

Essential Genetics A Genomics Perspective 6th Edition

Siddhartha Mukherjee onderzoekt aan de hand van zijn eigen familiegeschiedenis - een verleden vol geestesziekte en psychische aandoeningen - de menselijke erfelijkheid en het effect ervan op onze levens, persoonlijkheden, keuzes en lotsbestemmingen. In weergaloos proza beschrijft hij het eeuwenlange onderzoek naar de erfelijkheidskwestie - van Aristoteles en Pythagoras via Mendel en Darwin tot aan de revolutionaire eenentwintigste- eeuwse vernieuwers die het menselijk genoom in kaart brengen. In 'Het gen. Een intieme geschiedenis' verweeft Mukherjee wetenschap en sociale historie met een persoonlijk verhaal, om een onthullende en magistrale geschiedenis te schrijven waarin een wetenschappelijke abstractie tot leven komt. Het boek is onmisbaar voor iedereen die geïnteresseerd is in de morele complexiteit van de huidige wetenschappelijke mogelijkheden om het menselijk genoom te lezen en te schrijven, en voor iedereen die zich bezorgd afvraagt wat de toekomst van de mens behelst. De ongelijkheid in de wereld verklaard. Waarom hebben de Australische aboriginals niet de wereld veroverd? Of de Mexicaanse indianen of de Amerikaanse nomaden? Wat is bepalend voor de ontwikkeling van volkeren? Zijn dat genetische verschillen of spelen andere oorzaken een rol? Jared Diamond toont op toegankelijke wijze aan dat volkeren zich verschillend hebben ontwikkeld als gevolg van klimatologische en bacteriologische factoren. Genetische factoren blijken ondergeschikt. De ontwikkelde delen van de wereld hebben hun positie niet aan zichzelf, maar aan een speling van de natuur te danken. Diamond won met dit boek, waarvan meer dan 20.000 exemplaren zijn verkocht, de Pulitzer Price. 'Jared Diamond heeft een boek met een enorme reikwijdte geschreven (...) een van de belangrijkste en meest lezenswaardige werken die over de geschiedenis van de mensheid geschreven zijn.' Nature Jared Diamond is hoogleraar fysiologie aan de University of California in Los Angeles. Hij verricht onderzoek op het terrein van de evolutionaire biologie en is bekend als auteur van populair-wetenschappelijke boeken. Wereldwijd werden van deze megabestseller ruim een miljoen exemplaren verkocht.

Een kleine geschiedenis van iedereen die ooit heeft geleefd van Adam Rutherford is een adembenemende ontdekkingsreis door de menselijke geschiedenis, voor iedereen die Harari's Sapiens heeft gelezen. In onze unieke genomen dragen we allemaal de geschiedenis van onze soort – geboorte, dood, ziekte, oorlog, hongersnood, migratie en héél veel seks. Maar die verhalen zijn altijd verborgen gebleven – tot nu. Wie waren onze voorouders? Waar kwamen ze vandaan? Genetici zijn plotseling historici geworden en het harde bewijs in ons DNA heeft alles we dachten te weten over de afgelopen 100.000 jaar in een ander daglicht gesteld. De bejubelde wetenschapper en schrijver Adam Rutherford zal je anders doen denken over neanderthalers, evolutie, royalty, ras en zelfs roodharigen.

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This streamlined "essential" version of the Molecular Pathology (2009) textbook extracts key information, illustrations and photographs from the main textbook in the same number and organization of chapters. It is aimed at teaching students in courses where the full textbook is not needed, but the concepts included are desirable (such as graduate students in allied health programs or undergraduates). It is also aimed at students who are enrolled in courses that primarily use a traditional pathology textbook, but need the complementary concepts of molecular pathology (such as medical students). Further, the textbook will be valuable for pathology residents and other postdoctoral fellows who desire to advance their understanding of molecular mechanisms of disease beyond what they learned in medical/graduate school. Offers an essential introduction to molecular genetics and the "molecular" aspects of human disease Teaches from the perspective of "integrative systems biology," which encompasses the intersection of all molecular aspects of biology, as applied to understanding human disease In-depth presentation of 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 using histopathology. "Traditional" pathology section provides state-of-the-art information on the major forms of disease, their pathologies, and the molecular mechanisms that drive these diseases. Explains the practice of "molecular medicine" and the translational aspects of molecular pathology: molecular diagnostics, molecular assessment, and personalized medicine Each chapter ends with Key Summary Points and Suggested Readings

Updated throughout to reflect the latest discoveries in this fast-paced field, this Sixth Edition, provides an accessible, student-friendly introduction to modern genetics. Designed for the shorter, less comprehensive course, the Sixth Edition presents carefully chosen topics that provide a solid foundation to the basic understanding of gene mutation, expression, and regulation. It goes on to discuss the development and progression of genetics as a field of study within a societal and historical context. The Sixth Edition includes new learning objectives within each chapter which helps students identify what they should know as a result of their studying and highlights the skills they should acquire through various practice problems.

Richard Dawkins en Yan Wong nemen ons mee op een opwindende, omgekeerde reis door vier miljard jaar evolutie, van de hedendaagse mens terug naar de microbiële oorsprong van het leven. Naast mensen komen we onderweg ook dieren, planten en bacteriën tegen, ieder met een eigen verhaal. Vrijwel elke pagina in deze nieuwe uitgave is aangepast op basis van de resultaten van recente onderzoeken. Zo leidden nieuwe ontwikkelingen in DNA-onderzoek tot aanzienlijke herzieningen van de verhalen van onder andere de mitochondriale Eva, de bonobo, de olifantsvogel en de longvis. Het resultaat is een volledig bijgewerkte editie van een van de meest originele verslagen van de evolutie ooit geschreven.

In 2003, the secrets of the human genome were cracked open, creating a flurry of anticipation (and more than a little commercial buzz) about the role that genetic modification would play in years to come. This burgeoning field stands poised to redefine old paradigms and reshape industries such as medicine, agriculture, pharmacology, and biotechnology. Public Health Genomics and International Wealth Creation seeks to explore new opportunities and challenges in genomic commercialization by presenting a roadmap of current research, setting forth clear guidelines for how genomics can be wielded safely and ethically in a manner concordant with public welfare. Addressing problems such as chronic disease, world hunger, and global economic disparity, this book is an essential reference source for doctors, bioethicists, human genome specialists, and scientists in the fields of genetics and genomics. This authored monograph contains chapters on topics ranging from agronomics and biotechnology to commercial genomics, genome sequencing, cancer genomics, and more.

Genomics research has made significant advances in recent years. In this book, a team of internationally-renowned researchers share the most up-to-date information in a field that has in recent years switched emphasis from gene identification to functional genomics and the characterization of genes and gene products. This volume approaches this complex subject with a broad perspective to supply the reader with a vital overview of genomics and its derivative fields, with a focus on pivotal issues such as data analysis. Expansive and current, this book is a comprehensive research guide that describes both the key new techniques and more established methods. Every chapter discusses the merits and limitations of the various approaches and

then provides selected tried-and-tested protocols, as well as a plethora of good practical advice for immediate use at the bench. Key features: Provides a broad introduction to current practices and techniques for lab-based research in genomics Explains clearly and precisely how to carry out selected techniques in addition to background information on the various approaches Chapters are written by a leading international authorities in the field and cover both well-known and new, tried and tested, methods for working in genomics Includes troubleshooting guide and reviews of alternative techniques An essential laboratory manual for students and researchers at all levels

This informative new book presents an accessible account of the development of medical genetics over the past 70 years, one of the most important areas of 20th, and now 21st, century science and medicine. Based largely on the author's personal involvement and career as a leader in the field over the last half century, both in the UK and internationally, it also draws on his interest and involvement in documenting the history of medical genetics. Underpinning the content is a unique series of 100 recorded interviews undertaken by the author with key older workers in the field, the majority British, which has provided invaluable information going back to the very beginnings of human and medical genetics. Focusing principally on medically relevant areas of genetics rather than the underlying basic science and technological aspects, the book offers a fascinating insight for those working and training in the field of clinical or laboratory aspects of medical genetics and allied areas; it will also be of interest to historians of science and medicine and to workers in the social sciences who are increasingly attracted by the social and ethical challenges posed by modern medical genetics.

Novel Techniques for Analyzing and Combining Data from Modern Biological Studies Broadens the Traditional Definition of Meta-Analysis With the diversity of data and meta-data now available, there is increased interest in analyzing multiple studies beyond statistical approaches of formal meta-analysis. Covering an extensive range of quantitative information combination methods, *Meta-analysis and Combining Information in Genetics and Genomics* looks at how to analyze multiple studies from a broad perspective. After presenting the basic ideas and tools of meta-analysis, the book addresses the combination of similar data types: genotype data from genome-wide linkage scans and data derived from microarray gene expression experiments. The expert contributors show how some data combination problems can arise even within the same basic framework and offer solutions to these problems. They also discuss the combined analysis of different data types, giving readers an opportunity to see data combination approaches in action across a wide variety of genome-scale investigations. As heterogeneous data sets become more common, biological understanding will be significantly aided by jointly analyzing such data using fundamentally sound statistical methodology. This book provides many novel techniques for analyzing data from modern biological studies that involve multiple data sets, either of the same type or multiple data sources.

Essential Genetics and Genomics is the ideal textbook for the shorter, less comprehensive genetics course. It presents carefully chosen topics that provide a solid foundation to the basic understanding of gene mutation, expression, and regulation.

Completely updated to reflect new discoveries and current thinking in the field, the Fourth Edition of *Essential Genetics* is designed for the shorter, less comprehensive introductory course in genetics. The text is written in a clear, lively, and concise manner and includes many special features that make the book user friendly. Topics were carefully chosen to provide a solid foundation for understanding the basic processes of gene transmission, mutation, expression, and regulation. The text also helps students develop skills in problem solving, achieve a sense of the social and historical context in which genetics has developed, and become aware of the genetic resources and information available through the Internet.

In 1865, Gregor Mendel presented "Experiments in Plant-Hybridization," the results of his eight-year study of the principles of inheritance through experimentation with pea plants. Overlooked in its day, Mendel's work would later become the foundation of modern genetics. Did his pioneering research follow the rigors of real scientific inquiry, or was Mendel's data too good to be true—the product of doctored statistics? In *Ending the Mendel-Fisher Controversy*, leading experts present their conclusions on the legendary controversy surrounding the challenge to Mendel's findings by British statistician and biologist R. A. Fisher. In his 1936 paper "Has Mendel's Work Been Rediscovered?" Fisher suggested that Mendel's data could have been falsified in order to support his expectations. Fisher attributed the falsification to an unknown assistant of Mendel's. At the time, Fisher's criticism did not receive wide attention. Yet beginning in 1964, about the time of the centenary of Mendel's paper, scholars began to publicly discuss whether Fisher had successfully proven that Mendel's data was falsified. Since that time, numerous articles, letters, and comments have been published on the controversy. This self-contained volume includes everything the reader will need to know about the subject: an overview of the controversy; the original papers of Mendel and Fisher; four of the most important papers on the debate; and new updates, by the authors, of the latter four papers. Taken together, the authors contend, these voices argue for an end to the controversy—making this book the definitive last word on the subject.

Essential Genetics A Genomics Perspective Jones & Bartlett Learning

Mammalogy is the study of mammals from the diverse biological viewpoints of structure, function, evolutionary history, behavior, ecology, classification, and economics. Thoroughly updated, the Sixth Edition of *Mammalogy* explains and clarifies the subject as a unified whole. The text begins by defining mammals and summarizing their origins. It moves on to discuss the orders and families of mammals with comprehensive coverage on the fossil history, current distribution, morphological characteristics, and basic behavior and ecology of each family of mammals. The third part of the text progresses to discuss special topics such as mammalian echolocation, physiology, behavior, ecology, and zoogeography. The text concludes with two additional chapters, previously available online, that cover mammalian domestication and mammalian disease and zoonoses.

Mensen zijn voor 98% genetisch gelijk aan de gewone aap en de dwergchimpansee. Hoe is het dan te verklaren dat wij in staat zijn beschavingen, talen, godsdiensten en wetenschappen te ontwikkelen maar ook om dat in een oogwenk weer te vernietigen? Diamond schreef een baanbrekend, onderhoudend en soms schokkend boek over dat unieke schepsel en zijn evolutie: de derde chimpansee die mens heet. Scherp geschreven, een genot om te lezen. Deze uitdagende stijl van het boek dwingt de lezer ertoe zich grondig te bezinnen op het raadsel van de menselijke evolutie.? New York Times Book Review Jared Diamond is hoogleraar fysiologie in Los Angeles. Hij verricht onderzoek op het terrein van de evolutionaire biologie en is bekend als internationale bestsellerauteur van onder andere *Zwaarden*, *paarden* en *ziektekiemen* en *Ondergang*.

Replete with vital information, the second edition of this authoritative women's health text provides graduate nursing students and nurse practitioners with the resources to deliver optimal health to women of all ages. Edited by a team of highly distinguished clinicians, scholars, and educators, chapters retain a distinctive sociocultural lens that gives a view of women's health as it relates to women's lives and

identities. Eighteen new chapters address clinical primary care topics, genetics, environmental and occupational health promotion, health considerations for female caregivers, transgender care, urologic health concerns, dementia care, and more. An instructor's toolkit includes multiple resources to enhance critical thinking, and case studies engage critical thinking skills to apply the multidimensional content in context. This uniquely comprehensive resource examines women's health through a variety of clinical practice and theoretical frameworks such as feminism, feminist theory, and globalization. The second edition retains the important focus on prevention, managing symptoms, and health problems that are unique to women. Chapters address relevant legal issues, health throughout the life span, nutrition and exercise, sleep difficulties, mental health, LGBTQ health, fertility, substance abuse, violence against women, and dozens of specific health disorders. NEW TO THE SECOND EDITION: Updated to include the most current evidence-based, primary care management guidelines in women's health Includes 18 new chapters addressing health promotion and symptom management Provides a robust instructor's toolkit to foster critical thinking Organized to enhance easy retrieval of numerous clinical topics Includes theoretical frameworks for women's health, health promotion and prevention, and women's health management Presents brand-new information on genetics, transgender health, endocrine-related problems, health considerations for caregivers, and dementia care KEY FEATURES: Distills cutting-edge information on women's health issues through a sociocultural framework Offers a comprehensive investigation of key topics in women's health Edited by renowned scholar/educators for advanced practice nursing students

Many of the characteristics that distinguish plants from other living organisms can be traced to their bacterial origin early in the history of life. These features-such as a multicellular haploid life stage, prevalent hermaphroditism, self-fertilization, and general dependence on biotic and abiotic vectors for reproduction-stem directly from the plant's ability to obtain energy from the sun. This novel mode of energy capture had far-ranging implications for plant evolution. It not only fueled the tremendous diversification of life on Earth that followed, but also had far-ranging implications for the evolution of photosynthetic microorganisms and eventually for land plants. Understanding the evolutionary processes for the proliferation and diversification of plants requires an appreciation of their unique biological features. While the processes of mutation, selection, genetic drift, and gene flow remain the same for both plants and animals, there are specific characteristics of plants that modify the way their evolution is implemented. Unique traits of plants affect everything from the fate of mutations, through exposure to selection in a haploid life phase, to the distribution of genetic variation within populations, and ultimately the rates and patterns of diversification. This book examines the origins of the unique evolutionary features of plants, as well as their implications for evolutionary processes. Author Mitchell B. Cruzan provides contemporary discussion of subjects including population genetics, phylogeography, phylogenetics, ecological genetics, and genomics. The book fills a need for modern coverage of these topics, all of which are essential to a wide range of advanced courses in plant biology.

Je ogen heb je van je vader. Je lach van je moeder. Maar waarom verschillen jullie zo in lengte? En is intelligentie ook erfelijk? Sinds het menselijk genoom in kaart is gebracht, weten we: de mens is opgebouwd uit een mozaïek van DNA dat we van onze voorouders hebben meegekregen. Wie we zijn, wordt voor een groot deel door deze kleine stukjes bepaald. Maar we erven niet alleen onze bouwstenen, maar ook microben, gedrag en technologieën. Dat we weten hoe we onze genen moeten lezen, betekent ook dat we ze kunnen manipuleren. We zetten niet alleen de wereld naar onze hand, maar ook onszelf. Ook onze toekomst, zowel voor de mens als soort als voor onszelf, staat in ons DNA geschreven. Wij zijn onze genen. Carl Zimmer neemt ons mee op een reis door onze genen. Wie zijn we? Waar komen we vandaan? Hoe zijn we geworden wie we nu zijn? En hoe ziet onze toekomst eruit? Ze heeft haar moeders lach is het alomvattende verhaal over wat we krijgen van onze voorouders, wat we doorgeven aan onze kinderen en over mens zijn. Over Ze heeft haar moeders lach'Een briljante publicatie' - NBD Biblion

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

Inleiding tot de erfelijkheidsleer.

Bioinformatics is a relatively new field of research. It evolved from the requirement to process, characterize, and apply the information being produced by DNA sequencing technology. The production of DNA sequence data continues to grow exponentially. At the same time, improved bioinformatics such as faster DNA sequence search methods have been combined with increasingly powerful computer systems to process this information. Methods are being developed for the ever more detailed quantification of gene expression, providing an insight into the function of the newly discovered genes, while molecular genetic tools provide a link between these genes and heritable traits. Genetic tests are now available to determine the likelihood of suffering specific ailments and can predict how plant cultivars may respond to the environment. The steps in the translation of the genetic blueprint to the observed phenotype is being increasingly understood through proteome, metabolome and phenome analysis, all underpinned by advances in bioinformatics. Bioinformatics is becoming increasingly central to the study of biology, and a day at a computer can often save a year or more in the laboratory. The volume is intended for graduate-level biology students as well as researchers who wish to gain a better understanding of applied bioinformatics and who wish to use bioinformatics technologies to assist in their research. The volume would also be of value to bioinformatics developers, particularly those from a computing background, who would like to understand the application of computational tools for biological research. Each chapter would include a comprehensive introduction giving an overview of the fundamentals, aimed at introducing graduate students and researchers from diverse backgrounds to the field and bring them up-to-date on the current state of knowledge. To accommodate the broad range of topics in applied bioinformatics, chapters have been grouped into themes: gene and genome analysis, molecular genetic analysis, gene expression analysis, protein and proteome analysis, metabolome analysis, phenome data analysis, literature mining and bioinformatics tool development. Each chapter and theme provides an introduction to the biology behind the data describes the requirements for data processing and details some of the methods applied to the data to enhance biological understanding.

This up-to-date review of seed genomics, from basic seed biology to practical applications in crop science, provides a thorough background understanding of seed biology from a basic science perspective. A valuable resource for advanced graduate students, post-docs, researchers and professionals in the Plant and Crop Sciences, this book brings together top researchers in the field to cover three general themes: genomic approaches to studying seeds, genomic analysis of basic seed biology, and crop seed genomics. A valuable resource for advanced graduate students, post-docs, researchers and professionals in the Plant and Crop Sciences

The human genome is a linear sequence of roughly 3 billion bases and information regarding this genome is accumulating at an astonishing rate. Inspired by these advances, *The Human Genome in Health and Disease: A Story of Four Letters* explores the intimate link between sequence information and biological function. A range of sequence-based functional units of the genome are discussed and illustrated with inherited disorders and cancer. In addition, the book considers valuable medical applications related to human genome sequencing, such as gene therapy methods and the identification of causative mutations in rare genetic disorders. The primary audiences of the book are students of genetics, biology, medicine, molecular biology and bioinformatics. Richly illustrated with review questions provided for each chapter, the book helps students without previous studies of genetics and molecular biology. It may also be of benefit for advanced non-academics, which in the era of personal genomics, want to learn more about their genome. Key selling features: Molecular sequence perspective, explaining the relationship

between DNA sequence motifs and biological function Aids in understanding the functional impact of mutations and genetic variants Material presented at basic level, making it accessible to students without previous studies of genetics and molecular biology Richly illustrated with questions provided to each chapter

Jacket.

Updated to reflect the latest discoveries in the field, the Fifth Edition of Hartl's classic text provides an accessible, student-friendly introduction to contemporary genetics. Designed for the shorter, less comprehensive introductory course, *Essential Genetics: A Genomic Perspective, Fifth Edition* includes carefully chosen topics that provide a solid foundation to the basic understanding of gene mutation, expression, and regulation. New and updated sections on genetic analysis, molecular genetics, probability in genetics, and pathogenicity islands ensure that students are kept up-to-date on current key topics. The text also provides students with a sense of the social and historical context in which genetics has developed. The updated companion web site provides numerous study tools, such as animated flashcards, crosswords, practice quizzes and more! New and expanded end-of-chapter material allows for a mastery of key genetics concepts and is ideal for homework assignments and in-class discussion.

Daniel Lieberman onderzoekt de grote transformaties die ons lichaam gedurende miljoenen jaren onderging: het ontstaan van de tweevoeter, de overgang naar een voedselpatroon dat uit meer dan fruit bestond, de ontwikkeling van ons uitzonderlijk grote brein en ons atletische vermogen. Ons hoofd, onze ledematen, onze stofwisseling, geen deel van het lichaam blijft onbesproken. Continue adaptaties brachten ons veel voordeel, maar creëerden een omgeving waartegen ons lichaam niet bestand is, met als resultaat vermijdbare ziektes zoals obesitas en diabetes type 2. Lieberman noemt dit `dysevolutie': we leven steeds langer, maar zijn vaker chronisch ziek. Met Darwin als leidraad propageert hij een gezondere leefomgeving, voor ons eigen bestwil.

Stay up-to-date on the latest evidence and clinical practice in pediatric acute care with the definitive textbook in the field. Now in its second edition, *Pediatric Acute Care: A Guide for Interprofessional Practice* takes an evidence-based, interprofessional approach to pediatric acute care as it exemplifies the depth and diversity that's needed for the dynamic healthcare environments in which acutely ill children receive care. Coverage includes how to work with the pediatric patient and family, major acute care disorders and their management, emergency preparedness, common acute care procedures, and much more. With contributions from more than 200 practicing clinicians and academic experts, it represents a wide variety of disciplines including medicine, nursing, pharmacy, child life, nutrition, law, integrative medicine, education, public health, and psychology, among others. The second edition also features the addition of new physician and nurse practitioner co-editors as well as extensive content updates including updated evidence-based content throughout the text, the integration of the 2016 IPEC Core Competencies for Interprofessional Collaborative Practice, a new full-color design, and new vivid illustrations throughout. UNIQUE! Interprofessional collaborative approach includes contributions from more than 200 practicing clinicians and academic experts from the U.S. and Canada, including nursing, medicine, pharmacy, child life, nutrition, law, integrative medicine, education, public health, and psychology. Consistent organization within disorder chapters begins with a section on Physiology and continues with sections on Pathophysiology, Epidemiology and Etiology, Presentation, Differential Diagnosis, Diagnostic Studies, and a Plan of Care that include Therapeutic Management, Consultation, Patient and Family Education and Disposition and Discharge Planning. Comprehensive content spanning five units divides coverage into introductory information, the approach to the pediatric patient and family, major acute care disorders and their management, emergency preparedness, and common acute care procedures. NEW! Updated evidence-based content has been added throughout to ensure that you're up-to-date on all topics needed to provide care for pediatric patients in acute, inpatient, emergency, transport, and critical care settings. NEW! Full-color design and illustrations enhance learning and make content easier to navigate and digest. NEW! Integration of the 2016 IPEC Core Competencies ensure that you're learning the professional skills and protocols required for effective, contemporary interprofessional collaborative practice. UPDATED! Streamlined procedures unit focuses more sharply on need-to-know content.

Every new copy includes access to the student companion website Updated throughout to reflect the latest discoveries in this fast-paced field, *Essential Genetics: A Genomics Perspective, Sixth Edition*, provides an accessible, student-friendly introduction to modern genetics. Designed for the shorter, less comprehensive course, the Sixth Edition presents carefully chosen topics that provide a solid foundation to the basic understanding of gene mutation, expression, and regulation. It goes on to discuss the development and progression of genetics as a field of study within a societal and historical context. The Sixth Edition includes new learning objectives within each chapter which helps students identify what they should know as a result of their studying and highlights the skills they should acquire through various practice problems. What's new in the Sixth Edition? Chapter 1 includes a new section on the origin of life Chapter 2 includes a revised discussion of the complementation test and how it is used to determine whether two mutations have defects in the same gene Chapter 3 incorporates new data showing that the folding of interphase chromatin into chromosome territories has the form of a fractal globule. It also includes a new section on progenitor cells and embryonic stem cells Chapter 4 includes a new section discussing how copy-number variation in human amylase evolved in response to increased dietary starch as well as the latest on hotspots of recombination Chapter 5 is updated with the latest information on hazards of polycarbonate food containers. It also includes a new section on the genetics of schizophrenia and autism spectrum disorder Chapter 6 includes a revised section on restriction mapping and also discusses the newest massively parallel DNA sequencing technologies that can yield the equivalent of 200 human genomes' worth of DNA sequence in a single sequencing run Chapter 7 has been updated with a shortened and streamlined discussion of recombination in bacteriophage Chapter 8 includes new discoveries concerning the mechanisms of intrinsic transcriptional termination as well as rho-dependent termination Chapter 9 is updated with a new section on stochastic effects on gene expression and an expanded discussion of the lactose operon. There is also a revised discussion of galactose gene regulation in yeast, as well as new sections on lon noncoding RNAs Chapter 10 includes new sections on ancient DNA sequences of the Neandertal and Denisovan genomes Chapter 11 examines master control genes in development Chapter 12 includes a new section on the repair of double-stranded breaks in DNA by nonhomologous end joining or template-directed gap repair Chapter 13 has been extensively revised with the latest data on cancer. Chapter 14 includes a new section on the detection of natural selection, as well as a new section on conservation genetics Key Features of *Essential Genetics, Sixth Edition*: New Learning Objectives within each Completely updated to help nurses learn to "think genetically" Today's nurses must be able to "think genetically" to help individuals and families who are affected by genetic disease or

contemplating genetic testing. This book is a classic resource for nursing students and practitioners at all levels who need to acquire the knowledge and skills for using genomics in their practice. This completely updated second edition encompasses the many recent advances in genetic research and knowledge, providing essential new information on the science, technology, and clinical application of genomics. It focuses on the provision of individualized patient care based on personal genetics and dispositions. The second edition is designed for use by advanced practice nursing programs, as well as undergraduate programs. It pinpoints new developments in prenatal, maternity, and pediatric issues and supplies new information on genomics-based personal drug therapy, environmental susceptibilities, genetic therapies, epigenetics, and ethics. The text features a practical, clinically oriented framework in line with the core competencies defined by the AACN. It delivers information according to a lifespan approach used in the practice setting. The second edition continues to provide basic information on genomics, its impact on healthcare, and genetic disorders. It covers prevention, genetic counseling and referral, neuropsychiatric nursing, and public health. The core of the text presents information on a variety of diseases that affect patients throughout the lifespan, with specific guidance on the nursing role. Also included are tests for a variety of diseases and information on pharmacogenomics, which enable health care providers to select the best drugs for treatment based on a patient's genetic makeup. Plentiful case study examples support the information throughout. Additionally, an instructor's package of PowerPoint slides and a test bank are provided for use at both the graduate and undergraduate levels. New to the Second Edition: Completely updated with several new chapters: Personal drug therapy based on genomics, Environmental susceptibilities, Prenatal detection and diagnosis, Newborn and genetic screening, Reproductive technologies, Ethical issues, Genetic therapies, Epigenetics. Content for graduate-level programs, PowerPoint slides and a test bank for all student levels. Key Features: Encompasses state-of-the-art genomics from a nursing perspective, Provides a practical, clinically oriented lifespan approach, Covers science, technology, and clinical application of genomics, Addresses prevention, genetic testing, and treatment methods. Written for undergraduate- and graduate-level nursing students.

The ideal text for undergraduate and graduate students in advanced cell biology courses. Extraordinary technological advances in the last century have fundamentally altered the way we ask questions about biology, and undergraduate and graduate students must have the necessary tools to investigate the world of the cell. The ideal text for students in advanced cell biology courses, Lewin's *CELLS*, Third Edition continues to offer a comprehensive, rigorous overview of the structure, organization, growth, regulation, movements, and interactions of cells, with an emphasis on eukaryotic cells. The text provides students with a solid grounding in the concepts and mechanisms underlying cell structure and function, and will leave them with a firm foundation in cell biology as well as a "big picture" view of the world of the cell. Revised and updated to reflect the most recent research in cell biology, Lewin's *CELLS*, Third Edition includes expanded chapters on Nuclear Structure and Transport, Chromatin and Chromosomes, Apoptosis, Principles of Cell Signaling, The Extracellular Matrix and Cell Adhesion, Plant Cell Biology, and more. All-new design features and a chapter-by-chapter emphasis on key concepts enhance pedagogy and emphasize retention and application of new skills. Thorough, accessible, and essential, Lewin's *CELLS*, Third Edition, turns a new and sharper lens on the fundamental units of life.

Een ethiek voor gentechologie Een must read voor iedereen die begaan is met medisch-ethische kwesties. Toegankelijk boek vol aansprekende voorbeelden. Doorbraken in de genetica beloven ons veel goeds: genezing en preventie van slopende ziektes. Maar ze brengen ons ook in een lastig parket: we kunnen steeds meer sleutelen aan onze genetische eigenschappen en die van onze kinderen. Een doof paar dat via donorinseminatie per se een doof kind wil, geeft ons een ongemakkelijk gevoel. Of wat te denken van een onvruchtbaar stel dat 50.000 dollar belooft voor een 'perfecte' eicel van eidonor met onder meer een atletische bouw en een extreem hoog IQ? Aan de hand van aansprekende voorbeelden en gedachte-experimenten houdt Harvard-filosoof Michael Sandel een stevig pleidooi tegen het streven naar volmaaktheid van de menselijke natuur. Gentechologie vergt een nieuwe manier van ethiek bedrijven en zal de grote morele vraagstukken weer op de politieke agenda zetten. Filosoof Michael J. Sandel is hoogleraar politieke wetenschappen aan Harvard-University. Vorig jaar verscheen zijn internationale bestseller *Rechtvaardigheid* in het Nederlands. Ook *Pleidooi tegen volmaaktheid* werd al in zeven talen vertaald.

'Als Tom Clancy, maar dan spannender en met meer actie!' - Goodreads 'Het tempo is hoog, er is actie en spanning. Kortom: een aanrader!' - NBD Biblion In *Machtsovername* wordt de president van Amerika het doelwit van nietsontziende terroristen - een angstaanjagend realistisch rampscenario, want hoe goed is een vrijstaande villa in het midden van een drukke stad nu echt te beveiligen? Op een ochtend wordt de rust in Washington wreed verstoord door een groep terroristen die tientallen mensen vermoorden en bijna honderd mensen gijzelen terwijl ze zich een bloederige weg banen naar het Witte Huis. De geheime dienst brengt de president nog net op tijd naar een ondergrondse bunker, en terwijl de overheid discussieert over de juiste manier om met de vijand te onderhandelen, sluipt Mitch Rapp, de beste antiterreuragent van de CIA, door geheime gangen en verborgen tunnels van het enorme landhuis om de gijzelaars te redden voordat de terroristen de president bereiken. Maar een andere vijand - een hooggeplaatst persoon in Washington - is vastberaden Rapps reddingsmissie te laten falen...

Als er één hardnekkige mythe over de wereld bestaat, dan is het dat we allemaal aannemen dat wij mensen kunnen plannen hoe de wereld zich ontwikkelt. Matt Ridley betoogt echter dat 'evolutie' het sleutelbegrip is om te kunnen begrijpen hoe en waarom onze wereld verandert. Dit geldt niet alleen voor de natuur, maar ook voor vrijwel alles in de menselijke cultuur, van politiek, moraliteit en technologie tot geld, filosofie en religie. Dit zijn allemaal evolutionaire fenomenen. Ze ontvouwen zich, geleidelijk, ongericht, aanzwellend, gestuurd door een natuurlijke selectie onder concurrerende ideeën. Natuurlijk hebben individuen invloed, net als politieke partijen en grote bedrijven. Maar in *De evolutie van alles* maakt Ridley duidelijk dat onze wereld weliswaar het product is van menselijk handelen, maar niet van menselijk ontwerp.

The Second Edition of Lewin's *Essential GENES* continues to provide students with the latest findings in the field of molecular biology and molecular genetics. An exceptional new pedagogy enhances student learning and helps readers understand and retain key material like never before. New Concept and Reasoning Checks at the end of each chapter section, End of Chapter Questions and Further Readings for each chapter, and several categories of special topics boxes within each chapter expand and reinforce important concepts. The reorganization of topics in this edition allows students to focus more sharply on the key material at hand and improves the natural flow of course material. New end-of-chapter questions reviews major points in the chapter and allow students to test themselves on important course material. Important Notice: The digital edition of this book is missing some of the images or content found in the physical edition.

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