Biochemical Basis Of Disease

This book has been written primarily for medical students and junior doctors in clinical practice, but would also be a useful reference for postgraduate students in chemical pathology (clinical biochemistry), laboratory scientists, pathologists and medical laboratory technologists. It covers the field of chemical pathology, the biochemical basis of disease, and provides a basic understanding of the relationship between abnormal biochemical test results and disease states. A rational approach to proper selection and interpretation of biochemical investigations is adopted for each organ system or analyte covered in the 28 chapters. Emphasis is placed on areas and problems most commonly met with in clinical practice. Meant primarily as an introductory study book to the subject rather than as a reference text, the materials have been presented in a clear, condensed format to aid the study process. The written text is amply supplemented with relevant illustrations.

This companion to Brenner and Rector's The Kidney offers a state-of-the-art summary of the most recent advances in renal genetics. Molecular and Genetic Basis for Renal Disease provides the nephrologist with a comprehensive look at modern investigative tools in nephrology research today, and reviews the molecular pathophysiology of the nephron as well as the most common genetic and acquired renal diseases. A comprehensive clinical review of Medelian renal disease is also be included. Detailed review of the molecular anatomy and pathophysiology of the nephron that provides relevant basic science to consider when diagnosing and managing patients with these disorders.

Biochemical imbalances caused by nutritional deficiencies are a contributory factor in chronic illnesses such as cardiovascular disease, diabetes, auto-immune conditions and cancer. This handbook for practitioners explains how to identify and treat such biochemical imbalances in order to better understand and manage a patient's ill-health. The book examines a range of biochemical imbalances, including compromised adrenal or thyroid function, gastro-intestinal imbalances, immune system problems and sex hormone imbalances, and explains how and why such states occur. It pulls together a wide range of evidence to show how such imbalances are involved in the most common chronic diseases. It helps practitioners to understand how to identify the imbalances through appropriate case history taking and laboratory testing, and how to design and implement effective nutritional interventions. Developed by leading academics and practitioners in the fields of nutritional therapy and functional medicine, this evidence-informed approach can be used with all patients who present in clinic, regardless of whether or not they have a 'named medical condition'. In the final chapter, a case example illustrates how to use the theoretical information in the practice of treating patients with chronically compromised health. Biochemical Imbalances in Disease is an essential text for nutritional therapy practitioners, as well as for students, and will be welcomed by complementary and conventional healthcare practitioners alike.

Concise yet comprehensive, Clinical Biochemistry Lecture Notes contains all the essential information for students and foundation doctors to understand the biochemical basis of disease and principles of biochemical diagnostics. It presents scientific principles in a clinical setting, with a range of case studies integrated into the text to clearly demonstrate how knowledge should be applied to real-life situations. Key features include: • The fundamental science underpinning common biochemical disorders and their investigation in clinical practice • Accessible flow charts of biochemical processes and the reasoning behind specific tests, making look-up and understanding easy • A brand new companion website at www.lecturenoteseries.com/clinicalbiochemistry with self-assessment and downloadable summary slides for revision Clinical Biochemistry Lecture Notes is an ideal overview and revision guide for medical students, foundation doctors, general practitioners, and nurses. It also provides a core text for scientific and medical staff pursuing a career in clinical biochemistry.

Angiogenesis is a highly complex phenomenon where new blood vessels are formed for the supply of oxygen and nutrients in different organs of the body. It plays a critical role in both physiological processes such as growth and development as well as pathological processes including cancer and different types of tumors. Angiogenesis is also essential for the regeneration and survival of cells in several disease conditions such as ischemic heart disease (myocardial infarction), atherosclerosis, brain injury (stroke) and diabetes. Since the mechanisms of angiogenesis are organ specific and differ among various diseases, it is proposed to devote one section of this book to the development of angiogenesis in some selected diseases such as cancer, ischemic heart disease, atherosclerosis, diabetes and stroke. It is pointed out that extensive research work in this regard has been carried out in the area of cancer and heart disease, whereas relatively less attention has been paid to studying angiogenesis in other disease conditions.

Rewritten and redesigned, this remains the one essential text on the diseases of skeletal muscle.

This book covers the latest developments in the therapeutic implications of angiogenesis, ranging from angiogenesis in the brain, angiogenesis in cancer, angiogenesis' role in atherosclerosis and heart disease as well as metabolic disorders and peripheral vascular disease. The book is comprehensive in its coverage of angiogenesis in a diverse set of diseases and examines the role of cellular and subcellular structures during the development of angiogenesis. Well-organized and thorough, this is an ideal book for researchers and biomedical engineers working in the field of therapeutic implications of angiogenesis. This book also: Covers the basics of the physiology of angiogenesis, including VEGF pathways in angiogenesis, integr ins in angiogenesis, angiogenesis and exercise physiology, and more Details the role of angiogenesis in atherosclerosis and heart disease, including vascular endothelial growth factor and atherosclerotic plaque progression as well as angiogenesis and heart failure Illustrates in detail brain angiogenesis after stroke and the relationship between angiogenesis and Alzheimer's disease

The purpose of this manual is to provide an educational genetics resource for individuals, families, and health professionals in the New York - Mid-Atlantic region and increase awareness of specialty care in genetics. The manual begins with a basic introduction to genetics concepts, followed by a description of the different types and applications of genetic tests. It also provides information about diagnosis of genetic disease, family history, newborn screening, and genetic counseling. Resources are included to assist in patient care, patient and professional education, and identification of specialty genetics services within the New York - Mid-Atlantic region. At the end of each section, a list of

references is provided for additional information. Appendices can be copied for reference and offered to patients. These take-home resources are critical to helping both providers and patients understand some of the basic concepts and applications of genetics and genomics.
Medical Biochemistry is supported by over forty years of teaching experience, providing coverage of basic biochemical concepts, including the structure and physical and chemical properties of hydrocarbons, lipids, proteins, and nucleotides in a straightforward and easy to comprehend language. The book develops these concepts into the more complex aspects of biochemistry using a systems approach, dedicating chapters to the integral study of biological phenomena, including particular aspects of metabolism in some organs and tissues, and the biochemical bases of endocrinology, immunity, vitamins, hemostasis, and apoptosis. Integrates basic biochemistry principles with molecular biology and molecular physiology Provides translational relevance to basic biochemical concepts though medical and physiological examples Utilizes a systems approach to understanding biological phenomena
The Molecular and Cellular Basis of Neurodegenerative Diseases: Underlying Mechanisms presents the pathology, genetics, biochemistry and cell biology of the major human neurodegenerative diseases, including Alzheimer’s, Parkinson’s, frontotemporal dementia, ALS, Huntington’s, and prion diseases. Edited and authored by internationally recognized leaders in the field, the book's chapters explore their pathogenic commonalities and differences, also including discussions of animal models and prospects for therapeutics. Diseases are presented first, with common mechanisms later. Individual chapters discuss each major neurodegenerative disease, integrating this information to offer multiple molecular and cellular mechanisms that diseases may have in common. This book provides readers with a timely update on this rapidly advancing area of investigation, presenting an invaluable resource for researchers in the field. Covers the spectrum of neurodegenerative diseases and their complex genetic, pathological, biochemical and cellular features Focuses on leading hypotheses regarding the biochemical and cellular dysfunctions that cause neurodegeneration Details features, advantages and limitations of animal models, as well as prospects for therapeutic development Authored by internationally recognized leaders in the field Includes illustrations that help clarify and consolidate complex concepts
Diagnose and manage diseases using the newest information and research! Pathologic Basis of Veterinary Disease – Expert Consult, 6th Edition provides complete, illustrated coverage of both general pathology and the pathology of organ systems of domestic animals. Addressing species from dogs and cats to pigs and cattle — and many more — this reference describes the lesions and pathogeneses of diseases, how cells and tissues respond to injury, and the interplay of host defense mechanisms with microbes and injurious agents. Updates include the latest scientific advances and diagnostic information. Written by a team of expert contributors, this book includes an Expert Consult website with access to the complete digital book plus thousands of images and guidelines for sample acquisition and for performing a complete necropsy. Complete coverage of both general pathology and pathology of organ systems is provided in one convenient resource, and includes the latest information available. Over 20 recognized experts deliver the most relevant information for the practitioner, student, or individual preparing for the American College of Veterinary Pathology board examination. UPDATED content on cellular and organ system pathology includes the latest insights into the science of inflammation, healing, and molecular carcinogenesis, as well as expanded coverage of genetics and disease. Over 2,100 full-color illustrations include color schematics, flow charts, and diagrammatic representations of disease processes as well as summary tables and boxes, making it easier to understand difficult concepts. Clear, up-to-date explanations of disease mechanisms describe cell, tissue, and organ response to injury and infection. Easy-to-follow organization for each systemic disease chapter includes a brief review of basic principles related to anatomy, structure, and function, followed by congenital and functional abnormalities and discussions of infectious disease responses, helping you apply principles to veterinary practice. Expert Consult website provides the reader with the complete digital text plus: An image collection; guidelines for performing a complete, systematic necropsy and appropriate sample acquisition for all organ systems; a comprehensive glossary; and an appendix of photographic techniques in veterinary pathology. NEW line drawings and schematic diagrams depict current concepts about pathogeneses and lesions of veterinary diseases. NEW! Essential Concept boxes in each basic pathology chapter break down long and complicated topics, making it easier to understand lesions and pathogeneses in the ‘organ system’ chapters. NEW! Key Readings Index at the beginning of each chapter includes page numbers, making important information easy to locate.
Raising hopes for disease treatment and prevention, but also the specter of discrimination and "designer genes," genetic testing is potentially one of the most socially explosive developments of our time. This book presents a current assessment of this rapidly evolving field, offering principles for actions and research and recommendations on key issues in genetic testing and screening. Advantages of early genetic knowledge are balanced with issues associated with such knowledge: availability of treatment, privacy and discrimination, personal decisionmaking, public health objectives, cost, and more. Among the important issues covered: Quality control in genetic testing. Appropriate roles for public agencies, private health practitioners, and laboratories. Value-neutral education and counseling for persons considering testing. Use of test results in insurance, employment, and other settings.
Biochemical Basis of DiseaseBiochemical Basis of MedicineButterworth-Heinemann
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
Biochemical Basis of Medicine discusses academic biochemistry and the applications of biochemistry in medicine. This book deals with the biochemistry of the subcellular organelles, the biochemistry of the body , and of the specialized metabolism occurring in many body tissues. This text also discusses the various applications of biochemistry as regards environmental hazards, as well as in the diagnosis of illnesses and their treatment. This text explains the structure of the mammalian cell, the cell's metabolism, the nutritional requirements of the whole body, and the body's metabolism. This book explains the specialized metabolisms involved in tissues such as those occurring in blood clotting, in the liver during carbohydrate metabolism, or in the kidneys during water

absorption. The text explains toxicology or biochemical damage caused by excess presence of copper, mercury, or lead in the body. Chelation therapy can remove these toxic metals. This book describes the effects of alcohol on plasma liquids, the multistage concept of carcinogenesis, and the biochemical basis of diagnosis. Diagnosis and treatment include the determination of typical enzymes found in the plasma, tests for genetic defects in blood proteins, and the use of chemotherapeutic drugs. This book is suitable for chemists, students and professors in organic chemistry, and laboratory technicians whose work is related to pharmacology.

Wills' Biochemical Basis of Medicine, Second Edition provides a basic understanding of the structure and metabolic processes in the context in which they occur in the cell or in the tissues. This book provides groundwork of academic biochemistry and demonstrations of the application of biochemistry to medicine. Organized into five parts encompassing 43 chapters, this edition begins with an overview of the biochemistry of the subcellular organelles. This text then examines the functions of the nucleus, mitochondria, and the endoplasmic reticulum. Other chapters consider the biochemistry of the hormones and the regulation of the metabolic fuels. This book discusses as well the biochemistry of environmental hazards and examines the treatment of viral carcinogenesis. The final chapter deals with the results of the application of recombinant DNA technology to the diagnosis of genetic disorder. This book is a valuable resource for biochemists, biologists, physicians, clinical researchers, and medical students.

Chromium nutritional supplements are the second best selling mineral supplements after calcium as chromium is found in pills, sports drinks, chewing gums, smoothies, and numerous other products. Chromium has been promoted to promote weight loss and muscle development and most recently to be available to treat the symptoms of type 2 diabetes and related conditions. The aim of The Nutritional Biochemistry of Chromium(III) is to examine the four most controversial areas of chromium nutrition and biochemistry: - is chromium an essential element for humans and are chromium nutritional supplements of value? - what biochemical role, if any, does chromium play in the body - can large doses of chromium(III) be used to treat symptoms of type 2 diabetes, cardiovascular disease, and related medical conditions - is the use of chromium(III) supplements a health concern. Scientific experts, who are recognized leaders in the field, weigh in with their opinions on both sides of these issues in this book. A background review of the field from 1955-1995 by Vincent opens the book and concludes with a summary by Dr. Forrest Nielsen, Center Director of the USDA's Grand Forks Human Nutrition Research Center concludes the book. * Point-counterpoint format, providing both sides of major issues * Complete coverage of current issues, including nutrition, health, biochemical role and toxicology * Authors are recognised experts and leaders in this field

This textbook is specifically designed for upper-division undergraduate or graduate students in life science or pre-medical majors including dentistry or pharmacology, who are required to take a biochemistry or medical biochemistry course, but who are not necessarily biochemistry majors. The book adopts a unique approach to the topic compared with other biochemistry textbooks currently available, in that each biochemical subject is introduced by a human disease relating the biochemical principles to be developed in that chapter. The goal is to make biochemistry more meaningful to the student who is not normally shown the connection between biochemistry and medicine. * Includes an abundance of figures * Emphasizes human biochemistry * Introduces each chapter with a relevant disease or clinical relationship

Mitochondrial Medicine: A Primer for Health Care Providers and Translational Researchers is an applied, holistic resource that addresses the evolving and multidisciplinary area of mitochondrial disease. The book discusses the fundamentals of mitochondrial medicine in humans, as well as the pathophysiology, diagnosis and treatment of mitochondrial diseases. Three all-inclusive sections examine the role of mitochondria in common medical conditions, such as diabetes, heart failure and the full range of inherited mitochondrial diseases. Sections cover the genetic and biochemical basis of both mitochondrial DNA deletion syndromes and point mutation syndromes, their clinical presentation, treatment plans, genetic counseling, prenatal testing, and ongoing research. While providing a solid foundation in its topic area, each chapter in the book is written in an accessible format with illustrative case studies, thus making it a quick bedside or clinical laboratory reference. Includes a basic introduction to mitochondria and their misfunctions in human disease Presents current practice and research in mitochondrial medicine, with an emphasis on clinical presentation, diagnosis, treatment, genetic counseling and prenatal testing Features short, accessible chapters with illustrative case studies for quick reference Provides thorough coverage of inherited mitochondrial disorders, as well as the role of mitochondria in common medical conditions

Biochemical and Molecular Basis of Pediatric Disease, Fifth Edition has been a well-respected reference in the field for decades. This revision continues the strong focus on understanding the pathogenesis of pediatric disease, emphasizing not only the important role of the clinical laboratory in defining parameters that change with the disease process, but also the molecular basis of many pediatric diseases. Provides a fully-updated resource with more color illustrations Focuses on the biochemical and molecular basis of disease as well as the analytical techniques Defines important differences in the pathophysiology of diseases, comparing childhood with adult

Get the BIG PICTURE of Medical Biochemistry – and target what you really need to know to ace the course exams and the USMLE Step 1 300 FULL-COLOR ILLUSTRATIONS Medical Biochemistry: The Big Picture is a unique biochemistry review that focuses on the medically applicable concepts and techniques that form the underpinnings of the diagnosis, prognosis, and treatment of medical conditions. Those preparing for the USMLE, residents, as well as clinicians who desire a better understanding of the biochemistry behind a particular pathology will find this book to be an essential reference. Featuring succinct, to-the-point text, more than 300 full-color illustrations, and a variety of learning aids, Medical Biochemistry: The Big Picture is designed to make complex concepts understandable in the shortest amount of time possible. This full-color combination text and atlas features: Progressive chapters that allow you to build upon what you’ve learned in a logical, effective manner Chapter Overviews that orient you to the important concepts covered in that chapter Numerous tables and illustrations that clarify and encapsulate the text Sidebars covering a particular disease or treatment add clinical relevance to topic discussed Essay-type review questions at the end of each chapter allow you to assess your comprehension of the major topics USMLE-style review questions at the end of each section Three appendices, including examples of biochemically based diseases, a review of basic biochemical techniques, and a review of organic chemistry/biochemistry

The 2nd Edition of Metabolic Diseases provides readers with a completely updated description of the Foundations of Clinical Management, Genetics, and Pathology. A distinguished group of 31 expert authors has contributed 25 chapters as a tribute to Enid Gilbert-Barness and the late Lewis Barness--- both pioneers in this topic. Enid’s unique perspectives on the pathology of genetic disorders and Lew’s unsurpassed knowledge of metabolism integrated with nutrition have inspired the contributors to write interdisciplinary descriptions of generally rare, and always challenging, hereditary metabolic disorders. Discussions of these interesting genetic disorders are organized in the perspective of molecular abnormalities leading to morphologic disturbances with distinct pathology and clinical manifestations. The book emphasizes recent advances such as development of improved diagnostic methods and discovery of new, more effective therapies for many of the diseases. It includes optimal strategies for diagnosis and information on access to specialized laboratories for specific testing. The target audience is a

wide variety of clinicians, including pediatricians, neonatologists, obstetricians, maternal-fetal specialists, internists, pathologists, geneticists, and laboratorians engaged in prenatal and/or neonatal screening. In addition, all scientists and health science professionals interested in metabolic diseases will find the comprehensive, integrated chapters informative on the latest discoveries. It is our hope that the 2nd Edition will open new avenues and vistas for our readers and that they will share with us the interest, excitement and passion of the research into all these challenging disorders.

Gain a thorough understanding of the principles ofbiochemistry as they relate to the study of clinical medicine A Doody's Core Title for 2017! THE BEST REVIEW FOR THE USMLE! The Thirtieth Edition of Harper’s Illustrated Biochemistry combines outstanding full-colorillustrations with authoritative integrated coverage of biochemical disease and clinical information. Using brevity and numerous medically relevant examples, Harper's presents a clear, succinct review of the fundamentals of biochemistry that every student must understand in order to succeed in medical school. All fifty-eight chapters emphasize the medical relevance of biochemistry Full-color presentation includes more than 600 illustrations Each chapter includes a section on BiomedicalImportance and a summary of the topics covered Review questions follow each of the eleven sections Case studies in every chapter emphasize the clinical relevance to biochemistry NEW coverage of toxic naturally-occurring amino acids; extraterrestrial biomolecules; computer-aided drug design; the role of complement cascade in bacterial and viral infection; secreted mediators of cell-cell signaling between leukocytes; the role of mast cells, basophils, andeosinophils; and the hazard of antioxidants that down-regulate radical signaling for apoptosis and increase risk of cancer Applauded by medical students for its current and engaging style, Harper's Illustrated Biochemistry is an essential for USMLE review and the single best reference for learning the clinical relevance of any biochemistry topic.

Clinical Biochemistry of Domestic Animals, Second Edition, Volume I, is a major revision of the first edition prompted by the marked expansion of knowledge in the clinical biochemistry of animals. In keeping with this expansion of knowledge, this edition is comprised of two volumes. Chapters on the pancreas, thyroid, and pituitary-adrenal systems have been separated and entirely rewritten. Completely new chapters on muscle metabolism, iron metabolism, blood clotting, and gastrointestinal function have been added. All the chapters of the first edition have been revised with pertinent new information, and many have been completely rewritten. This volume contains 10 chapters and opens with a discussion of carbohydrate metabolism and associated disorders. Separate chapters follow on lipid metabolism, plasma proteins, and porphyrins. Subsequent chapters deal with liver, pancreatic, and thyroid functions; the role of the pituitary and adrenal glands in health and disease; the function of calcium, inorganic phosphorus, and magnesium metabolism in health and disease; and iron metabolism.

Human Physiology, Biochemistry and Basic Medicine is a unique perspective that draws together human biology, physiology, biochemistry, nutrition, and cell biology in one comprehensive volume. In this way, it is uniquely qualified to address the needs of the emerging field of humanology, a holistic approach to understanding the biology of humans and how they are distinguished from other animals. Coverage starts with human anatomy and physiology and the details of the workings of all parts of the male and female body. Next, coverage of human biochemistry and how sugars, fats, and amino acids are made and digested is discussed, as is human basic medicine, covering the science of diseases and human evolution and pseudo-evolution. The book concludes with coverage of basic human nutrition, diseases, and treatments, and contains broad coverage that will give the reader an understanding of the entire human picture. Covers the physiology, anatomy, nutrition, biochemistry and cell biology of humans, showing how they are distinguished from other animals Includes medical literature and internet references, example test questions, and a list of pertinent words at the end of each chapter Provides unique perspective into all aspects of what makes up and controls humans

Rosenberg’s Molecular and Genetic Basis of Neurologic and Psychiatric Disease, Fifth Edition provides a comprehensive introduction and reference to the foundations and key practical aspects relevant to the majority of neurologic and psychiatric disease. A favorite of over three generations of students, clinicians and scholars, this new edition retains and expands the informative, concise and critical tone of the first edition. This is an essential reference for general medical practitioners, neurologists, psychiatrists, geneticists, and related professionals, and for the neuroscience and neurology research community. The content covers all aspects essential to the practice of neurogenetics to inform clinical diagnosis, treatment and genetic counseling. Every chapter has been thoroughly revised or newly commissioned to reflect the latest scientific and medical advances by an international team of leading scientists and clinicians. The contents have been expanded to include disorders for which a genetic basis has been recently identified, together with abundant original illustrations that convey and clarify the key points of the text in an attractive, didactic format. Previous editions have established this book as the leading tutorial reference on neurogenetics. Researchers will find great value in the coverage of genomics, animal models and diagnostic methods along with a better understanding of the clinical implications. Clinicians will rely on the coverage of the basic science of neurogenetics and the methods for evaluating patients with biochemical abnormalities or gene mutations, including links to genetic testing for specific diseases. Comprehensive coverage of the neurogenetic foundation of neurological and psychiatric disease Detailed introduction to both clinical and basic research implications of molecular and genetic understanding of the brain Detailed coverage of genomics, animal models and diagnostic methods with new coverage of evaluating patients with biochemical abnormalities or gene mutations

Protein Homeostasis Diseases: Mechanisms and Novel Therapies offers an interdisciplinary examination of the fundamental aspects, biochemistry and molecular biology of protein homeostasis disease, including the use of natural and pharmacological small molecules to treat common and rare protein homeostasis disorders. Contributions from international experts discuss the biochemical and genetic components of protein homeostasis disorders, the mechanisms by which genetic variants may cause loss-of-function and gain-of-toxic-function, and how natural ligands can restore protein function and homeostasis in genetic diseases. Applied chapters provide guidance on employing high throughput sequencing and screening methodologies to develop pharmacological chaperones and repurpose approved drugs to treat protein homeostasis disorders. Provides an interdisciplinary examination of protein homeostasis disorders, with an emphasis on treatment strategies employing small natural and pharmacological ligands Offers applied approaches in employing high throughput sequencing and screening to develop pharmacological chaperones to treat protein homeostasis disease Gathers expertise from a range of international chapter authors who work across various biological methods and disease specific disciplines of relevance

Myasthenia gravis is the best-understood autoimmune disorder and its intense investigation has provided insights into the pathogenesis of autoimmune disease in general and the basic mechanisms of synaptic transmission. The papers in this volume report research findings on the mechanisms of disease, diagnosis and treatment of myasthenia gravis and related diseases. Other papers examine the advances in knowledge about the physiology, biochemistry, genetics, and the structure of the neuromuscular junction as well as advances in the immunology of pre-and post-synaptic disorders of the junction. Papers also discuss the clinical management of myasthenia gravis and related disorders.

Seventeen years after its initial description, nuclear factor-KB (NF-KB) endures as one of the most studied transcription factors. NF-KB has attracted widespread interest based on the variety of stimuli that activate it, the diverse genes and bio logical responses that it controls, the striking evolutionary conservation of struc ture and function among species, and its involvement in a variety of human diseases. The biochemical basis by which several stimuli converge to activate NF-KB has been largely elucidated during recent years. While first discovered as a key regulatory factor of the immune system, NF-KB is now recognized as an important player in the functioning of many organs and cell types. The ongoing examination of NF-KB signaling has revealed its ever expanding role in immune and inflammatory responses, but also in cancer and development. For this reason, numerous efforts are underway to develop safe inhibitors of NF-KB to be used in the treatment of both chronic and acute disease situations. The present book is the first to review and synthesize our knowledge of this interesting transcription factor. As such, the choice of subjects to review was daunting. To set the stage, an introductory chapter on activators and target genes, as well as the role they play in several responses, has been included.