverse approaches to enrich DNA for subsets of the genome prior to sequencing, and state-of-the-art protocols for sampling genetic variation for genetic mapping studies and population genetic studies (RAD sequencing, Sequenom, microarrays, etc.). The volume concludes by focusing on methods to study candidate genes, from obtaining their sequences and analyzing their transcripts to experimentally manipulating their activities in vivo. Written in the highly successful *Methods in Molecular Biology*TM series format, chapters contain introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and notes on troubleshooting and avoiding known pitfalls. Authoritative and accessible, *Molecular Methods for Evolutionary Genetics* serves as a rich resource to biologists interested in evolution, whether they be specialists or beginners in molecular biology.

Regulation of Gene Expression - Gary H. Perdew 2006-09-15

The use of molecular biology and biochemistry to study the regulation of gene expression has become a major feature of research in the biological sciences. Many excellent books and reviews exist that examine the experimental methodology employed in specific areas of molecular biology and regulation of gene expression. However, we have noticed a lack of books, especially textbooks, that provide an overview of the rationale and general experimental approaches used to examine chemically or disease-mediated alterations in gene expression in mammalian systems. For example, it has been difficult to find appropriate texts that examine specific experimental goals, such as proving that an increased level of mRNA for a given gene is attributable to an increase in transcription rates. *Regulation of Gene Expression: Molecular Mechanisms* is intended to serve as either a textbook for graduate students or as a basic reference for laboratory personnel. Indeed, we are using this book to teach a graduate-level class at The Pennsylvania State University. For more details about this class, please visit <http://moltox.cas.psu.edu> and select "Courses." The goal for our work is to provide an overview of the various methods and approaches to characterize possible mechanisms of gene regulation. Further, we have attempted to provide a framework for students to develop an understanding of how to determine the various mechanisms that lead to altered activity of a specific protein within a cell.

Molecular Biology of DNA Methylation - Roger L.P. Adams 1985-11-22

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.

Genetic Techniques for Biological Research - Corinne A. Michels 2002-06-10

Molecular Genetic Analysis is an advanced textbook to teach the theory and practice of molecular genetic analysis to senior undergraduates and graduates studying genetics, molecular biology and cell biology. This book uses a case study approach, with the yeast *Saccharomyces* as the model genetic organism, to explain the theory and practice of molecular genetic analysis. It provides enough information so readers will be able to apply the approach to their own research project.

Molecular Genetics of Bacteria - Larry R. Snyder 2014-01-15

Molecular Genetics of Bacteria is the single most comprehensive and authoritative textbook on bacterial molecular genetics. Perfect for advanced undergraduate and graduate-level courses, the text presents the latest research on the subject in a clearly written and well-illustrated style. This book is intended for students and professionals in the fields of microbiology, genetics, biochemistry, bioengineering, medicine, molecular biology, and biotechnology.

Biological Modeling and Simulation - Russell Schwartz 2008-07-25

A practice-oriented survey of techniques for computational modeling and simulation suitable for a broad range of biological problems. There are many excellent computational biology resources now available for learning about methods that have been developed to address specific biological systems, but comparatively little attention has been paid to training aspiring computational biologists to handle new and unanticipated problems. This text is intended to fill that gap by teaching students how to reason about developing formal mathematical models of biological systems that are amenable to computational analysis. It collects in one place a selection of broadly useful models, algorithms, and theoretical analysis tools normally found scattered among many other disciplines. It thereby gives the aspiring student a bag of tricks that will serve him or her well in modeling problems drawn from numerous subfields of biology. These techniques are taught from the perspective of what the practitioner needs to know to use them effectively, supplemented with references for further reading on more advanced use of each method covered. The text, which grew out of a class taught at Carnegie Mellon University, covers models for optimization, simulation and sampling, and parameter tuning. These topics provide a general framework for learning how to formulate mathematical models of biological systems, what techniques are available to work with these models, and how to fit the models to particular systems. Their application is illustrated by many examples drawn from a variety of biological disciplines and several extended case studies that show how the methods described have been applied to real problems in biology.

Plant Patterning - Esra Galun 2007

This book provides a fascinating account of the accumulated knowledge of the mechanisms by which plants regulate their patterning. This is an exciting subject based on a novel endeavor, not least due to the rapid progress made in recent years in the diverse fields of genetics, molecular biology, microscopy, inter- and intracellular signaling, as well as our intimate knowledge of model plants (such as *Arabidopsis*). This book is unique in that it provides, in one volume, comprehensive information on all the main organs of flowering plants. There is no other book similar to this, written by a single author, that has been published in the last 10 years. The book contains updated information on the differentiation of the plant organs with respect to structure and molecular genetics, and the methodologies employed to investigate plant patterning are described in detail. Extensively illustrated with numerous figures, many of which are in color, the book will appeal to three main groups of readers: novices interested in plant patterning; plant biologists requiring a comprehensive understanding of differentiation in flowering plants; and graduate students in advanced courses.

Molecular Techniques in Crop Improvement - Shri Mohan Jain 2010-03-18

This book provides comprehensive information on the latest tools and techniques of molecular genetics and their applications in crop improvement. It thoroughly discusses advanced techniques used in molecular markers, QTL mapping, marker-assisted breeding, and

molecular cytogenetics.

Molecular Biology and its Application to Medical Mycology - Bruno Maresca 2013-06-29

Proceedings of the NATO Advanced Research Workshop on Molecular Biology and its Application to Medical Mycology, held at Taormina, Italy, January 6-8, 1992

Advances in Molecular Techniques - Rakesh S. Sengar 2018-05-11

Molecular genetics aims to comprehend biological activity at the gene sub-level. Scientists from different areas of research and applied science can use the standard techniques optimized by molecular biologists. This book serves as a guide that introduces classic molecular biology techniques and advances in molecular and genetic engineering.

Genetics and Molecular Biology - Robert F. Schleif 1993

In the first edition of *Genetics and Molecular Biology*, renowned researcher and award-winning teacher Robert Schleif produced a unique and stimulating text that was a notable departure from the standard compendia of facts and observations. Schleif's strategy was to present the underlying fundamental concepts of molecular biology with clear explanations and critical analysis of well-chosen experiments. The result was a concise and practical approach that offered students a real understanding of the subject. This second edition retains that valuable approach--with material thoroughly updated to include an integrated treatment of prokaryotic and eukaryotic molecular biology. *Genetics and Molecular Biology* is copiously illustrated with two-color line art. Each chapter includes an extensive list of important references to the primary literature, as well as many innovative and thought-provoking problems on material covered in the text or on related topics. These help focus the student's attention on a variety of critical issues. Solutions are provided for half of the problems. Praise for the first edition: "Schleif's *Genetics and Molecular Biology*... is a remarkable achievement. It is an advanced text, derived from material taught largely to postgraduates, and will probably be thought best suited to budding professionals in molecular genetics. In some ways this would be a pity, because there is also gold here for the rest of us... The lessons here in dealing with the information explosion in biology are that an ounce of rationale is worth a pound of facts and that, for educational value, there is nothing to beat an author writing about stuff he knows from the inside."--Nature. "Schleif presents a quantitative, chemically rigorous approach to analyzing problems in molecular biology. The text is unique and clearly superior to any currently available."--R.L. Bernstein, San Francisco State University. "The greatest strength is the author's ability to challenge the student to become involved and get below the surface."--Clifford Brunk, UCLA

Non-Neutral Evolution - Brian Golding 1994-12-31

All organisms--from the AIDS virus, to bacteria, to fish, to humans--must evolve to survive. Despite the central place of evolution within biology, there are many things that are still poorly understood. For Charles Darwin, the driving force behind all evolution was natural selection. More recently, evolutionary biologists have considered that many mutations are essentially neutral with respect to natural selection. Many questions remain. Are molecular differences between species adaptive? Are differences within species adaptive? Modern biotechnology has enabled us to identify precisely the actual DNA structure from many individuals within a population, and thus to see how these DNA sequences have changed over time and to answer some of these questions. At the same time, this knowledge poses new challenges to our ability to understand the observed patterns. This exciting volume outlines the biological problems, provides new perspectives on theoretical treatments of the consequences of natural selection, examines the consequences of molecular data, and relates molecular events to speciation. Every evolutionary biologist will find it of interest.

Loose Leaf for Understanding Biology with Connect Access Card - Kenneth A. Mason, Dr. Ph.D. 2015-03-13

Computational Genome Analysis - Richard C. Deonier 2007-08-13

This book presents the foundations of key problems in computational molecular biology and bioinformatics. It focuses on computational and statistical principles applied to genomes, and introduces the mathematics and statistics that are crucial for understanding these applications. The book features a free download of the R software statistics package and the text provides great crossover material that is interesting and accessible to students in biology, mathematics, statistics and computer science. More than 100 illustrations and diagrams reinforce concepts and present key results from the primary literature. Exercises are given at the end of chapters.

Advanced Methods in Molecular Biology and Biotechnology - Khalid Z.

Masoodi 2020-11-10

Advanced Methods in Molecular Biology and Biotechnology: A Practical Lab Manual is a concise reference on common protocols and techniques for advanced molecular biology and biotechnology experimentation. Each chapter focuses on a different method, providing an overview before delving deeper into the procedure in a step-by-step approach. Techniques covered include genomic DNA extraction using cetyl trimethylammonium bromide (CTAB) and chloroform extraction, chromatographic techniques, ELISA, hybridization, gel electrophoresis, dot blot analysis and methods for studying polymerase chain reactions. Laboratory protocols and standard operating procedures for key equipment are also discussed, providing an instructive overview for lab work. This practical guide focuses on the latest advances and innovations in methods for molecular biology and biotechnology investigation, helping researchers and practitioners enhance and advance their own methodologies and take their work to the next level. Explores a wide range of advanced methods that can be applied by researchers in molecular biology and biotechnology. Features clear, step-by-step instruction for applying the techniques covered. Offers an introduction to laboratory protocols and recommendations for best practice when conducting experimental work, including standard operating procedures for key equipment.

Biochemistry and Molecular Biology - Robert Brambl 2013-04-17

Biochemistry and molecular biology are among the most rapidly emerging areas in the life sciences. Indeed, a number of important advances have been made with fungi and yeasts since the first edition of this volume was published in 1996. Still further, the influence that genomics projects have had on the design and interpretation of experiments in almost all areas is truly impressive. The availability of large amounts of sequence data has quickly altered the scope and dimensions of genetics and biochemistry, leading to new insights into fungal biology. Earlier chapters on mitochondrial import of proteins, pH and regulation of gene expression, stress responses, signal transduction, polysaccharidases, trehalose metabolisms, polyamines, carbon metabolism, and acetamide metabolism have been extensively revised or rewritten. Completely new chapters have been prepared on gene ontogeny, peroxisomes, mitochondrial gene expression, chitin biosynthesis, iron metabolism, GATA transcription factors, carbon metabolism, and sulfur metabolism.

GEN CMB UNST BIO; CNCT+ - Kenneth Mason 2015-03-13

Developmental Genetics of the Pharyngeal Arch System - Jeffry M. Cesario 2015-05-01

The pharyngeal arches are embryonic structures that develop into the face, neck, a part of the heart, and several endocrine glands in animals. They are thought to have played a key role in vertebrate evolution as their derivatives impact the mode of feeding and breathing. Moreover, perturbation in pharyngeal arch development is associated with several major groups of birth defects in humans. During early embryonic development, cells from all three germ layers come together to assemble the pharyngeal arches. Subsequently, the pharyngeal arches undergo growth, morphogenesis, and cell type differentiation to give rise to musculoskeletal, cardiovascular, neural, and glandular components. These processes are guided by interactions amongst different tissues, via signaling molecules. A large number of genes, with a complex network of regulatory relationships, govern each aspect of pharyngeal arch development. With the advance of molecular genetics tools in model organisms such as mice, we are beginning to understand the molecular and cellular mechanisms underlying development of the pharyngeal arches and related birth defects. This eBook will provide an introduction into development of the pharyngeal arch system, with a detailed discussion on the genetic regulation of this process.

Molecular Biology of Human Cancers - Wolfgang Arthur Schulz 2005-12-05

Cancer research is now an interdisciplinary effort requiring a basic knowledge of commonly used terms, facts, issues, and concepts. This interdisciplinary book meets this need, providing an authoritative overview to the field. It presents many of the molecules and mechanisms generally important in human cancers and examines a broad, but exemplary, selection of cancers. In addition, cancer research has now reached a critical stage, in which the accumulated knowledge on molecular mechanisms is gradually translated into improved prevention, diagnosis, and treatment. This book summarizes the state, pitfalls, and potential of these efforts.

Molecular Biotechnology - Mukesh Pasupuleti 2006

PART I MOLECULAR BIOLOGY An Introduction to Molecular Biotechnology Genetic Material DNA Replication and Repair Gene Concept Transcription or Gene Expression Translation PART II GENETICS Regulation of Gene

Expression Mendel's Laws Gene Interaction Linkage and Crossing Over Mutations Bacterial Recombination Transposons Chloroplast and Mitochondrial Genome Organization PART III GENETIC ENGINEERING Gene Cloning Enzymes Used in Genetic Engineering Bacterial Vectors Blotting Techniques Generation of Clones DNA Libraries Polymerase Chain Reaction DNA Synthesis by Chemical Method Restriction Fragment Length Polymorphism Gene Transfer Methods Application of Recombinant Technology

Current Protocols in Molecular Biology -

Molecular Biology Techniques - Heather Miller 2011-10-18

This manual is an indispensable tool for introducing advanced undergraduates and beginning graduate students to the techniques of recombinant DNA technology, or gene cloning and expression. The techniques used in basic research and biotechnology laboratories are covered in detail. Students gain hands-on experience from start to finish in subcloning a gene into an expression vector, through purification of the recombinant protein. The third edition has been completely re-written, with new laboratory exercises and all new illustrations and text, designed for a typical 15-week semester, rather than a 4-week intensive course. The "project approach to experiments was maintained: students still follow a cloning project through to completion, culminating in the purification of recombinant protein. It takes advantage of the enhanced green fluorescent protein - students can actually visualize positive clones following IPTG induction. Cover basic concepts and techniques used in molecular biology research labs Student-tested labs proven successful in a real classroom laboratories Exercises simulate a cloning project that would be performed in a real research lab "Project" approach to experiments gives students an overview of the entire process Prep-list appendix contains necessary recipes and catalog numbers, providing staff with detailed instructions

Physics in Molecular Biology - Kim Sneppen 2005-08-25

This book, first published in 2005, is a discussion for advanced physics students of how to use physics to model biological systems.

Advanced Genetics - Gurbachan S. Miglani 2002

Advanced genetics is written keeping in mind requirements of the students, teachers and research workers in genetics or cytogenetics or biotechnology, biosciences, botany and zoology assuming that the reader has acquired knowledge of basic genetics. A wonderful reference, this book will be most useful for the postgraduate students, researchers and teachers.

The Thread of Life - Susan Aldridge 1996-03-21

Susan Aldridge gives an accessible guide to the world of DNA and also explores the applications of genetic engineering in biotechnology. She takes the reader step by step, through the fascinating study of molecular biology. The first part of the book describes DNA and its function within living organisms. The second part explores genetic engineering and its applications to humans - such as gene therapy, genetic screening and DNA fingerprinting. The third part looks at the wider world of biotechnology and how genetic engineering can be applied to such problems as producing vegetarian cheese or cleaning up the environment. The final part explains how knowledge of the structure and

functioning of genes sheds light on evolution and our place in the world. Although easy to read, this book does not avoid the science involved and should be read by anyone who wants to know about DNA and genetic engineering.

An Introduction to Human Molecular Genetics - Jack J. Pasternak 2005-06-14

An Introduction to Human Molecular Genetics Second Edition Jack J. Pasternak The Second Edition of this internationally acclaimed text expands its coverage of the molecular genetics of inherited human diseases with the latest research findings and discoveries. Using a unique, systems-based approach, the text offers readers a thorough explanation of the gene discovery process and how defective genes are linked to inherited disease states in major organ and tissue systems. All the latest developments in functional genomics, proteomics, and microarray technology have been thoroughly incorporated into the text. The first part of the text introduces readers to the fundamentals of cytogenetics and Mendelian genetics. Next, techniques and strategies for gene manipulation, mapping, and isolation are examined. Readers will particularly appreciate the text's exceptionally thorough and clear explanation of genetic mapping. The final part features unique coverage of the molecular genetics of distinct biological systems, covering muscle, neurological, eye, cancer, and mitochondrial disorders. Throughout the text, helpful figures and diagrams illustrate and clarify complex material. Readers familiar with the first edition will recognize the text's same lucid and engaging style, and will find a wealth of new and expanded material that brings them fully up to date with a current understanding of the field, including: * New chapters on complex genetic disorders, genomic imprinting, and human population genetics * Expanded and fully revised section on clinical genetics, covering diagnostic testing, molecular screening, and various treatments This text is targeted at upper-level undergraduate students, graduate students, and medical students. It is also an excellent reference for researchers and physicians who need a clinically relevant reference for the molecular genetics of inherited human diseases.

Advanced Genetics - Miglani 2000-03-01

Connect with LearnSmart Labs Access Card for Raven's Biology -

Kenneth Mason 2016-05-04

McGraw-Hill Connect® with LearnSmart Labs is a subscription-based learning service accessible online through your personal computer or tablet. Choose this option if your instructor will require Connect to be used in the course. Your subscription to Connect includes the following: • SmartBook® - an adaptive digital version of the course textbook that personalizes your reading experience based on how well you are learning the content. • Access to your instructor's homework assignments, quizzes, syllabus, notes, reminders, and other important files for the course. • Progress dashboards that quickly show how you are performing on your assignments and tips for improvement. • The option to purchase (for a small fee) a print version of the book. This binder-ready, loose-leaf version includes free shipping. Complete system requirements to use Connect can be found here:

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