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A complete, hands-on guide to successful image acquisition and interpretation at the bedside. Written by top practitioners in the field, this comprehensive book is filled with practical guidance that helps you master clinical ultrasonography in a critical care environment. Here, you'll learn exactly how to utilize diagnostic ultrasound as part of the physical exam, as the book examines current evidence supporting its use in the critically ill adult and child. Organized by body system, *Critical Care Ultrasonography* features self-contained chapters that can be used as individual reference guides for a range of interventions, from transthoracic echocardiography to echocardiographic evaluation of cardiac trauma. Through this in-depth coverage, you'll get a sense of how this essential technology supports the cross-disciplinary nature of critical care. The book's authoritative content is reinforced throughout by a full-color presentation and hundreds of concept-clarifying illustrations, figures, and images. Features Comprehensive coverage of the fundamentals of ultrasound use in critical care Guidance on ultrasound procedures enables practitioners to use ultrasound for vascular and axial procedures, improving safety and ensuring that nationally recognized compliance standards are upheld Cardiac ultrasound chapters help you assess and monitor the patient's cardiopulmonary status non-invasively Chapter on Neck and Upper Respiratory Ultrasound offers an overview of little-known techniques that have not been comprehensively described in any other source Full-color presentation, with 495 illustrations that emphasize the basic skills required to visualize anatomic structures and interpret findings

Marine Mammals Ashore: A Field Guide for Strandings (J.R. Geraci & V.J. Lounsbury) in the hardcover format is back! A comprehensive manual for understanding and dealing with a stranded seal, manatee, dolphin, whale, or sea otter, this book contains information for the interested beach dweller or student and for the scientist or marine resource manager. *Marine Mammals Ashore* describes rescue operations, how to organize a response team, and how to deal with the media and the public. It includes basic information on marine mammal biology, life history, and health, and an extensive bibliography. *Marine Mammals Ashore* also provides stranding network participants with practical guidelines for collecting data and specimens to better understand the biology and behavior of marine animals and the condition of their environment. All chapters have been updated and expanded, with emphasis on topics that include: enhancing network organization, public education, and media relations. natural and human-related mortality in each major marine mammal group. recognizing, responding to, and investigating unusual mortality events. new or updated protocols for specimen and data collection (e.g., samples for PCR analysis; basic guidelines for investigating possible noise-related strandings; collecting environmental data and samples; and a detailed protocol for examining marine mammals for signs of human interactions). zoonoses and other public health issues. updated overview

of marine mammal stranding frequency and distribution in North America, with coverage extended to Canada and Mexico. overview of special topics provided by invited authors: disentanglement (Peter Howorth, Santa Barbara Marine Mammal Center, Santa Barbara CA); tagging and monitoring (Anthony Martin, British Antarctic Survey); and GIS applications (Greg Early, A.I.S., Inc., New Bedford, MA). close to 600 new references (and a few new carcass disposal stories!). The 372-page second edition features water- and tear-resistant paper, a vinyl cover, and durable plastic coil binding. There are even strategically placed lined pages for adding personal notes and contact information.

Advanced Paediatric Life Support is the internationally renowned manual on emergency paediatric care, written to support the course run by the Advanced Life Support Group. Using their structured approach, a tried and tested practical method of treating children during the crucial first few hours of a life threatening illness or injury, Advanced Paediatric Life Support is used by doctors, nurses and allied health professionals dealing with emergencies in children. Its clear layout and straightforward style make it a highly practical tool both for training and in the event of an emergency. The sixth edition includes major new features bringing it right up to date, including: The latest International Liaison Committee on Resuscitation (ILCOR) 2015 Guidelines The latest consensus guidelines on paediatric trauma Enhanced discussions on the importance of human factors A new and improved design including full colour photographs and diagrams Free access to the Wiley E-Text With this book at hand, all those providing care during paediatric emergencies can be confident in having comprehensive and authoritative guidance on the recognition and management of life threatening conditions necessary to save a child's life. This title is also available as a mobile App from MedHand Mobile Libraries. Buy it now from iTunes, Google Play or the MedHand Store.

This new edition of the Handbook of Surface and Colloid Chemistry informs you of significant recent developments in the field. It highlights new applications and provides revised insight on surface and colloid chemistry's growing role in industrial innovations. The contributors to each chapter are internationally recognized experts. Several chapter

This exciting volume offers an up-to-date tour of current trends in the neurobiology of memory while saluting Raymond Kesner's pioneering contributions to the field as a theorist and researcher, teacher and mentor.

Starting with his signature chapter introducing the Attribute Model of Memory, the first half of the book focuses on the central role of the hippocampus in processing dimensions of space and time, and branches out to memory system interactions across brain structures. Later chapters apply the attribute model to multiple functions of memory in learning, and to specific neurological contexts, including Huntington's disease, traumatic brain injury, and Fragile X. As a bonus, the book concludes with an essay on Kesner's life and work, and reminiscences by colleagues. Among the topics covered: How the hippocampus supports the

spatial and temporal attributes of memory. Self-regulation of memory processing centers of the brain. Multiple memory systems: the role of Kesner's Attribute Model in understanding the neurobiology of memory. Pattern separation: a key processing deficit associated with aging? · Prefrontal cortex and basal ganglia attributes underlying behavioral flexibility. Memory disruption following traumatic brain injury. Cognitive neuroscientists, neuropsychologists, gerontologists, psychiatrists, and neurobiologists will find *The Neurobiological Basis of Memory* both enlightening and inspiring--much like Kesner himself.

This international bestseller covers the full advanced paediatric life support course, with the core sections for the abbreviated one-day course clearly picked out. The book provides practical guidance for managing children and infants in the first life-threatening "golden" hour. This new edition goes beyond immediate management to include stabilisation and transfer.

1 2 MARCEL B. ROBERFROID AND GLENN R. GIBSON 1 Universite Catholique de Louvain, Department of Pharmaceutical Sciences, Avenue Mounier 73, B-1200 Brussels, BELGIUM 2 Food Microbial Sciences Unit, Department of Food Science and Technology, The University of Reading, Reading, UK It is clear that diet fulfils a number of important human requirements. These include the provision of sufficient nutrients to meet the requirements of essential metabolic pathways, as well as the sensory (and social) values associated with eating. It is also evident that diet may control and modulate various body functions in a manner that can reduce the risk of certain diseases. This very broad view of nutrition has led to the development of foodstuffs with added "functionality". Many different definitions of functional foods have arisen. Most of these complicate the simple issue that a functional food is merely a dietary ingredient(s) that can have positive properties above its normal nutritional value. Other terms used to describe such foods include vitafoods, nutraceuticals, pharmafoods, foods for specified health use, health foods, designer foods, etc. Despite some trepidation, the concept has recently attracted much interest through a vast number of articles in both the popular and scientific media.

Reverse Licensing evaluates the transfer of technology to the U.S. as an alternative growth strategy for both small- and medium-sized U.S. manufacturing firms which need new and competitive technology and for foreign firms which are anxious to enter the U.S. market but lack the required resources for export and/or foreign direct investment. The first theoretical research on international technology licensing from the U.S. licensees' standpoint, this book examines reverse licensing as an alternative to reverse investment. In addition, a sample of 120 U.S. manufacturing firms which have actually utilized reverse licensing is used for empirical and statistical analysis.

This technical paper reviews current information on the effectiveness of habitat rehabilitation techniques for inland fisheries, based on published evaluations of projects including studies on roads improvements and sediment reduction, riparian and floodplain rehabilitation, placement of habitat structures in lakes and streams, and the addition of nutrients to increase aquatic production. It also sets out information on planning, prioritising and monitoring rehabilitation projects.

This volume focuses on blocking disease transmission and the ecological perspective of pathogens and pathogenic processes. The chapters on blocking transmission cover the environmental safety of space flight, biocides and biocide resistance, as well as infection control in healthcare facilities. The book also offers insights into the ecological aspects of infectious disease, introducing the reader to the role of indigenous gut microbiota in maintaining human health and current discussions on environmentally encountered bacterial and fungal pathogens including species that variously cause the necrotizing skin disease Buruli ulcer and coccidioidomycosis. Further, it explores the influenza A virus as an example for understanding zoonosis. It is a valuable resource for microbiologists and biomedical scientists alike.

This book is a well-illustrated and comprehensive guide to the etiology, clinical manifestations, diagnosis, clinical management and prevention of dental caries. Current challenging problems in the field are analyzed and the latest research findings, presented. After an introductory chapter on tooth development, the relationships of biofilm and saliva to dental caries and the significance of the balance between demineralization and remineralization for the development of carious lesions are discussed. Subsequent chapters address the state of the art in diagnosis and treatment, the implications of disease burden for prevention and the association between systemic diseases and dental caries. *Dental Caries: Principles and Management* is intended for dental school students, practicing dentists and researchers in dentistry.

In this book a group of international experts guide the reader through the clinical features of adults with autism spectrum disorders, describe the care needs of patients and their families, explain the evolution of the disorders into old age, and highlight what can be done to help. Detailed attention is paid to the medical and psychiatric problems of adults with these disorders and the approach to their education and professional integration. In addition, expert neuroscientists summarize current views on the neurobiology of autism. Autism spectrum disorders are devastating neurodevelopmental disorders. Although diagnosis and therapeutic interventions usually take place in infancy, they are chronic lifelong conditions. Surprisingly, the literature on autism spectrum disorders in adults is scarce. Moreover, most mental health professionals working with adults have little training in autism, and adult mental health services around the world are rarely prepared to address the needs of these patients, which tend to increase with age. This book therefore fills a crucial gap in the literature and will prove useful for all who care for and deal with adults in the Autistic Spectrum.

Practical Handbook of Microbiology, 4th edition provides basic, clear and concise knowledge and practical information about working with microorganisms. Useful to anyone interested in microbes, the book is intended to especially benefit four groups: trained microbiologists working within one specific area of microbiology; people with training in other disciplines, and use microorganisms as a tool or "chemical reagent"; business people evaluating investments in microbiology focused companies; and an emerging group, people in occupations and trades that might have limited training in microbiology, but who require specific practical information.

Key Features Provides a comprehensive compendium of basic information on microorganisms—from classical microbiology to genomics. Includes coverage of disease-causing bacteria, bacterial viruses (phage), and the use of phage for treating diseases, and added coverage of extremophiles. Features comprehensive coverage of antimicrobial agents, including chapters on anti-fungals and anti-virals. Covers the Microbiome, gene editing with CRISPR, Parasites, Fungi, and Animal Viruses. Adds numerous chapters especially intended for professionals such as healthcare and industrial professionals, environmental scientists and ecologists, teachers, and businesspeople. Includes comprehensive survey table of Clinical, Commercial, and Research-Model bacteria.

Award-winning psychologist Peter Warr explores why some people at work are happier or unhappier than others. He evaluates different approaches to the definition and assessment of

happiness, and combines environmental and person-based themes to explain differences in people's experience. A framework of key job characteristics is linked to an account of primary mental processes, and those are set within a summary of demographic, cultural, and occupational patterns. Consequences of happiness or unhappiness for individuals and groups are also reviewed, as is recent literature on unemployment and retirement. Although primarily focusing on job situations, the book shows that processes of happiness are similar across settings of all kinds. It provides a uniquely comprehensive assessment of research published across the world. Initial chapters explore the several meanings of happiness and the ways in which those have been measured by psychologists. The construct includes pleasure, satisfaction and subjective well-being, and unhappiness has been studied in terms of dissatisfaction, strain, anxiety, and depression. The impacts of principal environmental features on these experiences are reviewed through an analogy with vitamins in relation to physical health—beneficial only up to a point. However, environmental effects are not fixed. Influences on happiness from within the person are examined in terms of principal thinking patterns, personality styles, and cultural backgrounds. Differences are explored between groups (men and women, older and younger people, employees who are full-time and part-time, and so on), and processes of person-environment fit are placed within an overall framework which emphasizes the impact of variations in personal salience. The book is written primarily for academic readers, including senior undergraduates, graduate students, teachers, and researchers in fields of Industrial/Organizational Psychology, Management, Human Resources, and Labor Studies. However, the topic's centrality in many professions makes it important also to a wider readership.

Many technologies exist for men and women to preserve fertility, and advances are being made all the time. Sadly, this information is not always well known in the oncology community and is, therefore, not presented to all eligible cancer patients. Reflecting the latest advances in the field and offering practical information useful to clinicians and scientists, *Preservation of Fertility* addresses new concepts, progress in reproductive techniques, novel treatment modalities, pregnancy after cancer treatment, patient care issues, and professional responsibilities. Tulandi and Gosden have assembled an outstanding group of internationally recognized specialists to address the entire spectrum of issues regarding fertility preservation. They begin with a discussion of age and fertility, epidemiology of cancer survival and fertility, and the vulnerability of the reproductive system to radiotherapy and chemotherapy. The book includes coverage of methods for preserving fertility, new developments in the laboratory for preserving gametes and gonadal tissue, and the psychosocial, legal, and ethical issues of fertility preservation. A powerful knowledge tool for the medical community, this pioneering book provides a complete understanding of the techniques for preserving fertility.

The latest edition of the bestselling *Groundwater Chemicals Desk Reference* has been thoroughly updated and expanded. In addition to information concerning the environmental fate and transport in various media, organic priority pollutants and chemicals commonly found in the workplace and the environment, it includes toxicity information for mammals and aquatic species in a clear, consistent format.

This book covers the basics of pain neurobiology and reviews evidence on the mechanisms of action of physical therapy treatments, as well as their clinical effectiveness in specific pain syndromes. The book is a comprehensive textbook for the management of pain for the physical therapy student and the practicing physical therapist.

Abnormal Child and Adolescent Psychology with DSM-5 Updates, 8/e presents students with a comprehensive, research-based introduction to understanding child and adolescent psychopathology. The authors provide a logically formatted and easy to understand text that covers the central issues and theoretical and methodological foundations of childhood behavior disorders. Rich with illustrations and examples, this text highlights the newest areas of

research and clinical work, stressing supported treatments and the prevention of behavior problems of youth.

This book offers comprehensive coverage of both basic and clinical aspects of immune reactions responsible for infertility. It has four sections focusing on Sperm antigens, Antisperm antibodies (ASAs), Clinical impact of ASAs, and Immune contraception, and include contributions from leading experts in these fields. This new edition of the book offers a comprehensive update that reflects the very significant advances in reproductive immunology that have been achieved over the past five years, especially related to the sperm proteome, sperm-egg binding/fusion proteins, gene knockout studies, and immunocontraception. Reproductive immunology continues to be a fast-growing discipline in which new knowledge is emerging almost every day. Immune Infertility is a model source of vital and reliable information on the latest scientific developments in the field. It will be of value for clinicians, scientists, students, residents, and fellows working in reproductive biology, obstetrics and gynecology, and urology.

A timely overview covering the three major types of glial cells in the central nervous system - astrocytes, microglia, and oligodendrocytes. New findings on glia biology are overturning a century of conventional thinking about how the brain operates and are expanding our knowledge about information processing in the brain. The book will present recent research findings on the role of glial cells in both healthy function and disease. It will comprehensively cover a broad spectrum of topics while remaining compact in size.

River Channel Management is the first book to deal comprehensively with recent revolutions in river channel management. It explores the multi-disciplinary nature of river channel management in relation to modern management techniques that bear the background of the entire drainage basin in mind, use channel restoration where appropriate, and are designed to be sustainable. River Channel Management is divided into five sections: ·The Introduction outlines the need for river channel management . ·Retrospective Review offers an overview of twentieth century engineering methods and the ways that river channel systems operate. ·Realisation explains how greater understanding of river channel adjustments, channel hazards and river basin planning created a context for twenty-first century management. ·Requirements for Management explains and examines environmental assessment, restoration-based approaches, and methods that work towards 'design with nature' ·Final Revision speculates about prospects for twenty-first century river channel management. River Channel Management is written for higher-level undergraduates and for postgraduates in geography, ecology, engineering, planning, geology and environmental science, for professionals involved in river channel management, and for staff in environmental agencies.

Multisystemic Resilience brings together for the first time in one volume a wide range of resilience scholars who have been wrestling with how to explain processes of recovery, adaptation, and transformation in contexts of change and adversity. With contributions from psychologists, epigeneticists, ecologists, architects, disaster specialists, engineers, sociologists, social workers, and public health researchers among others, this innovative volume creates a platform for an interdisciplinary conversation about how to effectively research resilience across systems. Even more, it explores how to identify possible solutions to problems that threaten the physical and mental health of individuals, the wellbeing of our communities, and the sustainability of our planet. Every chapter provides a detailed review of systemic resilience from one disciplinary perspective, drawing from cutting edge research and case studies. Together these chapters show that considering the resilience of multiple systems at once is instrumental to understanding the processes of change and sustainability.

The use of human in vitro fertilization in the management of infertility is the outgrowth of

years of laboratory observations on in vitro sperm-egg interaction. "The editors of this work have themselves contributed significantly to basic knowledge of the mammalian fertilization process. The observations of Don Wolf on sperm penetration, the block to polyspermy and, most recently, sperm hyperactivation in the monkey and human, Gregory Kopf's elucidation of the mechanisms of sperm activation during penetration and the reciprocal dialogue between sperm and egg, and Barry Bavister's definition of culture conditions and requirements necessary for in vitro oocyte maturation, fertilization and development in model mammalian systems including nonhuman primates have contributed greatly to our understanding of the mammalian fertilization process. Wolf, Kopf and Gerrity have enjoyed substantial interaction with clinicians in Departments of Obstetrics and Gynecology and have been directly involved with successful IVF programs. Both Wolf and Kopf have served as research scientists in the Division of Reproductive Biology at the University of Pennsylvania, which, for more than 22 years, has fostered co-mingling of clinically oriented and basic science faculty. It is through such interaction, which clearly exists at many institutions including the University of Wisconsin, that the process of technology transfer is best served. Without an exquisitely coordinated laboratory, there can be no consistent success in human in vitro fertilization. Quality control is pivotal, but close collaboration between the laboratory and the clinic is also essential as information is shared and correlated. Meeting the Challenge of Caring for Persons Living with Dementia and Their Care Partners and Caregivers A Way Forward Critical Care Ultrasonography McGraw Hill Professional

This book focuses on various types of bioactive compounds, including secondary metabolites, oligosaccharides, polysaccharides, flavonoids, peptides/proteins, carotenoid pigments, quinones, terpenes, and polyunsaturated fatty acids, and presents an overview of their nutraceutical activities. It covers the current status and future potential of food compounds, as well as extraction technologies for bioactives derived from plant, fungi and marine-derived bioactive agents. Finally, health-promoting effects of plant, fungi and marine-derived bioactive agents are discussed. Chapters come from top researchers in this area from around the globe. The volume caters to the needs of undergraduate and post-graduate students in the area of food biotechnology, food bioprocessing, biotechnology, food engineering, etc., and also contains information pertinent to researchers.

Urban flooding is an increasing challenge today to the expanding cities and towns of developing countries. This Handbook is a state-of-the art, user-friendly operational guide that shows decision makers and specialists how to effectively manage the risk of floods in rapidly urbanizing settings--and within the context of a changing climate.

In recent years, the advancing science and increasing availability of assisted reproduction have given new hope to infertile couples. However, the use of IVF and ART has also led to marked increases in the number of multiple-infant live births. This poses a public health concern, as these neonates have a higher rate of pre-term delivery, compromising their survival chances and increasing their risk of lifelong disability. By optimizing the selection of gametes and embryos with high probabilities of implantation, it is possible to reduce the number of embryos transferred and, by extension, the number of high-risk multiple gestations, while maintaining or increasing pregnancy rates. Human Gametes and Preimplantation Embryos: Assessment and

Diagnosis provides a broad yet concise overview of established and developing methodologies for assessment of gamete and embryo viability in assisted reproduction. This book elucidates the best practices for precisely selecting viable specimens based on morphology and cleavage rate and covers the spectrum of emerging adjunctive technologies for predicting reproductive potential. The authors present their extensive knowledge of “omics” approaches (genomics, transcriptomics, proteomics, and metabolomics), with unbiased delineation of the associated advantages and potential pitfalls. This valuable clinical resource is well suited to infertility specialists, Ob/Gyn physicians, IVF laboratory technicians, and researchers in the fields of embryology and reproductive medicine.

Across the United States, municipalities, counties, and states grapple with issues of ensuring adequate amounts of water in times of high demand and low supply. Instream flow programs aim to balance ecosystem requirements and human uses of water, and try to determine how much water should be in rivers. With its range of river and ecosystem conditions, growing population, and high demands on water, Texas is representative of instream flow challenges across the United States, and its instream flow program may be a model for other jurisdictions. Three state agencies—the Texas Water Development Board (TWDB), the Texas Parks and Wildlife Department (TPWD), and the Texas Commission on Environmental Quality (TCEQ)—asked a committee of the National Research Council (NRC) to review the Programmatic Work Plan (PWP) and Technical Overview Document (TOD) that outline the state's instream flow initiative. The committee suggested several changes to the proposed plan, such as establishing clearer goals, modifying the flow chart that outlines the necessary steps for conducting an instream flow study, and provide better linkages between individual studies of biology, hydrology and hydraulics, physical processes, and water quality. Marine mammals attract human interest – sometimes this interest is benign or positive – whale watching, conservation programmes for whales, seals, otters, and efforts to clear beaches of marine debris are seen as proactive steps to support these animals. However, there are many forces operating to affect adversely the lives of whales, seals, manatees, otters and polar bears – and this book explores how the welfare of marine mammals has been affected and how they have adapted, moved, responded and sometimes suffered as a result of the changing marine and human world around them. Marine mammal welfare addresses the welfare effects of marine debris, of human traffic in the oceans, of noise, of hunting, of whale watching and tourism, and of some of the less obvious impacts on marine mammals – on their social structures, on their behaviours and migration, and also of the effects on captivity for animals kept in zoos and aquaria. There is much to think and talk about – how marine mammals respond in a world dramatically influenced by man, how are their social structures affected and how is their welfare impacted?

Antimicrobial therapy is a key factor in our success against pathogens poised to ravage at risk or infected individuals. However, we are currently at a watershed point as we face a growing crisis of antibiotic resistance among diverse pathogens. One area of intense interest is the impact of the application of antibiotics for uses other than the treatment of patients and the association with

such utilization with emerging drug resistance. This Research Topic “Low- dose antibiotics: current status and outlook for the future” in *Frontiers in Microbiology: Antimicrobials, Resistance and Chemotherapy* details various aspects of the wide ranging effects of antimicrobial therapy from areas such as the regulation of host responses to modulation of bacterial virulence factors to acquisition of antibiotic resistance genes.

Makes the case for systems thinking in an easily accessible form for a broad interdisciplinary audience, including health system stewards, programme implementers, researchers, evaluators, and funding partners.

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