

Molecular Biology 2nd Edition Elsevier

YEAH, REVIEWING A BOOKS **MOLECULAR BIOLOGY 2ND EDITION ELSEVIER** COULD AMASS YOUR CLOSE CONTACTS LISTINGS. THIS IS JUST ONE OF THE SOLUTIONS FOR YOU TO BE SUCCESSFUL. AS UNDERSTOOD, ATTAINMENT DOES NOT RECOMMEND THAT YOU HAVE WONDERFUL POINTS.

COMPREHENDING AS WELL AS COVENANT EVEN MORE THAN ADDITIONAL WILL FIND THE MONEY FOR EACH SUCCESS. ADJACENT TO, THE PRONOUNCEMENT AS WITH EASE AS PERSPICACITY OF THIS MOLECULAR BIOLOGY 2ND EDITION ELSEVIER CAN BE TAKEN AS WELL AS PICKED TO ACT.

ENCYCLOPEDIA OF CELL BIOLOGY - 2015-08-07

THE ENCYCLOPEDIA OF CELL BIOLOGY OFFERS A BROAD OVERVIEW OF CELL BIOLOGY, OFFERING REPUTABLE, FOUNDATIONAL CONTENT FOR RESEARCHERS AND STUDENTS ACROSS THE BIOLOGICAL AND MEDICAL SCIENCES. THIS IMPORTANT WORK INCLUDES 285 ARTICLES FROM DOMAIN EXPERTS COVERING EVERY ASPECT OF CELL BIOLOGY, WITH FULLY ANNOTATED FIGURES, ABUNDANT ILLUSTRATIONS, VIDEOS, AND REFERENCES FOR FURTHER READING. EACH ENTRY IS BUILT WITH A LAYERED APPROACH TO THE CONTENT, PROVIDING BASIC INFORMATION FOR THOSE NEW TO THE AREA AND MORE DETAILED MATERIAL FOR THE MORE EXPERIENCED RESEARCHER. WITH AUTHORED CONTRIBUTIONS BY EXPERTS IN THE FIELD, THE ENCYCLOPEDIA OF CELL BIOLOGY PROVIDES A FULLY CROSS-REFERENCED, ONE-STOP RESOURCE FOR STUDENTS, RESEARCHERS, AND TEACHING FACULTY ACROSS THE BIOLOGICAL AND MEDICAL SCIENCES. FULLY ANNOTATED COLOR IMAGES AND VIDEOS FOR FULL COMPREHENSION OF CONCEPTS, WITH LAYERED CONTENT FOR READERS FROM DIFFERENT LEVELS OF EXPERIENCE INCLUDES INFORMATION ON CYTOKINESIS, CELL BIOLOGY, CELL MECHANICS, CYTOSKELETON DYNAMICS, STEM CELLS, PROKARYOTIC CELL BIOLOGY, RNA BIOLOGY, AGING, CELL GROWTH, CELL INJURY, AND MORE IN-DEPTH LINKING TO ACADEMIC PRESS/ELSEVIER CONTENT AND ADDITIONAL LINKS TO OUTSIDE WEBSITES AND RESOURCES FOR FURTHER READING A ONE-STOP RESOURCE FOR STUDENTS, RESEARCHERS, AND TEACHING FACULTY ACROSS THE BIOLOGICAL AND MEDICAL SCIENCES

BIOTECHNOLOGY AND ITS APPLICATIONS - W.T. GODBEY 2021-02-15

GODBEY'S BIOTECHNOLOGY AND ITS APPLICATIONS IS WRITTEN FOR THE STUDENT WITH LITTLE TO NO BACKGROUND IN COLLEGE LEVEL BIOLOGY. THE GOAL OF THE BOOK IS TO INTRODUCE THE STUDENT TO THE WORLD OF BIOTECHNOLOGY IN A WAY THAT RUNS DEEPER THAN A MERE SURVEY. THE BOOK IS DIVIDED INTO THREE UNITS. IN THE FIRST, BASIC SCIENCE IS COVERED TO INTRODUCE THE READER TO THE CELL, HOW IT BEHAVES, AND WHAT IT IS MADE OF. THE SECOND UNIT DEMONSTRATES THE BIOTECHNOLOGICAL APPLICATION OF SCIENTIFIC PRINCIPLES IN THE LABORATORY WHILE THE THIRD UNIT OF THE BOOK PRESENTS BIOTECHNOLOGIES "IN THE REAL WORLD." EXAMPLES INCLUDE RECOMBINANT PROTEINS THAT

ARE AVAILABLE TO MILLIONS OF PATIENTS, PLANTS THAT HAVE BEEN ENGINEERED TO PRODUCE FOOD THAT HAS BEEN MADE AVAILABLE TO PEOPLE AROUND THE WORLD, AND REGENERATIVE MEDICINE THAT MAY SOMEDAY ALLOW PATIENTS TO RECEIVE ORGANS THAT HAVE BEEN GROWN FROM THEIR OWN CELLS. THE SECOND EDITION HAS BEEN UPDATED AND EXPANDED WITH THE MOST CURRENT INFORMATION AVAILABLE, AND NEW CHAPTERS HAVE BEEN ADDED ON SUCH TOPICS AS GENE EDITING, BIOREMEDIATION, VACCINES AND IMMUNOTHERAPY, AND PROCESSING AND MANUFACTURING, RESULTING IN A MODERN, ROBUST, YET HIGHLY READABLE APPLICATIONS-ORIENTED INTRODUCTION TO BIOTECHNOLOGY. TAKES AN INTEGRATED APPROACH FROM FIRST PRINCIPLES, INTEGRATING CELL BIOLOGY, MOLECULAR BIOLOGY, BIOCHEMISTRY, AND HEALTH SCIENCE, STARTING AT THE BASIC SCIENCE LEVEL AND BUILDING TO BIOTECHNOLOGICAL APPLICATIONS PRESENTS SIDE TOPICS OF INTEREST THROUGHOUT ("GEE WHIZ" TOPICS), TO GIVE STUDENTS QUICK MENTAL BREAKS WHILE STILL EXTENDING THEIR KNOWLEDGE IN A PRACTICAL SENSE CONTAINS A GREATLY IMPROVED, ROBUST TEACHING PEDAGOGY TO AID STUDENT LEARNING, FEATURING NEW CHAPTER LEARNING OBJECTIVES, CHAPTER SUMMARIES, HIGHLIGHTED KEY TERMS, MORE END-OF-CHAPTER QUESTIONS, AND A NEW GLOSSARY

BIOTECHNOLOGY - JEFFERY M. BECKER 2012-12-02

BIOTECHNOLOGY: A LABORATORY COURSE IS A SERIES OF LABORATORY EXERCISES DEMONSTRATING THE IN-DEPTH EXPERIENCE AND UNDERSTANDING OF SELECTED METHODS, TECHNIQUES, AND INSTRUMENTATION USED IN BIOTECHNOLOGY. THIS MANUAL IS AN OUTGROWTH OF AN INTRODUCTORY LABORATORY COURSE FOR SENIOR UNDERGRADUATE AND FIRST YEAR GRADUATE STUDENTS IN THE BIOLOGICAL SCIENCES AT THE UNIVERSITY OF TENNESSEE. THIS BOOK IS COMPOSED OF 19 CHAPTERS AND BEGINS WITH SOME INTRODUCTORY NOTES ON RECORD KEEPING AND SAFETY RULES. THE FIRST EXERCISES INCLUDE PH MEASUREMENT, THE USE OF MICROPIPETTORS AND SPECTROPHOTOMETERS, THE CONCEPT OF ASEPTIC TECHNIQUE, AND PREPARATION OF CULTURE MEDIA. THE SUBSEQUENT EXERCISES INVOLVE THE APPLICATION OF THE GROWTH CURVE, THE ISOLATION, PURIFICATION, AND CONCENTRATION OF PLASMID DNA FROM ESCHERICHIA COLI, AND THE PROCESS OF AGAROSE

GEL ELECTROPHORESIS. OTHER EXERCISES INCLUDE THE PREPARATION, PURIFICATION, AND HYBRIDIZATION OF PROBE, THE TRANSFORMATION OF SACCHAROMYCES CEREVISIAE, THE TRANSFORMATION OF E. COLI BY PLASMID DNA, AND THE PRINCIPLES AND APPLICATIONS OF PROTEIN ASSAYS. THE FINAL EXERCISES EXPLORE THE β -GALACTOSIDASE ASSAY AND THE PURIFICATION AND DETERMINATION OF β -GALACTOSIDASE IN PERMEABILIZED YEAST CELLS. THIS BOOK IS OF GREAT VALUE TO UNDERGRADUATE BIOTECHNOLOGY AND MOLECULAR BIOLOGY STUDENTS.

THE EXTRACELLULAR MATRIX FACTSBOOK - SHIRLEY AYAD 1998-03-27

THE SECOND EDITION OF THE EXTRACELLULAR MATRIX FACTSBOOK HAS BEEN COMPLETELY REVISED, UPDATED AND EXPANDED BY OVER 50 PERCENT. IT CONTAINS OVER 85 ENTRIES ON THE DIVERSE GROUP OF MACROMOLECULES THAT ASSEMBLE TO FORM THE EXTRACELLULAR MATRIX. ENTRIES PROVIDE INFORMATION ON MOLECULAR STRUCTURE, ISOLATION, PRIMARY STRUCTURE, STRUCTURAL AND FUNCTIONAL SITES, GENE STRUCTURE, DATABASE ACCESSION NUMBERS, AND KEY REFERENCES. KEY FEATURES * COMPILED BY MEMBERS OF ONE OF THE FOREMOST CENTERS OF MATRIX BIOCHEMISTRY IN THE WORLD * CONTAINS OVER 30 NEW ENTRIES, WITH ALL PREVIOUS ENTRIES BEING REVISED AND UPDATED * INCLUDES NEW ENTRIES ON PROTEINASES INVOLVED IN THE DEPOSITION OF THE EXTRACELLULAR MATRIX * PRESENTS 3D RIBBON DIAGRAMS IN CASES WHERE THE PROTEIN STRUCTURE IS NOW KNOWN

HANDBOOK OF EPIGENETICS - TRYGVE TOLLEFSBOL 2017-07-10

HANDBOOK OF EPIGENETICS: THE NEW MOLECULAR AND MEDICAL GENETICS, SECOND EDITION, PROVIDES A COMPREHENSIVE ANALYSIS OF EPIGENETICS, FROM BASIC BIOLOGY, TO CLINICAL APPLICATION. EPIGENETICS IS CONSIDERED BY MANY TO BE THE NEW GENETICS IN THAT MANY BIOLOGICAL PHENOMENA ARE CONTROLLED, NOT THROUGH GENE MUTATIONS, BUT RATHER THROUGH REVERSIBLE AND HERITABLE EPIGENETIC PROCESSES. THESE EPIGENETIC PROCESSES RANGE FROM DNA METHYLATION TO PRIONS. THE BIOLOGICAL PROCESSES IMPACTED BY EPIGENETICS ARE VAST AND ENCOMPASS EFFECTS IN LOWER ORGANISMS AND HUMANS THAT INCLUDE TISSUE AND ORGAN REGENERATION, X-CHROMOSOME INACTIVATION, STEM CELL DIFFERENTIATION, GENOMIC IMPRINTING, AND AGING. THE FIRST EDITION OF THIS IMPORTANT WORK RECEIVED EXCELLENT REVIEWS; THE SECOND EDITION CONTINUES ITS COMPREHENSIVE COVERAGE ADDING MORE CURRENT RESEARCH AND NEW TOPICS BASED ON CUSTOMER AND READER REVIEWS, INCLUDING NEW DISCOVERIES, APPROVED THERAPEUTICS, AND CLINICAL TRIALS. FROM MOLECULAR MECHANISMS AND EPIGENETIC TECHNOLOGY, TO DISCOVERIES IN HUMAN DISEASE AND CLINICAL EPIGENETICS, THE NATURE AND APPLICATIONS OF THE SCIENCE IS PRESENTED FOR THOSE WITH INTERESTS RANGING FROM THE FUNDAMENTAL BASIS OF EPIGENETICS, TO THERAPEUTIC INTERVENTIONS FOR EPIGENETIC-BASED DISORDERS. TIMELY AND COMPREHENSIVE COLLECTION OF FULLY UP-TO-DATE REVIEWS ON EPIGENETICS THAT ARE ORGANIZED INTO ONE VOLUME AND WRITTEN BY LEADING FIGURES IN THE FIELD COVERS THE LATEST ADVANCES IN MANY DIFFERENT AREAS OF EPIGENETICS, RANGING FROM BASIC ASPECTS, TO TECHNOLOGIES, TO CLINICAL MEDICINE WRITTEN AT A VERBAL AND TECHNICAL LEVEL THAT CAN BE UNDERSTOOD BY SCIENTISTS AND COLLEGE STUDENTS

UPDATED TO INCLUDE NEW EPIGENETIC DISCOVERIES, NEWLY APPROVED THERAPEUTICS, AND CLINICAL TRIALS

PLATELETS - ALAN D. MICHELSON 2011-08-29

PLATELETS IS THE DEFINITIVE CURRENT SOURCE OF STATE-OF-THE-ART KNOWLEDGE ABOUT PLATELETS AND COVERS THE ENTIRE FIELD OF PLATELET BIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL MEDICINE. RECENTLY THERE HAS BEEN A RAPID EXPANSION OF KNOWLEDGE IN BOTH BASIC BIOLOGY AND THE CLINICAL APPROACH TO PLATELET-RELATED DISEASES INCLUDING THROMBOSIS AND HEMORRHAGE. NOVEL PLATELET FUNCTION TESTS, DRUGS, BLOOD BANK STORAGE METHODS, AND GENE THERAPIES HAVE BEEN INCORPORATED INTO PATIENT CARE OR ARE IN DEVELOPMENT. THIS BOOK DRAWS ALL THIS INFORMATION INTO A SINGLE, COMPREHENSIVE AND AUTHORITATIVE RESOURCE. · FIRST EDITION WON BEST BOOK IN MEDICAL SCIENCE AWARD FROM THE ASSOCIATION OF AMERICAN PUBLISHERS · CONTAINS FOURTEEN NEW CHAPTERS ON TOPICS SUCH AS PLATELET GENOMICS AND PROTEOMICS, INHIBITION OF PLATELET FUNCTION BY THE ENDOTHELIUM, CLINICAL TESTS OF PLATELET FUNCTION, REAL TIME IN VIVO IMAGING OF PLATELETS, AND INHERITED THROMBOCYTOPENIAS · A COMPREHENSIVE FULL COLOR REFERENCE COMPRISING OVER 70 CHAPTERS, 1400 PAGES, AND 16,000 REFERENCES

VITAMIN D - DAVID FELDMAN 2005-01-25

VITAMIN D, A STEROID HORMONE, HAS MAINLY BEEN KNOWN FOR ITS EFFECTS ON BONE AND OSTEOPOROSIS. THE CURRENT THERAPEUTIC PRACTICES EXPAND INTO SUCH MARKETS AS CANCER RESEARCH, PEDIATRICS, NEPHROLOGY, DERMATOLOGY, IMMUNOLOGY, AND GENETICS. THIS SECOND EDITION INCLUDES OVER 100 CHAPTERS COVERING EVERYTHING FROM CHEMISTRY AND METABOLISM TO MECHANISMS OF ACTION, DIAGNOSIS AND MANAGEMENT, NEW ANALOGS, AND EMERGING THERAPIES. THIS COMPLETE REFERENCE WORKS IS A MUST HAVE RESOURCE FOR ANYONE WORKING IN ENDOCRINOLOGY, OSTEOLOGY, BONE BIOLOGY, OR CANCER RESEARCH. *MOST COMPREHENSIVE, UP-TO-DATE TWO-VOLUME SET ON VITAMIN D *NEW CHAPTERS ON SQUAMOUS CELL CANCER, BRAIN CANCER, THYROID CANCER AND MANY MORE *FURTHER SECTIONS ON EMERGING USES FOR TREATMENTS OF AUTO-IMMUNE DISEASES AND DIABETES *OVER 600 ILLUSTRATIONS AND FIGURES AVAILABLE ON CD

PRINCIPLES OF DEVELOPMENTAL GENETICS - SALLY A. MOODY 2014-09-02

PROVIDING EXPERT COVERAGE OF ALL MAJOR EVENTS IN EARLY EMBRYOGENESIS AND THE ORGANOGENESIS OF SPECIFIC SYSTEMS, AND SUPPLEMENTED WITH REPRESENTATIVE CLINICAL SYNDROMES, PRINCIPLES OF DEVELOPMENTAL GENETICS, SECOND EDITION DISCUSSES THE PROCESSES OF NORMAL DEVELOPMENT IN EMBRYONIC AND PRENATAL ANIMALS, INCLUDING HUMANS. THE NEW EDITION OF THIS CLASSIC WORK SUPPORTS CLINICAL RESEARCHERS DEVELOPING FUTURE THERAPIES WITH ITS ALL-NEW COVERAGE OF SYSTEMS BIOLOGY, STEM CELL BIOLOGY, NEW TECHNOLOGIES, AND CLINICAL DISORDERS. A CRYSTAL-CLEAR LAYOUT, EXCEPTIONAL FULL-COLOR DESIGN, AND BULLETED SUMMARIES OF MAJOR TAKEAWAYS AND CLINICAL PATHWAYS ASSIST COMPREHENSION AND READABILITY OF THE HIGHLY COMPLEX CONTENT. ALL-NEW COVERAGE OF SYSTEMS BIOLOGY AND STEM CELL BIOLOGY IN CONTEXT

OF EVOLVING TECHNOLOGIES PLACES THE WORK SQUARELY ON THE MODERN SCIENCES
CHAPTERS ARE COMPLEMENTED WITH A BULLETED SUMMARY FOR EASY DIGESTION OF THE
MAJOR POINTS, WITH A CLINICAL SUMMARY FOR THERAPEUTIC APPLICATION
CLINICAL HIGHLIGHTS PROVIDES A BRIDGE BETWEEN BASIC DEVELOPMENTAL BIOLOGY AND CLINICAL
SCIENCES IN EMBRYONIC AND PRENATAL SYNDROMES

BIOPROCESS ENGINEERING PRINCIPLES - PAULINE M. DORAN 1995-04-03

THE EMERGENCE AND REFINEMENT OF TECHNIQUES IN MOLECULAR BIOLOGY HAS CHANGED OUR
PERCEPTIONS OF MEDICINE, AGRICULTURE AND ENVIRONMENTAL MANAGEMENT. SCIENTIFIC
BREAKTHROUGHS IN GENE EXPRESSION, PROTEIN ENGINEERING AND CELL FUSION ARE BEING
TRANSLATED BY A STRENGTHENING BIOTECHNOLOGY INDUSTRY INTO REVOLUTIONARY NEW
PRODUCTS AND SERVICES. MANY A STUDENT HAS BEEN ENTICED BY THE PROMISE OF
BIOTECHNOLOGY AND THE EXCITEMENT OF BEING NEAR THE CUTTING EDGE OF SCIENTIFIC
ADVANCEMENT. HOWEVER, GRADUATES TRAINED IN MOLECULAR BIOLOGY AND CELL
MANIPULATION SOON REALISE THAT THESE TECHNIQUES ARE ONLY PART OF THE PICTURE.
REAPING THE FULL BENEFITS OF BIOTECHNOLOGY REQUIRES MANUFACTURING CAPABILITY
INVOLVING THE LARGE-SCALE PROCESSING OF BIOLOGICAL MATERIAL. INCREASINGLY,
BIOTECHNOLOGISTS ARE BEING EMPLOYED BY COMPANIES TO WORK IN CO-OPERATION WITH
CHEMICAL ENGINEERS TO ACHIEVE PRAGMATIC COMMERCIAL GOALS. FOR MANY YEARS
ASPECTS OF BIOCHEMISTRY AND MOLECULAR GENETICS HAVE BEEN INCLUDED IN CHEMICAL
ENGINEERING CURRICULA, YET THERE HAS BEEN LITTLE ATTEMPT UNTIL RECENTLY TO TEACH
ASPECTS OF ENGINEERING APPLICABLE TO PROCESS DESIGN TO BIOTECHNOLOGISTS. THIS
TEXTBOOK IS THE FIRST TO PRESENT THE PRINCIPLES OF BIOPROCESS ENGINEERING IN A WAY
THAT IS ACCESSIBLE TO BIOLOGICAL SCIENTISTS. OTHER TEXTS ON BIOPROCESS ENGINEERING
CURRENTLY AVAILABLE ASSUME THAT THE READER ALREADY HAS ENGINEERING TRAINING. ON
THE OTHER HAND, CHEMICAL ENGINEERING TEXTBOOKS DO NOT CONSIDER EXAMPLES FROM
BIOPROCESSING, AND ARE WRITTEN ALMOST EXCLUSIVELY WITH THE PETROLEUM AND
CHEMICAL INDUSTRIES IN MIND. THIS PUBLICATION EXPLAINS PROCESS ANALYSIS FROM AN
ENGINEERING POINT OF VIEW, BUT REFERS EXCLUSIVELY TO THE TREATMENT OF BIOLOGICAL
SYSTEMS. OVER 170 PROBLEMS AND WORKED EXAMPLES ENCOMPASS A WIDE RANGE OF
APPLICATIONS, INCLUDING RECOMBINANT CELLS, PLANT AND ANIMAL CELL CULTURES,
IMMOBILISED CATALYSTS AS WELL AS TRADITIONAL FERMENTATION SYSTEMS. * * FIRST
BOOK TO PRESENT THE PRINCIPLES OF BIOPROCESS ENGINEERING IN A WAY THAT IS ACCESSIBLE
TO BIOLOGICAL SCIENTISTS * EXPLAINS PROCESS ANALYSIS FROM AN ENGINEERING POINT OF
VIEW, BUT USES WORKED EXAMPLES RELATING TO BIOLOGICAL SYSTEMS * COMPREHENSIVE,
SINGLE-AUTHORED * 170 PROBLEMS AND WORKED EXAMPLES ENCOMPASS A WIDE RANGE OF
APPLICATIONS, INVOLVING RECOMBINANT PLANT AND ANIMAL CELL CULTURES, IMMOBILIZED
CATALYSTS, AND TRADITIONAL FERMENTATION SYSTEMS * 13 CHAPTERS, ORGANIZED
ACCORDING TO ENGINEERING SUB-DISCIPLINES, ARE GROUPEL IN FOUR SECTIONS -
INTRODUCTION, MATERIAL AND ENERGY BALANCES, PHYSICAL PROCESSES, AND REACTIONS
AND REACTORS * EACH CHAPTER INCLUDES A SET OF PROBLEMS AND EXERCISES FOR THE

STUDENT, KEY REFERENCES, AND A LIST OF SUGGESTIONS FOR FURTHER READING * INCLUDES
USEFUL APPENDICES, DETAILING CONVERSION FACTORS, PHYSICAL AND CHEMICAL PROPERTY
DATA, STEAM TABLES, MATHEMATICAL RULES, AND A LIST OF SYMBOLS USED * SUITABLE
FOR COURSE ADOPTION - FOLLOWS CLOSELY CURRICULA USED ON MOST BIOPROCESSING AND
PROCESS BIOTECHNOLOGY COURSES AT SENIOR UNDERGRADUATE AND GRADUATE LEVELS.
MOLECULAR PATHOLOGY - WILLIAM B. COLEMAN 2017-11-09

AS THE MOLECULAR BASIS OF HUMAN DISEASE BECOMES BETTER CHARACTERIZED, AND THE
IMPLICATIONS FOR UNDERSTANDING THE MOLECULAR BASIS OF DISEASE BECOMES REALIZED
THROUGH IMPROVED DIAGNOSTICS AND TREATMENT, *MOLECULAR PATHOLOGY, SECOND
EDITION* STANDS OUT AS THE MOST COMPREHENSIVE TEXTBOOK WHERE MOLECULAR
MECHANISMS REPRESENT THE FOCUS. IT IS UNIQUELY CONCERNED WITH THE MOLECULAR BASIS
OF MAJOR HUMAN DISEASES AND DISEASE PROCESSES, PRESENTED IN THE CONTEXT OF
TRADITIONAL PATHOLOGY, WITH IMPLICATIONS FOR TRANSLATIONAL MOLECULAR MEDICINE.
THE SECOND EDITION OF *MOLECULAR PATHOLOGY* HAS BEEN THOROUGHLY UPDATED TO
REFLECT SEVEN YEARS OF EXPONENTIAL CHANGES IN THE FIELDS OF GENETICS, MOLECULAR,
AND CELL BIOLOGY WHICH *MOLECULAR PATHOLOGY* TRANSLATES IN THE PRACTICE OF
MOLECULAR MEDICINE. THE TEXTBOOK IS INTENDED TO SERVE AS A MULTI-USE TEXTBOOK
THAT WOULD BE APPROPRIATE AS A CLASSROOM TEACHING TOOL FOR BIOMEDICAL
GRADUATE STUDENTS, MEDICAL STUDENTS, ALLIED HEALTH STUDENTS, AND OTHERS (SUCH
AS ADVANCED UNDERGRADUATES). FURTHER, THIS TEXTBOOK WILL BE VALUABLE FOR
PATHOLOGY RESIDENTS AND OTHER POSTDOCTORAL FELLOWS THAT DESIRE TO ADVANCE
THEIR UNDERSTANDING OF MOLECULAR MECHANISMS OF DISEASE BEYOND WHAT THEY LEARNED
IN MEDICAL/GRADUATE SCHOOL. IN ADDITION, THIS TEXTBOOK IS USEFUL AS A REFERENCE
BOOK FOR PRACTICING BASIC SCIENTISTS AND PHYSICIAN SCIENTISTS THAT PERFORM DISEASE-
RELATED BASIC SCIENCE AND TRANSLATIONAL RESEARCH, WHO REQUIRE A READY
INFORMATION RESOURCE ON THE MOLECULAR BASIS OF VARIOUS HUMAN DISEASES AND
DISEASE STATES. EXPLORES THE PRINCIPLES AND PRACTICE OF MOLECULAR PATHOLOGY:
MOLECULAR PATHOGENESIS, MOLECULAR MECHANISMS OF DISEASE, AND HOW THE MOLECULAR
PATHOGENESIS OF DISEASE PARALLELS THE EVOLUTION OF THE DISEASE EXPLAINS THE
PRACTICE OF "MOLECULAR MEDICINE AND THE TRANSLATIONAL ASPECTS OF MOLECULAR
PATHOLOGY TEACHES FROM THE PERSPECTIVE OF "INTEGRATIVE SYSTEMS BIOLOGY
ENHANCED DIGITAL VERSION INCLUDED WITH PURCHASE

CAENORHABDITIS ELEGANS - 2011-11-23

AN UPDATED EDITION OF THE CLASSIC *METHODS IN CELL BIOLOGY* VOLUME 48, THIS BOOK
EMPHASIZES DIVERSE METHODS AND TECHNOLOGIES NEEDED TO INVESTIGATE *C. ELEGANS*,
BOTH AS AN INTEGRATED ORGANISM AND AS A MODEL SYSTEM FOR RESEARCH INQUIRIES IN
CELL, DEVELOPMENTAL, AND MOLECULAR BIOLOGY, AS WELL AS IN GENETICS AND
PHARMACOLOGY. BY DIRECTING ITS AUDIENCE TO TRIED-AND-TRUE AND CUTTING-EDGE
RECIPES FOR RESEARCH, THIS COMPREHENSIVE COLLECTION IS INTENDED TO GUIDE
INVESTIGATORS OF *C. ELEGANS* FOR YEARS TO COME. DIVERSE, UP-TO-DATE TECHNIQUES

COVERED WILL BE USEFUL TO THE BROADENING COMMUNITY OF C. ELEGANS RESEARCHERS FOR YEARS TO COME CHAPTERS WRITTEN BY LEADERS IN THE FIELD TRIED AND TRUE METHODS DELIVER BUSY RESEARCHERS A ONE-STOP COMPENDIUM OF ESSENTIAL PROTOCOLS

BIOLOGICAL INORGANIC CHEMISTRY - ROBERT R. CRICHTON 2007-12-11

THE IMPORTANCE OF METALS IN BIOLOGY, THE ENVIRONMENT AND MEDICINE HAS BECOME INCREASINGLY EVIDENT OVER THE LAST TWENTY FIVE YEARS. THE STUDY OF THE MULTIPLE ROLES OF METAL IONS IN BIOLOGICAL SYSTEMS, THE RAPIDLY EXPANDING INTERFACE BETWEEN INORGANIC CHEMISTRY AND BIOLOGY CONSTITUTES THE SUBJECT CALLED BIOLOGICAL INORGANIC CHEMISTRY. THE PRESENT TEXT, WRITTEN BY A BIOCHEMIST, WITH A LONG CAREER EXPERIENCE IN THE FIELD (PARTICULARLY IRON AND COPPER) PRESENTS AN INTRODUCTION TO THIS EXCITING AND DYNAMIC FIELD. THE BOOK BEGINS WITH INTRODUCTORY CHAPTERS, WHICH TOGETHER CONSTITUTE AN OVERVIEW OF THE CONCEPTS, BOTH CHEMICAL AND BIOLOGICAL, WHICH ARE REQUIRED TO EQUIP THE READER FOR THE DETAILED ANALYSIS WHICH FOLLOWS. PATHWAYS OF METAL ASSIMILATION, STORAGE AND TRANSPORT, AS WELL AS METAL HOMEOSTASIS ARE DEALT WITH NEXT. THEREAFTER, INDIVIDUAL CHAPTERS DISCUSS THE ROLES OF SODIUM AND POTASSIUM, MAGNESIUM, CALCIUM, ZINC, IRON, COPPER, NICKEL AND COBALT, MANGANESE, AND FINALLY MOLYBDENUM, VANADIUM, TUNGSTEN AND CHROMIUM. THE FINAL THREE CHAPTERS PROVIDE A TANTALISING VIEW OF THE ROLES OF METALS IN BRAIN FUNCTION, BIOMINERALIZATION AND A BRIEF ILLUSTRATION OF THEIR IMPORTANCE IN BOTH MEDICINE AND THE ENVIRONMENT. RELAXED AND AGREEABLE WRITING STYLE. THE READER WILL NOT ONLY FIND THE BOOK EASY TO READ, THE FASCINATING ANECDOTES AND FOOTNOTES WILL GIVE HIM PEGS TO HANG IMPORTANT IDEAS ON. WRITTEN BY A BIOCHEMIST. WILL ENABLE THE READER TO MORE READILY GRASP THE BIOLOGICAL AND CLINICAL RELEVANCE OF THE SUBJECT. MANY COLOUR ILLUSTRATIONS. ENABLES EASIER VISUALIZATION OF MOLECULAR MECHANISMS WRITTEN BY A SINGLE AUTHOR. ENSURES HOMOGENEITY OF STYLE AND EFFECTIVE CROSS REFERENCING BETWEEN CHAPTERS

QUANTITATIVE HUMAN PHYSIOLOGY - JOSEPH J FEHER 2017-01-02

QUANTITATIVE HUMAN PHYSIOLOGY: AN INTRODUCTION IS THE FIRST TEXT TO MEET THE NEEDS OF THE UNDERGRADUATE BIOENGINEERING STUDENT WHO IS BEING EXPOSED TO PHYSIOLOGY FOR THE FIRST TIME, BUT REQUIRES A MORE ANALYTICAL/QUANTITATIVE APPROACH. THIS BOOK EXPLORES HOW COMPONENT BEHAVIOR PRODUCES SYSTEM BEHAVIOR IN PHYSIOLOGICAL SYSTEMS. THROUGH TEXT EXPLANATION, FIGURES, AND EQUATIONS, IT PROVIDES THE ENGINEERING STUDENT WITH A BASIC UNDERSTANDING OF PHYSIOLOGICAL PRINCIPLES WITH AN EMPHASIS ON QUANTITATIVE ASPECTS. FEATURES A QUANTITATIVE APPROACH THAT INCLUDES PHYSICAL AND CHEMICAL PRINCIPLES PROVIDES A MORE INTEGRATED APPROACH FROM FIRST PRINCIPLES, INTEGRATING ANATOMY, MOLECULAR BIOLOGY, BIOCHEMISTRY AND PHYSIOLOGY INCLUDES CLINICAL APPLICATIONS RELEVANT TO THE BIOMEDICAL ENGINEERING STUDENT (TENS, COCHLEAR IMPLANTS, BLOOD SUBSTITUTES, ETC.) INTEGRATES LABS AND PROBLEM SETS TO PROVIDE OPPORTUNITIES FOR PRACTICE AND ASSESSMENT THROUGHOUT THE COURSE NEW FOR THE SECOND EDITION EXPANSION OF

MANY SECTIONS TO INCLUDE RELEVANT INFORMATION ADDITION OF MANY NEW FIGURES AND RE-DRAWING OF OTHER FIGURES TO UPDATE OUR UNDERSTANDING AND CLARIFY DIFFICULT AREAS SUBSTANTIAL UPDATING OF THE TEXT TO REFLECT NEWER RESEARCH RESULTS ADDITION OF SEVERAL NEW APPENDICES INCLUDING STATISTICS, NOMENCLATURE OF TRANSPORT CARRIERS, AND STRUCTURAL BIOLOGY OF IMPORTANT ITEMS SUCH AS THE NEUROMUSCULAR JUNCTION AND CALCIUM RELEASE UNIT ADDITION OF NEW PROBLEMS WITHIN THE PROBLEM SETS ADDITION OF COMMENTARY TO POWER POINT PRESENTATIONS

MOLECULAR BIOLOGY OF B CELLS - MICHAEL RETH 2004-02-19

MOLECULAR BIOLOGY OF B CELLS IS A COMPREHENSIVE REFERENCE TO HOW B CELLS ARE GENERATED, SELECTED, ACTIVATED AND ENGAGED IN ANTIBODY PRODUCTION. ALL THESE DEVELOPMENTAL AND STIMULATORY PROCESSES ARE DESCRIBED IN MOLECULAR AND GENETIC TERMS TO GIVE A CLEAR UNDERSTANDING OF COMPLEX PHENOTYPES. THE MOLECULAR BASIS OF MANY DISEASES DUE TO B CELL ABNORMALITY IS ALSO DISCUSSED. THIS DEFINITIVE REFERENCE IS DIRECTED AT RESEARCH LEVEL IMMUNOLOGISTS, MOLECULAR BIOLOGISTS AND GENETICISTS.

BASIC AND APPLIED BONE BIOLOGY - DAVID B. BURR 2013-06-11

THIS BOOK PROVIDES AN OVERVIEW OF SKELETAL BIOLOGY FROM THE MOLECULAR LEVEL TO THE ORGAN LEVEL, INCLUDING CELLULAR CONTROL, INTERACTION AND RESPONSE; ADAPTIVE RESPONSES TO VARIOUS EXTERNAL STIMULI; THE INTERACTION OF THE SKELETAL SYSTEM WITH OTHER METABOLIC PROCESSES IN THE BODY; AND THE EFFECT OF VARIOUS DISEASE PROCESSES ON THE SKELETON. THE BOOK ALSO INCLUDES CHAPTERS THAT ADDRESS HOW THE SKELETON CAN BE EVALUATED THROUGH THE USE OF VARIOUS IMAGING TECHNOLOGIES, BIOMECHANICAL TESTING, HISTOMORPHOMETRIC ANALYSIS, AND THE USE OF GENETICALLY MODIFIED ANIMAL MODELS. PRESENTS AN IN-DEPTH OVERVIEW OF SKELETAL BIOLOGY FROM THE MOLECULAR TO THE ORGAN LEVEL OFFERS "REFRESHER" LEVEL CONTENT FOR CLINICIANS OR RESEARCHERS OUTSIDE THEIR AREAS OF EXPERTISE BOASTS EDITORS AND MANY CHAPTER AUTHORS FROM INDIANA AND PURDUE UNIVERSITIES, TWO OF THE BROADEST AND DEEPEST PROGRAMS IN SKELETAL BIOLOGY IN THE US; OTHER CHAPTER AUTHORS INCLUDE CLINICIAN SCIENTISTS FROM PHARMACEUTICAL COMPANIES THAT APPLY THE BASICS OF BONE BIOLOGY

DYNEINS - STEPHEN M. KING 2017-11-28

DYNEINS: STRUCTURE, BIOLOGY AND DISEASE, SECOND EDITION, OFFERS A BROAD VIEW OF DYNEINS MECHANICS, DYSFUNCTION, AND DISEASE, PROVIDING AN OVERVIEW OF DYNEINS FROM STRUCTURE AND FUNCTION, TO DYSFUNCTION AND DISEASE. SINCE THE FIRST EDITION, ENORMOUS STRIDES HAVE BEEN TAKEN IN UNDERSTANDING DYNEIN STRUCTURE, ITS ORGANIZATION IN THE AXONEME, SINGLE MOLECULE MOTOR MECHANICS, AND THE CONSEQUENCES OF DEFECTS FOR HUMAN BIOLOGY, DISEASE, AND DEVELOPMENT. TO ACCOUNT FOR THESE ENORMOUS STRIDES, THE SECOND EDITION IS EXTENSIVELY REVISED. ADDITIONALLY, THE COVERAGE HAS EXPANDED FROM 24 TO 42 CHAPTERS, AND IS NOW HOUSED IN TWO VOLUMES. MUCH OF THE EXPANDED COVERAGE OCCURS IN VOLUME 2 WHICH FOCUSES ON DYNEIN DYSFUNCTION AND DISEASE, SUCH AS THE ROLE OF DYNEIN AND CANCER.

VOLUME 1 COVERS THE HISTORY AND EVOLUTION OF DYNEINS, DYNEINS IN CILIARY BIOLOGY, AND CYTOPLASMIC DYNEIN BIOLOGY, WHILE VOLUME 2 COVERS THE STRUCTURE AND MECHANICS OF DYNEIN MOTORS AND DYNEIN DYSFUNCTION AND DISEASE. PRESENTS A BROAD-BASED AND UP-TO DATE VIEW OF DYNEIN MECHANICS, DYSFUNCTION, AND DISEASE. CONTAINS APPROACHES FROM GENETICS, MOLECULAR BIOLOGY, BIOCHEMISTRY, AND BIOPHYSICS DISCUSSED. PROVIDES COMPANION WEBSITE WITH MOVIES OF DYNAMIC CELL BEHAVIOR. INCLUDES EXTENSIVE CHAPTERS WRITTEN BY LEADING, GLOBAL EXPERTS

POST-GENOMIC CARDIOLOGY - JOS² MAR² N-GARC² A 2014-05-09

IN THIS SECOND EDITION OF *POST-GENOMIC CARDIOLOGY*, DEVELOPING AND NEW TECHNOLOGIES SUCH AS TRANSLATIONAL GENOMICS, NEXT GENERATION SEQUENCING (NGS), BIOINFORMATICS, AND SYSTEMS BIOLOGY IN MOLECULAR CARDIOLOGY ARE ASSESSED IN LIGHT OF THEIR THERAPEUTIC POTENTIAL. AS NEW METHODS OF MUTATION SCREENING EMERGE, BOTH FOR THE GENOME AND FOR THE "EPIGENOME," COMPREHENSIVE UNDERSTANDING OF THE MANY MUTATIONS THAT UNDERLIE CARDIOVASCULAR DISEASES AND ADVERSE DRUG REACTIONS IS WITHIN OUR REACH. THIS BOOK, WRITTEN BY RESPECTED CARDIOLOGIST JOS² MAR² N-GARC² A, FEATURES DISCUSSION ON THE HAP-MAP: THE LARGEST INTERNATIONAL EFFORT TO DATE AIMING TO DEFINE THE DIFFERENCES BETWEEN OUR INDIVIDUAL GENOMES. THIS UNIQUE REFERENCE FURTHER REVIEWS AND INVESTIGATES GENOME SEQUENCES FROM OUR EVOLUTIONARY RELATIVES THAT COULD HELP US DECIPHER THE SIGNALS OF GENES, AND OFFERS A COMPREHENSIVE AND CRITICAL EVALUATION OF REGULATORY ELEMENTS FROM THE COMPLICATED NETWORK OF THE BACKGROUND DNA. OFFERS UPDATED DISCUSSION OF CUTTING-EDGE MOLECULAR TECHNIQUES INCLUDING NEW GENOMIC SEQUENCING / NGS / HAP-MAP / BIOINFORMATICS / SYSTEMS BIOLOGY APPROACHES. ANALYZES MITOCHONDRIA DYNAMICS AND THEIR ROLE IN CARDIAC DYSFUNCTION, UP-TO-DATE ANALYSIS OF CARDIO-PROTECTION, AND CARDIO-METABOLIC SYNDROME. PRESENTS RECENT TRANSLATIONAL STUDIES, GENE THERAPY, TRANSPLANTATION OF STEM CELLS, AND PHARMACOLOGICAL TREATMENTS IN CVDs

AN INTRODUCTION TO BIOLOGICAL MEMBRANES - WILLIAM STILLWELL 2016-06-30

INTRODUCTION TO BIOLOGICAL MEMBRANES: COMPOSITION, STRUCTURE AND FUNCTION, SECOND EDITION IS A GREATLY EXPANDED REVISION OF THE FIRST EDITION THAT INTEGRATES MANY ASPECTS OF COMPLEX BIOLOGICAL MEMBRANE FUNCTIONS WITH THEIR COMPOSITION AND STRUCTURE. A SINGLE MEMBRANE IS COMPOSED OF HUNDREDS OF PROTEINS AND THOUSANDS OF LIPIDS, ALL IN CONSTANT FLUX. EVERY ASPECT OF MEMBRANE STRUCTURAL STUDIES INVOLVES PARAMETERS THAT ARE VERY SMALL AND FAST. BOTH SIZE AND TIME RANGES ARE SO VAST THAT MULTIPLE INSTRUMENTATIONS MUST BE EMPLOYED, OFTEN SIMULTANEOUSLY. AS A RESULT, A VARIETY OF HIGHLY SPECIALIZED AND ESOTERIC BIOCHEMICAL AND BIOPHYSICAL METHODOLOGIES ARE OFTEN UTILIZED. THIS BOOK ADDRESSES THE SALIENT FEATURES OF MEMBRANES AT THE MOLECULAR LEVEL, OFFERING COHESIVE, FOUNDATIONAL INFORMATION FOR ADVANCED UNDERGRADUATE STUDENTS, GRADUATE STUDENTS, BIOCHEMISTS, AND MEMBRANOLOGISTS WHO SEEK A BROAD OVERVIEW OF

MEMBRANE SCIENCE. SIGNIFICANTLY EXPANDED COVERAGE ON FUNCTION, COMPOSITION, AND STRUCTURE BRINGS TOGETHER COMPLEX ASPECTS OF MEMBRANE RESEARCH IN A UNIVERSALLY UNDERSTANDABLE MANNER. FEATURES PROFILES OF MEMBRANE PIONEERS DETAILING HOW CONTEMPORARY STUDIES ORIGINATED. INCLUDES A TIMELINE OF IMPORTANT DISCOVERIES RELATED TO MEMBRANE SCIENCE

MEDICAL EPIGENETICS - TRYGVE TOLLEFSBOL 2016-06-21

MEDICAL EPIGENETICS PROVIDES A COMPREHENSIVE ANALYSIS OF THE IMPORTANCE OF EPIGENETICS TO HEALTH MANAGEMENT. THE PURPOSE OF THIS BOOK IS TO FILL A CURRENT NEED FOR A COMPREHENSIVE VOLUME ON THE MEDICAL ASPECTS OF EPIGENETICS WITH A FOCUS ON HUMAN SYSTEMS, EPIGENETIC DISEASES THAT AFFECT THESE SYSTEMS AND MODES OF TREATING EPIGENETIC-BASED DISORDERS AND DISEASES. THE INTENT OF THIS BOOK IS TO PROVIDE A STAND-ALONE COMPREHENSIVE VOLUME THAT WILL COVER ALL HUMAN SYSTEMS RELEVANT TO EPIGENETIC MALADIES AND ALL MAJOR ASPECTS OF MEDICAL EPIGENETICS. THE OVERALL GOAL IS TO PROVIDE THE LEADING BOOK ON MEDICAL EPIGENETICS THAT WILL BE USEFUL NOT ONLY TO PHYSICIANS, NURSES, MEDICAL STUDENTS AND MANY OTHERS DIRECTLY INVOLVED WITH HEALTH CARE, BUT ALSO INVESTIGATORS IN LIFE SCIENCES, BIOTECH COMPANIES, GRADUATE STUDENTS AND MANY OTHERS WHO ARE INTERESTED IN MORE APPLIED ASPECTS OF EPIGENETICS. RESEARCH IN THE AREA OF TRANSLATIONAL EPIGENETICS IS A CORNERSTONE OF THIS VOLUME. CRITICAL REVIEWS DEDICATED TO THE BURGEONING ROLE OF EPIGENETICS IN MEDICAL PRACTICE. COVERAGE OF EMERGING TOPICS INCLUDING TWIN EPIGENETICS AS WELL AS EPIGENETICS OF GASTROINTESTINAL DISEASE, MUSCLE DISORDERS, ENDOCRINE DISORDERS, OCULAR MEDICINE, PEDIATRIC DISEASES, SPORTS MEDICINE, NONCODING RNA THERAPEUTICS, PAIN MANAGEMENT AND REGENERATIVE MEDICINE. ENCOMPASSES A DISEASE-ORIENTED PERSPECTIVE OF MEDICAL EPIGENETICS AS WELL AS DIAGNOSTIC AND PROGNOSTIC EPIGENETIC APPROACHES TO APPLIED MEDICINE

GENETICS OF BONE BIOLOGY AND SKELETAL DISEASE - RAJESH V. THAKKER 2017-10-31

GENETICS OF BONE BIOLOGY AND SKELETAL DISEASE, SECOND EDITION, IS AIMED AT STUDENTS OF BONE BIOLOGY AND GENETICS AND INCLUDES GENERAL INTRODUCTORY CHAPTERS ON BONE BIOLOGY AND GENETICS. MORE SPECIFIC DISEASE ORIENTATED CHAPTERS COMPREHENSIVELY SUMMARIZE THE CLINICAL, GENETIC, MOLECULAR, ANIMAL MODEL, MOLECULAR PATHOLOGY, DIAGNOSTIC, COUNSELING, AND TREATMENT ASPECTS OF EACH DISORDER. THE BOOK IS ORGANIZED INTO FIVE SECTIONS THAT EACH EMPHASIZE A PARTICULAR THEME, GENERAL BACKGROUND TO BONE BIOLOGY, GENERAL BACKGROUND TO GENETICS AND EPIGENETICS, DISORDERS OF BONE AND JOINT, PARATHYROID AND RELATED DISORDERS, AND VITAMIN D AND RENAL DISORDERS. THE FIRST SECTION IS SPECIFICALLY DEVOTED TO PROVIDING AN OVERVIEW OF BONE BIOLOGY AND STRUCTURE, JOINT AND CARTILAGE BIOLOGY, PRINCIPLES OF ENDOCRINE REGULATION OF BONE, AND THE ROLE OF NEURONAL REGULATION AND ENERGY HOMEOSTASIS. THE SECOND SECTION REVIEWS THE PRINCIPLES AND PROGRESS OF MEDICAL GENETICS AND EPIGENETICS RELATED TO BONE DISEASE, INCLUDING GENOME-WIDE ASSOCIATION STUDIES (GWAS), GENOMIC PROFILING, COPY

NUMBER VARIATION, PROSPECTS OF GENE THERAPY, PHARMACOGENOMICS, GENETIC TESTING AND COUNSELING, AS WELL AS THE GENERATION AND UTILIZING OF MOUSE MODELS. THE THIRD SECTION DETAILS ADVANCES IN THE GENETICS AND MOLECULAR BIOLOGY OF BONE AND JOINT DISEASES, BOTH MONOGENIC AND POLYGENIC, AS WELL AS SKELETAL DYSPLASIAS, AND RARER BONE DISORDERS. THE FOURTH SECTION HIGHLIGHTS THE CENTRAL ROLE OF THE PARATHYROIDS IN CALCIUM AND SKELETAL HOMEOSTASIS BY REVIEWING THE MOLECULAR GENETICS OF: HYPERPARATHYROIDISM, HYPOPARATHYROIDISM, ENDOCRINE NEOPLASIAS, AND DISORDERS OF THE PTH AND CALCIUM-SENSING RECEPTORS. THE FIFTH SECTION DETAILS MOLECULAR AND CELLULAR ADVANCES ACROSS ASSOCIATED RENAL DISORDERS SUCH AS VITAMIN D AND RICKETS. IDENTIFIES AND ANALYZES THE GENETIC BASIS OF BONE DISORDERS IN HUMANS AND DEMONSTRATES THE UTILITY OF MOUSE MODELS IN FURTHERING THE KNOWLEDGE OF MECHANISMS AND EVALUATION OF TREATMENTS DEMONSTRATES HOW THE INTERACTIONS BETWEEN BONE AND JOINT BIOLOGY, PHYSIOLOGY, AND GENETICS HAVE GREATLY ENHANCED THE UNDERSTANDING OF NORMAL BONE FUNCTION AS WELL AS THE MOLECULAR PATHOGENESIS OF METABOLIC BONE DISORDERS SUMMARIZES THE CLINICAL, GENETIC, MOLECULAR, ANIMAL MODEL, MOLECULAR PATHOLOGY, DIAGNOSTIC, COUNSELING, AND TREATMENT ASPECTS OF EACH DISORDER

DIAGNOSTIC MOLECULAR BIOLOGY - CHANG-HUI SHEN 2019-04-02

DIAGNOSTIC MOLECULAR BIOLOGY DESCRIBES THE FUNDAMENTALS OF MOLECULAR BIOLOGY IN A CLEAR, CONCISE MANNER TO AID IN THE COMPREHENSION OF THIS COMPLEX SUBJECT. EACH TECHNIQUE DESCRIBED IN THIS BOOK IS EXPLAINED WITHIN ITS CONCEPTUAL FRAMEWORK TO ENHANCE UNDERSTANDING. THE TARGETED APPROACH COVERS THE PRINCIPLES OF MOLECULAR BIOLOGY INCLUDING THE BASIC KNOWLEDGE OF NUCLEIC ACIDS, PROTEINS, AND GENOMES AS WELL AS THE BASIC TECHNIQUES AND INSTRUMENTATIONS THAT ARE OFTEN USED IN THE FIELD OF MOLECULAR BIOLOGY WITH DETAILED PROCEDURES AND EXPLANATIONS. THIS BOOK ALSO COVERS THE APPLICATIONS OF THE PRINCIPLES AND TECHNIQUES CURRENTLY EMPLOYED IN THE CLINICAL LABORATORY. • PROVIDES AN UNDERSTANDING OF WHICH TECHNIQUES ARE USED IN DIAGNOSIS AT THE MOLECULAR LEVEL • EXPLAINS THE BASIC PRINCIPLES OF MOLECULAR BIOLOGY AND THEIR APPLICATION IN THE CLINICAL DIAGNOSIS OF DISEASES • PLACES PROTOCOLS IN CONTEXT WITH PRACTICAL APPLICATIONS

REGENERATIVE NEPHROLOGY - MICHAEL S. GOLIGORSKY 2021-06-12

SINCE THE PUBLICATION OF THE FIRST EDITION OF THIS BOOK IN 2010, AN EXPLOSION OF SPECTACULAR DISCOVERIES IN THE FIELD OF REGENERATION HAS COMPELLED THE CURRENT REVISIT OF THE FIELD OF REGENERATIVE NEPHROLOGY. THIS SECOND EDITION FEATURES SUBJECTS AS DIVERSE AS AGE AND GENDER INFLUENCING REGENERATIVE PROCESSES; MECHANISMS AND PATHWAYS OF PREMATURE CELL SENESCENCE AFFECTING KIDNEY REGENERATION; THE WAYS INTRINSIC REGENERATIVE PROCESSES CAN BECOME SUBVERTED BY NOXIOUS STRESSORS EVENTUATING IN DISEASE PROGRESSION; NOVEL MECHANISTIC AND ENGINEERING EFFORTS TO RECREATE FUNCTIONAL KIDNEY OR ITS COMPONENT PARTS; CELL REPROGRAMMING AND RECONDITIONING AS EMERGING TOOLS OF FUTURE REGENERATIVE

EFFORTS; AND EFFECTS OF VARIOUS BIOLOGICALS ON KIDNEY REGENERATION. THESE NEWER ADDITIONS TO THE ARMAMENTARIUM OF REGENERATIVE MEDICINE AND NEPHROLOGY HAVE BECOME AN INTEGRAL PART OF THE SECOND EDITION OF THE BOOK. CUTTING-EDGE INVESTIGATIONS ARE SUMMARIZED BY THE CONSTELLATION OF THE MOST EXPERIENCED CONTRIBUTING AUTHORS COMING TOGETHER FROM AROUND THE WORLD UNDER THE UMBRELLA OF THE SECOND EDITION. A SIGNIFICANT EXPANSION OF SECTION ON INDUCED PLURIPOTENT CELLS AND TRAJECTORIES OF THEIR DIFFERENTIATION. THIS WILL BE FOLLOWED BY MECHANISMS AND MODALITIES OF CELL REPROGRAMMING FOR THERAPEUTIC PURPOSES A NEW SECTION ON TISSUE ENGINEERING OF THE KIDNEY OF INTEREST TO NEPHROLOGISTS AND UROLOGISTS AN ENTIRE SECTION DEDICATED TO CAUSES OF REGENERATIVE FAILURE WITH THE EMPHASIS ON RECENT DISCOVERIES OF SENESCENT CELLS IN KIDNEY DISEASE, PATHOLOGIC EFFECTS OF SENESCENT CELLS, ADVENTS IN SENOTHERAPIES AND REJUVENATION THERAPIES A VASTLY EXPANDED SECTION ON PHARMACOTHERAPIES PROMOTING KIDNEY REGENERATION, TRIALS OF ENGINEERED ORGANS, MANUFACTURING IN REGENERATIVE MEDICINE AND SMOOTH TRANSITION TO THE CLINICAL TRIALS, WITH AN UPDATE ON SOME ETHICAL ISSUES

PRINCIPLES OF REGENERATIVE MEDICINE - ANTHONY ATALA 2010-12-16

VIRTUALLY ANY DISEASE THAT RESULTS FROM MALFUNCTIONING, DAMAGED, OR FAILING TISSUES MAY BE POTENTIALLY CURED THROUGH REGENERATIVE MEDICINE THERAPIES, BY EITHER REGENERATING THE DAMAGED TISSUES IN VIVO, OR BY GROWING THE TISSUES AND ORGANS IN VITRO AND IMPLANTING THEM INTO THE PATIENT. PRINCIPLES OF REGENERATIVE MEDICINE DISCUSSES THE LATEST ADVANCES IN TECHNOLOGY AND MEDICINE FOR REPLACING TISSUES AND ORGANS DAMAGED BY DISEASE AND OF DEVELOPING THERAPIES FOR PREVIOUSLY UNTREATABLE CONDITIONS, SUCH AS DIABETES, HEART DISEASE, LIVER DISEASE, AND RENAL FAILURE. KEY FOR ALL RESEARCHERS AND INSTITUTIONS IN STEM CELL BIOLOGY, BIOENGINEERING, AND DEVELOPMENTAL BIOLOGY THE FIRST OF ITS KIND TO OFFER AN ADVANCED UNDERSTANDING OF THE LATEST TECHNOLOGIES IN REGENERATIVE MEDICINE NEW DISCOVERIES FROM LEADING RESEARCHERS ON RESTORATION OF DISEASED TISSUES AND ORGANS

DYNEINS - STEPHEN M. KING 2011-06-25

RESEARCH ON DYNEINS HAS A DIRECT IMPACT ON HUMAN DISEASES, SUCH AS VIRUSES AND CANCER. WITH AN ACCOMPANYING WEBSITE SHOWING OVER 100 STREAMING VIDEOS OF CELL DYNAMIC BEHAVIOR FOR BEST COMPREHENSION OF MATERIAL, DYNEIN: STRUCTURE, BIOLOGY AND DISEASE IS THE ONLY REFERENCE COVERING THE STRUCTURE, BIOLOGY AND APPLICATION OF DYNEIN RESEARCH TO HUMAN DISEASE. FROM BENCH TO BEDSIDE, DYNEIN: STRUCTURE, BIOLOGY AND DISEASE OFFERS RESEARCH ON FUNDAMENTAL CELLULAR PROCESSES TO RESEARCHERS AND CLINICIANS ACROSS DEVELOPMENTAL BIOLOGY, CELL BIOLOGY, MOLECULAR BIOLOGY, BIOPHYSICS, BIOMEDICINE, GENETICS AND MEDICINE. BROAD-BASED UP-TO-DATE RESOURCE FOR THE DYNEIN CLASS OF MOLECULAR MOTORS CHAPTERS WRITTEN BY WORLD EXPERTS IN THEIR TOPICS NUMEROUS WELL-ILLUSTRATED FIGURES AND TABLES INCLUDED TO COMPLEMENT THE TEXT, IMPARTING COMPREHENSIVE INFORMATION ON

DYNEIN COMPOSITION, INTERACTIONS, AND OTHER FUNDAMENTAL FEATURES

THE SENSES: A COMPREHENSIVE REFERENCE - 2020-09-30

THE SENSES: A COMPREHENSIVE REFERENCE, SECOND EDITION, IS A COMPREHENSIVE REFERENCE WORK COVERING THE RANGE OF TOPICS THAT CONSTITUTE CURRENT KNOWLEDGE OF THE NEURAL MECHANISMS UNDERLYING THE DIFFERENT SENSES. THIS IMPORTANT WORK PROVIDES THE MOST UP-TO-DATE, CUTTING-EDGE, COMPREHENSIVE REFERENCE COMBINING VOLUMES ON ALL MAJOR SENSORY MODALITIES IN ONE SET. OFFERING 264 CHAPTERS FROM A DISTINGUISHED TEAM OF INTERNATIONAL EXPERTS, THE SENSES LAYS OUT CURRENT KNOWLEDGE ON THE ANATOMY, PHYSIOLOGY, AND MOLECULAR BIOLOGY OF SENSORY ORGANS, IN A COLLECTION OF COMPREHENSIVE CHAPTERS SPANNING 4 VOLUMES. TOPICS COVERED INCLUDE THE PERCEPTION, PSYCHOPHYSICS, AND HIGHER ORDER PROCESSING OF SENSORY INFORMATION, AS WELL AS DISORDERS AND NEW DIAGNOSTIC AND TREATMENT METHODS. WRITTEN FOR A WIDE AUDIENCE, THIS REFERENCE WORK PROVIDES STUDENTS, SCHOLARS, MEDICAL DOCTORS, AS WELL AS ANYONE INTERESTED IN NEUROSCIENCE, A COMPREHENSIVE OVERVIEW OF THE KNOWLEDGE ACCUMULATED ON THE FUNCTION OF SENSE ORGANS, SENSORY SYSTEMS, AND HOW THE BRAIN PROCESSES SENSORY INPUT. AS WITH THE FIRST EDITION, CONTRIBUTIONS FROM LEADING SCHOLARS FROM AROUND THE WORLD WILL ENSURE THE SENSES OFFERS A TRULY INTERNATIONAL PORTRAIT OF SENSORY PHYSIOLOGY. THE SET IS THE DEFINITIVE REFERENCE ON SENSORY NEUROSCIENCE AND PROVIDES THE ULTIMATE ENTRY POINT INTO THE REVIEW AND ORIGINAL LITERATURE IN SENSORY NEUROSCIENCE ENABLING STUDENTS AND SCIENTISTS TO DELVE INTO THE SUBJECT AND DEEPEN THEIR KNOWLEDGE. ALL-INCLUSIVE COVERAGE OF TOPICS: UPDATED EDITION OFFERS READERS THE ONLY CURRENT REFERENCE AVAILABLE COVERING NEUROBIOLOGY, PHYSIOLOGY, ANATOMY, AND MOLECULAR BIOLOGY OF SENSE ORGANS AND THE PROCESSING OF SENSORY INFORMATION IN THE BRAIN AUTHORITY CONTENT: WORLD-LEADING CONTRIBUTORS PROVIDE READERS WITH A REPUTABLE, DYNAMIC AND AUTHORITY ACCOUNT OF THE TOPICS UNDER DISCUSSION COMPREHENSIVE-STYLE CONTENT: IN-DEPTH, COMPLEX COVERAGE OF TOPICS OFFERS STUDENTS AT UPPER UNDERGRADUATE LEVEL AND ABOVE FULL INSIGHT INTO TOPICS UNDER DISCUSSION

BIOLOGY OF DISEASE VECTORS - WILLIAM H. MARQUARDT 2004-12-04

BIOLOGY OF DISEASE VECTORS PRESENTS A COMPREHENSIVE AND ADVANCED DISCUSSION OF DISEASE VECTORS AND WHAT THE FUTURE MAY HOLD FOR THEIR CONTROL. THIS EDITION EXAMINES THE CONTROL OF DISEASE VECTORS THROUGH TOPICS SUCH AS GENERAL BIOLOGICAL REQUIREMENTS OF VECTORS, EPIDEMIOLOGY, PHYSIOLOGY AND MOLECULAR BIOLOGY, GENETICS, PRINCIPLES OF CONTROL AND INSECTICIDE RESISTANCE. METHODS OF MAINTAINING VECTORS IN THE LABORATORY ARE ALSO DESCRIBED IN DETAIL. NO OTHER SINGLE VOLUME INCLUDES BOTH BASIC INFORMATION ON VECTORS, AS WELL AS CHAPTERS ON CUTTING-EDGE TOPICS, AUTHORED BY THE LEADING EXPERTS IN THE FIELD. THE FIRST EDITION OF BIOLOGY OF DISEASE VECTORS WAS A LANDMARK TEXT, AND THIS EDITION PROMISES TO HAVE EVEN MORE IMPACT AS A REFERENCE FOR CURRENT THOUGHT AND TECHNIQUES IN

VECTOR BIOLOGY. CURRENT - EACH CHAPTER REPRESENTS THE PRESENT STATE OF KNOWLEDGE IN THE SUBJECT AREA AUTHORITY - AUTHORS INCLUDE LEADING RESEARCHERS IN THE FIELD COMPLETE - PROVIDES BOTH INDEPENDENT INVESTIGATOR AND THE STUDENT WITH A SINGLE REFERENCE VOLUME WHICH ADOPTS AN EXPLICITLY EVOLUTIONARY VIEWPOINT THROUGHOUT ALL CHAPTERS. USEFUL - CONCEPTUAL FRAMEWORKS FOR ALL SUBJECT AREAS INCLUDE CRUCIAL INFORMATION NEEDED FOR APPLICATION TO DIFFICULT PROBLEMS OF CONTROLLING VECTOR-BORNE DISEASES

FUTURE DIRECTIONS IN BIOCATALYSIS - TOMOKO MATSUDA 2017-08-11

FUTURE DIRECTIONS IN BIOCATALYSIS, SECOND EDITION, PRESENTS THE FUTURE DIRECTION AND LATEST RESEARCH ON HOW TO UTILIZE ENZYMES, I.E., NATURAL CATALYSTS, TO MAKE MEDICINES AND OTHER NECESSITIES FOR HUMANS. IT EMPHASIZES THE MOST IMPORTANT AND UNIQUE RESEARCH ON BIOCATALYSIS INSTEAD OF SIMPLY DETAILING THE ABC'S ON THE TOPIC. THIS BOOK IS AN INDISPENSABLE TOOL FOR NEW RESEARCHERS IN THE FIELD TO HELP IDENTIFY SPECIFIC NEEDS, START NEW PROJECTS THAT ADDRESS CURRENT ENVIRONMENTAL CONCERNS, AND DEVELOP TECHNIQUES BASED ON GREEN TECHNOLOGY. IT PROVIDES INVALUABLE HINTS AND CLUES FOR CONDUCTING NEW RESEARCH ON ENZYMES, WITH FINAL SECTIONS OUTLINING FUTURE DIRECTIONS IN BIOCATALYSIS FURTHER EXPANDING THE SCIENCE INTO NEW APPLICATIONS. GIVES FUTURE DIRECTIONS IN THE AREA OF BIOCATALYSIS RESEARCH PRESENTS RESEARCH TOPICS BASED ON THEIR UNIQUENESS, ORIGINALITY, AND NOVELTY INCLUDES MANY EXPLANATORY FIGURES TO DEMONSTRATE CONCEPTS TO BOTH ORGANIC CHEMISTS AND BIOCHEMISTS SHOWS THAT THERE IS NO BOUNDARY BETWEEN ORGANIC CHEMISTRY AND BIOCHEMISTRY

BIOTECHNOLOGY - DAVID P. CLARK 2015-05-16

BIOTECHNOLOGY, SECOND EDITION APPROACHES MODERN BIOTECHNOLOGY FROM A MOLECULAR BASIS, WHICH HAS GROWN OUT OF INCREASING BIOCHEMICAL UNDERSTANDING OF GENETICS AND PHYSIOLOGY. USING STRAIGHTFORWARD, LESS-TECHNICAL JARGON, CLARK AND PAZDERNIK INTRODUCE EACH CHAPTER WITH BASIC CONCEPTS THAT DEVELOP INTO MORE SPECIFIC AND DETAILED APPLICATIONS. THIS UP-TO-DATE TEXT COVERS A WIDE REALM OF TOPICS INCLUDING FORENSICS, BIOETHICS, AND NANOBIOLOGY USING COLORFUL ILLUSTRATIONS AND CONCISE APPLICATIONS. IN ADDITION, THE BOOK INTEGRATES RECENT, RELEVANT PRIMARY RESEARCH ARTICLES FOR EACH CHAPTER, WHICH ARE PRESENTED ON AN ACCOMPANYING WEBSITE. THE ARTICLES DEMONSTRATE KEY CONCEPTS OR APPLICATIONS OF THE CONCEPTS PRESENTED IN THE CHAPTER, WHICH ALLOWS THE READER TO SEE HOW THE FOUNDATIONAL KNOWLEDGE IN THIS TEXTBOOK BRIDGES INTO PRIMARY RESEARCH. THIS BOOK HELPS READERS UNDERSTAND WHAT MOLECULAR BIOTECHNOLOGY ACTUALLY IS AS A SCIENTIFIC DISCIPLINE, HOW RESEARCH IN THIS AREA IS CONDUCTED, AND HOW THIS TECHNOLOGY MAY IMPACT THE FUTURE. UP-TO-DATE TEXT FOCUSES ON MODERN BIOTECHNOLOGY WITH A MOLECULAR FOUNDATION INCLUDES CLEAR, COLOR ILLUSTRATIONS OF KEY TOPICS AND CONCEPT FEATURES CLEARLY WRITTEN WITHOUT OVERLY TECHNICAL JARGON OR COMPLICATED EXAMPLES PROVIDES A COMPREHENSIVE SUPPLEMENTS PACKAGE

WITH AN EASY-TO-USE STUDY GUIDE, FULL PRIMARY RESEARCH ARTICLES THAT DEMONSTRATE HOW RESEARCH IS CONDUCTED, AND INSTRUCTOR-ONLY RESOURCES

AUTOPHAGY IN HEALTH AND DISEASE - BEVERLY ROTHERMEL 2021-09-22
AUTOPHAGY IN HEALTH AND DISEASE, SECOND EDITION PROVIDES A COMPREHENSIVE OVERVIEW OF THE PROCESS OF AUTOPHAGY AND ITS IMPACT ON HUMAN PHYSIOLOGY AND PATHOPHYSIOLOGY. IT EXPANDS ON THE SCOPE OF THE FIRST EDITION BY COVERING A WIDER RANGE OF CELL TYPES, DEVELOPMENTAL PROCESSES, AND ORGAN SYSTEMS. THE SECOND EDITION IS AN INTERNATIONAL EFFORT BY INVESTIGATORS FROM 15 DIFFERENT COUNTRIES WHOSE MANY CONTRIBUTIONS ARE COMPRISED IN 28 CHAPTERS ORGANIZED INTO SIX SECTIONS. THE FIRST SECTION (CHAPTERS 1-7) COVERS FOUNDATIONAL CONCEPTS, INCLUDING HISTORY, TRAJECTORY OF THE RESEARCH FIELD, MECHANISMS OF AUTOPHAGY, AND AUTOPHAGY REGULATION. THE SECOND SECTION (CHAPTERS 8-11) DETAILS DEVELOPMENTAL ASPECTS, INCLUDING STEM CELLS, EMBRYOGENESIS, HEMATOPOIESIS, AND PALIGENOSIS. THE SUBSEQUENT SECTIONS ARE DEVOTED TO THE ROLE OF AUTOPHAGY IN SPECIFIC ORGAN SYSTEMS INVOLVED IN METABOLIC CONTROL AND DIABETES (CHAPTERS 12-15), THE CARDIOVASCULAR SYSTEM (CHAPTERS 16-18), AND THE NERVOUS SYSTEM (CHAPTERS 19-20). THE FINAL SECTION (CHAPTERS 21-28) ADDRESSES AUTOPHAGY IN OTHER ORGAN SYSTEMS VITAL TO HUMAN HEALTH AND LONGEVITY. ALSO INCLUDED ARE CHAPTERS ON MICROAUTOPHAGY, CHAPERONE-MEDIATED AUTOPHAGY, AND THE POTENTIAL FOR AUTOPHAGY AS A THERAPEUTIC TARGET. AUTOPHAGY IN HEALTH AND DISEASE IS INVALUABLE TO ANYONE NEW TO THE FIELD AS WELL AS ESTABLISHED INVESTIGATORS LOOKING FOR A BROADER UNDERSTANDING OF AUTOPHAGY FROM OUTSIDE THEIR SPECIFIC FIELD OF STUDY. PROVIDES A COMPREHENSIVE OVERVIEW OF THE PROCESS OF AUTOPHAGY AND ITS IMPACT ON HUMAN PHYSIOLOGY AND PATHOLOGY OFFERS EXTENDED COVERAGE OF THE MECHANISMS THAT MEDIATE AUTOPHAGY COVERS THE ROLE OF AUTOPHAGY IN STEM CELLS AND INDUCED PLURIPOTENT STEM CELLS, AS WELL AS THE REGENERATIVE PROCESS OF PALIGENOSIS HIGHLIGHTS IMPORTANT QUESTIONS THAT REMAIN TO BE ADDRESSED

PRACTICAL PROTEIN CRYSTALLOGRAPHY - DUNCAN E. McREE 2012-12-02
DESIGNED FOR EASY USE BY BOTH NEW AND EXPERIENCED PROTEIN CRYSTALLOGRAPHERS, THIS MUCH-NEEDED BOOK IS FOR ANYONE INTERESTED IN SOLVING PROTEIN STRUCTURES BY THE METHOD OF CRYSTALLOGRAPHY. IT CONTAINS MANY EXAMPLES OF ACTUAL EXPERIMENTS AND DATA, INCLUDING ELECTRON DENSITY MAPS. COMPUTER METHODS AND COMPUTER CODE SAMPLES ARE PRESENTED. PRACTICAL PROTEIN CRYSTALLOGRAPHY IS LOADED WITH NEW INFORMATION ON AREA DETECTORS, SYNCHROTRON RADIATION TECHNIQUES, AND THE LATEST COMPUTER METHODS, AND FEATURES THE XTALVIEW SOFTWARE SYSTEM. GRADUATE STUDENTS AND TEACHERS IN PHYSICAL BIOCHEMISTRY AND PHARMACEUTICAL RESEARCHERS WILL FIND THIS TEXT A TIMELY AND CONVENIENT AID.

INSECT MOLECULAR GENETICS - MARJORIE A. HOY 2013-04-09
INSECT MOLECULAR GENETICS, THIRD EDITION, SUMMARIZES AND SYNTHESIZES TWO RATHER DISPARATE DISCIPLINES—ENTOMOLOGY AND MOLECULAR GENETICS. THIS VOLUME PROVIDES

AN INTRODUCTION TO THE TECHNIQUES AND LITERATURE OF MOLECULAR GENETICS; DEFINES TERMINOLOGY; AND REVIEWS CONCEPTS, PRINCIPLES, AND APPLICATIONS OF THESE POWERFUL TOOLS. THE WORLD OF INSECT MOLECULAR GENETICS, ONCE DOMINATED BY DROSOPHILA, HAS BECOME MUCH MORE DIVERSE, ESPECIALLY WITH THE SEQUENCING OF MULTIPLE ARTHROPOD GENOMES (FROM SPIDER MITES TO MOSQUITOES). THIS INTRODUCTION INCLUDES DISCUSSION OF HONEY BEES, MOSQUITOES, FLOUR BEETLES, SILK MOTHS, FRUIT FLIES, APHIDS, HOUSE FLIES, KISSING BUGS, CICADAS, BUTTERFLIES, TSETSE FLIES AND ARMYWORMS. THIS BOOK SERVES AS BOTH A FOUNDATIONAL TEXT AND A REVIEW OF A RAPIDLY GROWING LITERATURE. WITH FULLY REVISED AND UPDATED CHAPTERS, THE THIRD EDITION WILL BE A VALUABLE ADDITION TO THE PERSONAL LIBRARIES OF ENTOMOLOGISTS, GENETICISTS, AND MOLECULAR BIOLOGISTS. UP-TO-DATE REFERENCES TO IMPORTANT REVIEW ARTICLES, WEBSITES, AND SEMINAL CITATIONS IN THE DISCIPLINES WELL CRAFTED AND INSTRUCTIVE ILLUSTRATIONS INTEGRAL TO EXPLAINING THE TECHNIQUES OF MOLECULAR GENETICS GLOSSARY OF TERMS TO HELP BEGINNERS LEARN THE VOCABULARY OF MOLECULAR BIOLOGY

MOLECULAR BIOLOGY - DAVID P. CLARK 2018-11-02
MOLECULAR BIOLOGY, THIRD EDITION, PROVIDES A THOROUGHLY REVISED, INVALUABLE RESOURCE FOR COLLEGE AND UNIVERSITY STUDENTS IN THE LIFE SCIENCES, MEDICINE AND RELATED FIELDS. THIS ESTEEMED TEXT CONTINUES TO MEET THE NEEDS OF STUDENTS AND PROFESSORS BY OFFERING NEW CHAPTERS ON RNA, GENOME DEFENSE, AND EPIGENETICS, ALONG WITH EXPANDED COVERAGE OF RNAI, CRISPR, AND MORE ENSURING TOPICAL CONTENT FOR A NEW CLASS OF STUDENTS. THIS VOLUME EFFECTIVELY INTRODUCES BASIC CONCEPTS THAT ARE FOLLOWED BY MORE SPECIFIC APPLICATIONS AS THE TEXT EVOLVES. MOREOVER, AS PART OF THE ACADEMIC CELL LINE OF TEXTBOOKS, THIS BOOK CONTAINS RESEARCH PASSAGES THAT SHINE A SPOTLIGHT ON CURRENT EXPERIMENTAL WORK REPORTED IN CELL PRESS ARTICLES. THESE ARTICLES FORM THE BASIS OF CASE STUDIES FOUND IN THE ASSOCIATED ONLINE STUDY GUIDE THAT IS DESIGNED TO TIE CURRENT TOPICS TO THE SCIENTIFIC COMMUNITY. CONTAINS NEW CHAPTERS ON NON-CODING RNA, GENOME DEFENSE, EPIGENETICS AND EPIGENOMICS FEATURES NEW AND EXPANDED COVERAGE OF RNAI, CRISPR, GENOME EDITING, GIANT VIRUSES AND PROTEOMICS INCLUDES AN ACADEMIC CELL STUDY GUIDE THAT TIES ALL ARTICLES FROM THE TEXT WITH CONCURRENT CASE STUDIES PROVIDES AN UPDATED, ANCILLARY PACKAGE WITH FLASHCARDS, ONLINE SELF-QUIZZING, REFERENCES WITH LINKS TO OUTSIDE CONTENT, AND POWERPOINT SLIDES WITH IMAGES

HUMAN GROWTH AND DEVELOPMENT - NOEL CAMERON 2012-06-08
OFFERING A STUDY OF BIOLOGICAL, BIOMEDICAL AND BIOCULTURAL APPROACHES, THIS BOOK IS SUITABLE FOR RESEARCHERS, PROFESSORS AND GRADUATE STUDENTS ACROSS THE INTERDISCIPLINARY AREA OF HUMAN DEVELOPMENT. IT IS PRESENTED IN THE FORM OF LECTURES TO FACILITATE STUDENT PROGRAMMING.

MOLECULAR DIAGNOSTICS - GEORGE P. PATRINOS 2016-10-27
MOLECULAR DIAGNOSTICS, THIRD EDITION, FOCUSES ON THE TECHNOLOGIES AND APPLICATIONS THAT PROFESSIONALS NEED TO WORK IN, DEVELOP, AND MANAGE A CLINICAL

DIAGNOSTIC LABORATORY. EACH CHAPTER CONTAINS AN EXPERT INTRODUCTION TO EACH SUBJECT THAT IS NEXT TO TECHNICAL DETAILS AND MANY APPLICATIONS FOR MOLECULAR GENETIC TESTING THAT CAN BE FOUND IN COMPREHENSIVE REFERENCE LISTS AT THE END OF EACH CHAPTER. CONTENTS ARE DIVIDED INTO THREE PARTS, TECHNOLOGIES, APPLICATION OF THOSE TECHNOLOGIES, AND RELATED ISSUES. THE FIRST PART IS DEDICATED TO THE BATTERY OF THE MOST WIDELY USED MOLECULAR PATHOLOGY TECHNIQUES. NEW CHAPTERS HAVE BEEN ADDED, INCLUDING THE VARIOUS NEW TECHNOLOGIES INVOLVED IN NEXT-GENERATION SEQUENCING (MUTATION DETECTION, GENE EXPRESSION, ETC.), MASS SPECTROMETRY, AND PROTEIN-SPECIFIC METHODOLOGIES. ALL REVISED CHAPTERS HAVE BEEN COMPLETELY UPDATED, TO INCLUDE NOT ONLY TECHNOLOGY INNOVATIONS, BUT ALSO NOVEL DIAGNOSTIC APPLICATIONS. AS WITH PREVIOUS EDITIONS, EACH OF THE CHAPTERS IN THIS SECTION INCLUDES A BRIEF DESCRIPTION OF THE TECHNIQUE FOLLOWED BY EXAMPLES FROM THE AREA OF EXPERTISE FROM THE SELECTED CONTRIBUTOR. THE SECOND PART OF THE BOOK ATTEMPTS TO INTEGRATE PREVIOUSLY ANALYZED TECHNOLOGIES INTO THE DIFFERENT ASPECTS OF MOLECULAR DIAGNOSTICS, SUCH AS IDENTIFICATION OF GENETICALLY MODIFIED ORGANISMS, STEM CELLS, PHARMACOGENOMICS, MODERN FORENSIC SCIENCE, MOLECULAR MICROBIOLOGY, AND GENETIC DIAGNOSIS. PART THREE FOCUSES ON VARIOUS EVERYDAY ISSUES IN A DIAGNOSTIC LABORATORY, FROM GENETIC COUNSELING AND RELATED ETHICAL AND PSYCHOLOGICAL ISSUES, TO SAFETY AND QUALITY MANAGEMENT. PRESENTS A COMPREHENSIVE ACCOUNT OF ALL NEW TECHNOLOGIES AND APPLICATIONS USED IN CLINICAL DIAGNOSTIC LABORATORIES EXPLORES A WIDE RANGE OF MOLECULAR-BASED TESTS THAT ARE AVAILABLE TO ASSESS DNA VARIATION AND CHANGES IN GENE EXPRESSION OFFERS CLEAR TRANSLATIONAL PRESENTATIONS BY THE TOP MOLECULAR PATHOLOGISTS, CLINICAL CHEMISTS, AND MOLECULAR GENETICISTS IN THE FIELD

COMPREHENSIVE GLYCOSCIENCE - 2021-06-29

COMPREHENSIVE GLYCOSCIENCE, SECOND EDITION ASSEMBLES THE TOP MINDS IN THIS AREA WHO PROVIDE AN UPDATE ON THE RENOWNED 2007 FIRST EDITION, INCLUDING NEW DISCOVERIES AND LATEST ADVANCES IN GLYCOSCIENCE-RELATED RESEARCH AREAS SUCH AS GLYCAN MICROARRAYS, CARBOHYDRATE MATERIALS, GLYCOENGINEERING AND MICROBIOME RESEARCH. THE RESULT IS AN UP-TO-DATE WORK WHICH WILL IMPRESS READERS WITH THE MANY NEW ADVANCES THAT ARE OUTLINED AND TAUGHT IN THIS SECOND EDITION. MOST AREAS OF THE ORIGINAL EDITION HAVE BEEN MAJORLY UPDATED, SOME OVERLAPPING TOPICS HAVE BEEN CONSOLIDATED, AND SEVERAL TOPICS HAVE BEEN REARRANGED INTO MORE APPROPRIATE SECTIONS. COMBINES MULTIPLE ASPECTS OF GLYCOSCIENCE IN ONE COMPREHENSIVE AND RELIABLE REFERENCE WORK INCLUDES ALL MAJOR DEVELOPMENTS SINCE 2007 (E.G. NANOTECHNOLOGY) PLACES GLYCOSCIENCE AT THE CROSSROADS OF SEVERAL DISCIPLINES, INCLUDING BIOLOGY, BIOCHEMISTRY, GLYCOBIOLOGY AND SYNTHETIC CHEMISTRY, THUS OFFERING A TRULY INTERDISCIPLINARY PERSPECTIVE

INSECT PHEROMONE BIOCHEMISTRY AND MOLECULAR BIOLOGY - GARY BLOMQUIST
2020-09-25

INSECT PHEROMONE BIOCHEMISTRY AND MOLECULAR BIOLOGY, SECOND EDITION, PROVIDES AN UPDATED AND COMPREHENSIVE REVIEW OF THE BIOCHEMISTRY AND MOLECULAR BIOLOGY OF INSECT PHEROMONE BIOSYNTHESIS AND RECEPTION. THE BOOK TIES TOGETHER HISTORICAL INFORMATION WITH RECENT DISCOVERIES, PROVIDES THE READER WITH THE CURRENT STATE OF THE FIELD, AND SUGGESTS WHERE FUTURE RESEARCH IS HEADED. WRITTEN BY INTERNATIONAL EXPERTS, MANY OF WHOM PIONEERED STUDIES ON INSECT PHEROMONE PRODUCTION AND RECEPTION, THIS RELEASE UPDATES THE 2003 FIRST EDITION WITH AN EMPHASIS ON RECENT ADVANCES IN THE FIELD. THIS BOOK WILL BE AN IMPORTANT RESOURCE FOR ENTOMOLOGISTS AND MOLECULAR BIOLOGISTS STUDYING ALL AREAS OF INSECT COMMUNICATION. OFFERS A HISTORICAL AND CONTEMPORARY PERSPECTIVE, WITH A FOCUS ON ADVANCES OVER THE LAST 15 YEARS DISCUSSES THE MOLECULAR AND REGULATORY MECHANISMS UNDERLYING PHEROMONE PRODUCTION/DETECTION, AS WELL AS THE EVOLUTION OF THESE PROCESSES ACROSS THE INSECTS LED BY EDITORS WITH BROAD EXPERTISE IN THE METABOLIC PATHWAYS OF PHEROMONE PRODUCTION AND THE BIOCHEMICAL AND GENETIC PROCESSES OF PHEROMONE DETECTION

COMPUTATIONAL SYSTEMS BIOLOGY - ANDRES KRIETE 2005-11-10

SYSTEMS BIOLOGY IS CONCERNED WITH THE QUANTITATIVE STUDY OF COMPLEX BIOSYSTEMS AT THE MOLECULAR, CELLULAR, TISSUE, AND SYSTEMS SCALES. ITS FOCUS IS ON THE FUNCTION OF THE SYSTEM AS A WHOLE, RATHER THAN ON INDIVIDUAL PARTS. THIS EXCITING NEW ARENA APPLIES MATHEMATICAL MODELING AND ENGINEERING METHODS TO THE STUDY OF BIOLOGICAL SYSTEMS. THIS BOOK IS THE FIRST OF ITS KIND TO FOCUS ON THE NEWLY EMERGING FIELD OF SYSTEMS BIOLOGY WITH AN EMPHASIS ON COMPUTATIONAL APPROACHES. THE WORK COVERS NEW CONCEPTS, METHODS FOR INFORMATION STORAGE, MINING AND KNOWLEDGE EXTRACTION, REVERSE ENGINEERING OF GENE AND METABOLIC NETWORKS, AS WELL AS MODELLING AND SIMULATION OF MULTI-CELLULAR SYSTEMS. CENTRAL THEMES INCLUDE STRATEGIES FOR PREDICTING BIOLOGICAL PROPERTIES AND METHODS FOR ELUCIDATING STRUCTURE-FUNCTION RELATIONSHIPS.

SERTOLI CELL BIOLOGY - MICHAEL D. GRISWOLD 2014-11-19

SERTOLI CELL BIOLOGY, SECOND EDITION SUMMARIZES THE PROGRESS SINCE THE LAST EDITION AND EMPHASIZES THE NEW INFORMATION AVAILABLE ON SERTOLI/GERM CELL INTERACTIONS. THIS INFORMATION IS ESPECIALLY TIMELY SINCE THE PROGRESS IN THE PAST FEW YEARS HAS BEEN EXCEPTIONAL AND IT RELATES TO CONTROL OF SPERM PRODUCTION IN VIVO AND IN VITRO. FULLY REVISED WRITTEN BY EXPERTS IN THE FIELD SUMMARIZES 10 YEARS OF RESEARCH CONTAINS CLEAR EXPLANATIONS AND SUMMARIES PROVIDES A SUMMARY OF REFERENCES OVER THE LAST 10 YEARS

NITRIC OXIDE - LOUIS J. IGNARRO 2000-09-13

NITRIC OXIDE (NO) IS A GAS THAT TRANSMITS SIGNALS IN AN ORGANISM. SIGNAL TRANSMISSION BY A GAS THAT IS PRODUCED BY ONE CELL AND WHICH PENETRATES THROUGH MEMBRANES AND REGULATES THE FUNCTION OF ANOTHER CELL REPRESENTS AN ENTIRELY NEW PRINCIPLE FOR SIGNALING IN BIOLOGICAL SYSTEMS. NO IS A SIGNAL MOLECULE OF KEY

IMPORTANCE FOR THE CARDIOVASCULAR SYSTEM ACTING AS A REGULATOR OF BLOOD PRESSURE AND AS A GATEKEEPER OF BLOOD FLOW TO DIFFERENT ORGANS. NO ALSO EXERTS A SERIES OF OTHER FUNCTIONS, SUCH AS ACTING A SIGNAL MOLECULE IN THE NERVOUS SYSTEM AND AS A WEAPON AGAINST INFECTIONS. NO IS PRESENT IN MOST LIVING CREATURES AND MADE BY MANY DIFFERENT TYPES OF CELLS. NO RESEARCH HAS LED TO NEW TREATMENTS FOR TREATING HEART AS WELL AS LUNG DISEASES, SHOCK, AND IMPOTENCE. SCIENTISTS ARE CURRENTLY TESTING WHETHER NO CAN BE USED TO STOP THE GROWTH OF CANCEROUS TUMORS, SINCE THE GAS CAN INDUCE PROGRAMMED CELL DEATH, APOPTOSIS. THIS BOOK IS THE FIRST COMPREHENSIVE TEXT ON NITRIC OXIDE TO COVER ALL ASPECTS--BASIC BIOLOGY, CHEMISTRY, PATHOBIOLOGY, EFFECTS ON VARIOUS DISEASE STATES, AND THERAPEUTIC IMPLICATIONS. EDITED BY NOBEL LAUREATE LOUIS J. IGNARRO, EDITOR OF THE ACADEMIC PRESS JOURNAL, NITRIC OXIDE AUTHORED BY WORLD EXPERTS ON NITRIC OXIDE INCLUDES AN OVERVIEW OF BASIC PRINCIPLES OF BIOLOGY AND CHEMICAL BIOLOGY COVERS PRINCIPLES OF

INSECT MOLECULAR GENETICS

PATHOBIOLOGY, INCLUDING THE NERVOUS SYSTEM, CARDIOVASCULAR FUNCTION, PULMONARY FUNCTION, AND IMMUNE DEFENSE

- MARJORIE A. HOY 2003-03-17

INSECT MOLECULAR GENETICS, 2ND EDITION, IS A SUCCINCT BOOK THAT BRIEFLY INTRODUCES GRADUATE AND UNDERGRADUATE STUDENTS TO MOLECULAR GENETICS AND THE TECHNIQUES USED IN THIS WELL ESTABLISHED AND IMPORTANT DISCIPLINE. THE BOOK IS WRITTEN FOR TWO CONVERGING AUDIENCES: THOSE FAMILIAR WITH INSECTS THAT NEED TO LEARN ABOUT MOLECULAR GENETICS, AND THOSE THAT ARE FAMILIAR WITH MOLECULAR GENETICS BUT NOT FAMILIAR WITH INSECTS. THUS, THIS BOOK IS INTENDED TO FILL THE GAP BETWEEN TWO AUDIENCES THAT SHARE A COMMON MIDDLE GROUND. * UP-TO-DATE REFERENCES TO IMPORTANT REVIEW ARTICLES, WEBSITES, AND SEMINAL CITATIONS IN THE DISCIPLINES * WELL CRAFTED AND INSTRUCTIVE ILLUSTRATIONS INTEGRAL TO EXPLAINING THE TECHNIQUES OF MOLECULAR GENETICS * GLOSSARY OF TERMS TO HELP BEGINNERS LEARN THE VOCABULARY OF MOLECULAR BIOLOGY