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YOM4EW - SHANNON WERNER

Obra que consta de dos tomos en los que se presentan estudios realizados a nivel mundial por especialistas de distintas nacionalidades: Gerardo Barboza, Herlinda Bonilla-Jaime, Carlos Armando Cadoppi, Angelo Citro, Adrián Alejandro Corrales, Luis Alberto de la Cruz-Cruz, William Gomes, Natalia Guarino Souza, Paloma Islas-Fabila, , Cristian Larrondo, José Raúl López, Eduardo Luis Maitret, Héctor Óscar Orozco-Gregorio, Visoky Paján, Andrés Felipe Pérez, Gladis Isabel Rébak, José Manuel Reyes, Patricia Roldán-Santiago, Marlyn Hellen Romero, Ariel Marcel Tarazona, Juan Manuel Vargas-Romero, Hugo Fernando Vélez, Ariadna Sagrario Yáñez-Pizaña y Marco Zava.

Plants are important source of lead molecules for drug discovery. These lead molecules serve as starting materials for laboratory synthesis of drug as well a model for production of biologically active compounds. Phytochemical processing of raw plant materials is essentially required to optimize the concentration of known constituents and also to maintain their activities. Extraction techniques and analytical techniques have played critical roles in phytochemical processing of raw materials. Extraction technologies from conventional extraction to green extraction as well as analytical techniques from single technique to hyphenated/coupled techniques most frequently used in phytochemistry laboratories are covered in the book.

Our knowledge of reproductive biology has increased enormously in recent years on cellular, molecular, and genetic levels, leading to significant breakthroughs that have directly benefitted in vitro fertilization (IVF) and other assisted reproductive technologies (ART) in humans and animal systems. Animal Models and Human Reproduction presents a comprehensive reference that reflects the latest scientific research being done in human reproductive biology utilizing domestic animal models. Chapters on canine, equine, cow, pig, frog, and mouse models of reproduction reflect frontier research in placental biology, ovarian function and fertility, non-coding RNAs in gametogenesis, oocyte and embryo metabolism, fertilization, cryopreservation, signal transduction pathways, chromatin dynamics, epigenetics, reproductive aging, and inflammation. Chapters on non-human primate models also highlight recent advancements into such issues as human in vitro fertilization (IVF) and assisted reproductive technologies (ART). This book offers animal scientists, reproductive biology scientists, clinicians and practitioners, invaluable insights into a wide range of issues at the forefront of human reproductive health.

I. Fundamentals; II. Biology and ecology; III. Control tactics and strategies; IV. Implementation of rice IPM systems.

Condensed into a detailed analysis and a selection of continent-wide datasets, this revised edition of World Population & Human Capital in the Twenty-First Century addresses the role of educational attainment in global population trends and models. Presenting the full chapter text of the original edition alongside a concise selection of data, it summarizes past trends in fertility, mortality, migration, and education, and examines relevant theories to identify key determining factors. Deriving from a global survey of hundreds of experts and five expert meetings on as many continents, World Population & Human Capital in the Twenty-First Century: An Overview emphasizes alternative trends in human capital, new ways of studying ageing and the quantification of alternative population, and education pathways in the context of global sustainable development. It is an ideal companion to the county specific online Wittgenstein Centre Data Explorer.

The authors have revised and updated this bestseller to include both the Oracle8i and new Oracle9i Internet-savvy database products.

The success of Assisted Reproductive Technology is critically dependent upon the use of well optimized protocols, based upon sound scientific reasoning, empirical observations and evidence of clinical efficacy. Recently, the treatment of infertility has experienced a revolution, with the routine adoption of increasingly specialized molecular biological techniques and advanced methods for the manipulation of gametes and embryos. This textbook – inspired by the postgraduate degree program at the University of Oxford – guides students through the multidisciplinary syllabus essential to ART laboratory practice, from basic culture techniques and micromanipulation to laboratory management and quality assurance, and from endocrinology to molecular biology and research methods. Written for all levels of IVF practitioners, reproductive biologists and technologists involved in human reproductive science, it can be used as a reference manual for all IVF labs and as a textbook by undergraduates, advanced students, scientists and professionals involved in gamete, embryo or stem cell biology.

To present a coherent and meaningful survey of scientific research endeavour in an area that has expanded as fast as physiology and biochemistry of reproduction in the male is no mean task these days. No less prodigious than the growth of knowledge of male reproductive function has been the rate at which the outpouring of publications on this subject has continued since the appearance of 'The Biochemistry of Semen and of the Male Reproductive Tract' in 1964. Since cyclopaedic treatment of this vast literature did not appeal to us, we have made no attempt either to rehash the material contained in that book or to enlarge the bibliography beyond the nearly 3500 references included in the present treatise. At the same time, whilst writing, we felt strongly that to advance, it is ne-

cessary to understand the past, and for this reason we have not hesitated to refer (especially in the introductory chapter) to a number of those fundamental early discoveries in which today's knowledge is deeply and firmly rooted.

A groundbreaking contribution to the literature now in its revised and expanded second edition, this textbook offers a comprehensive review of diagnostic and treatment techniques for male infertility. This state-of-the-art, evidence-based textbook incorporates new multidisciplinary and complementary medicine approaches to create a first-of-its-kind guide to treatment strategies for male infertility and beyond. While this new edition is primarily designed as a reference for students and residents in reproductive medicine and andrology, it will be equally useful as well for professionals in urology, reproductive endocrinology, embryology, and research fields who are interested in the role that antioxidants play in male infertility. World-renowned experts in these areas have been selected to participate in this work. Careful selection of the highest quality content will span the whole range of topics in the area of male infertility, providing a complete review of well-established and current diagnostic and treatment techniques for male infertility. The incorporation of 20 new chapters will enhance the book’s appeal by including the most recent advances brought to the male infertility arena. Additionally, this edition incorporates new features, including bulleted key points, review criteria and select video clips demonstrating some of the most fascinating male infertility treatment modalities. A dedicated new section on current guidelines on male infertility will enlighten readers on how to most optimally manage male infertility clinical scenarios. Covering all aspects of diagnosis and management, ART, lifestyle factors and associated conditions for male infertility, Male Infertility: Contemporary Clinical Approaches, Andrology, ART and Antioxidants will be a readily accessible, high quality reference for medical students and residents, and will be of significant value to professionals working in the various fields treating this condition as well.

A unique interdisciplinary overview of the way mammals reproduce, this volume synthesizes research done by laboratory physiologists, behaviorists, population ecologists, and animal breeders. F. H. Bronson has drawn together the disparate literature in these areas to provide students and researchers with a comprehensive and biologically integrated approach to the study of mammalian reproduction. Each chapter presents a wealth of issues and questions, summarizing the current consensus on interpretations as well as viable alternatives under debate. The book is principally concerned with how environmental factors regulate reproduction. Bronson proposes that a mammal's reproductive performance routinely reflects simultaneous regulation by several environmental factors that interact in fascinatingly complex ways. Environment is defined broadly, and the chapters give equal weight to ecological and physiological factors when considering how variables such as food availability, ambient temperature, photoperiod, and social cues interact to regulate a mammal's reproduction. Particular attention is given to seasonal breeding, and a taxonomically arranged chapter underscores the importance of comparative and evolutionary biology to an understanding of mammalian reproduction. Mammalian Reproductive Biology is a powerful argument for the value and importance of interdisciplinary approaches to research. Its almost 1,500 references constitute the most comprehensive bibliography to date on this topic. Bronson also gives detailed consideration to promising areas for future research. Well organized, carefully planned, and clearly written, this book will become standard reading for scientists concerned with any aspect of mammalian biology.

Herbal Medicine in Andrology: An Evidence-Based Update provides a comprehensive overview of ethnomedical approaches in andrology, including ethnopharmacology of plant extracts and relevant bioactive compounds. It highlights information on the availability of medicinal plants and the legal and procedural processes involved in developing a marketable product. This reference helps clinicians and scientists develop an understanding on how herbal medicine can be used to treat andrological patients in practice. Only a limited number of journal articles are available on this topic, making this reference a valuable source of information for a large audience, including urologists, andrologists, gynecologists, reproductive endocrinologists and basic scientists. Provides essential evidence-based information about herbal medicine Offers an ethnopharmacological background on bioactive compounds in certain plant extracts Educates the basic scientist and clinician on the use of herbal medicines in andrology Provides an update to recent advances on herbal medicine in andrology from world experts

This book provides andrologists and other practitioners with reliable, up-to-date information on all aspects of male infertility and is designed to assist in the clinical management of patients. Clear guidance is offered on classification of infertility, sperm analysis interpretation and diagnosis. The full range of types and causes of male infertility are then discussed in depth. Particular attention is devoted to poorly understood conditions such as unexplained couple infertility and idiopathic male infertility, but the roles of diverse disorders, health and lifestyle factors and environmental pollution are also fully explored. Research considered stimulating for the reader is highlighted, reflecting the fascinating and controversial nature of the field. International treatment guidelines are presented and the role of diet and dietary supplements is discussed in view of their increasing importance. Clinicians will find that the book’s straightforward approach ensures that it can be easily and rapidly consulted.

Recent advances in genomic and omics analysis have triggered a revolution affecting nearly every field of medicine, including reproductive medicine, obstetrics, gynecology, andrology, and infertility treatment. Reproductomics: The –Omics Revolution and Its Impact on Human Reproductive Medicine demonstrates how various omics technologies are already aiding fertility specialists and clinicians in characterizing patients, counseling couples towards pregnancy success, informing embryo selection, and supporting many other positive outcomes. A diverse range of chapters from international experts examine the complex relationship between genomics, transcriptomics, proteomics, and metabolomics and their role in human reproduction, identifying molecular factors of clinical significance. With this book Editors Jaime Gosálvez and José A. Horcajadas have provided researchers and clinicians with a strong foundation for a new era of personalized reproductive medicine. Thoroughly discusses how genomics and other omics approaches aid clinicians in various areas of reproductive medicine Identifies specific genomic and molecular factors of translational value in treating infertility and analyzing patient data Features chapter contributions by leading international experts

Microbial pollution is a key element of indoor air pollution. It is caused by hundreds of species of bacteria and fungi, in particular filamentous fungi (mould), growing indoors when sufficient moisture is available. This document provides a comprehensive review of the scientific evidence on health problems associated with building moisture and biological agents. The review concludes that the most important effects are increased prevalences of respiratory symptoms, allergies and asthma as

well as perturbation of the immunological system. The document also summarizes the available information on the conditions that determine the presence of mould and measures to control their growth indoors. WHO guidelines for protecting public health are formulated on the basis of the review. The most important means for avoiding adverse health effects is the prevention (or minimization) of persistent dampness and microbial growth on interior surfaces and in building structures. [Ed.]

Multidisciplinary collection of essays on the relationship of infertility and the "historic" STIS--gonorrhea, chlamydia, and syphilis--producing surprising new insights in studies from across the globe and spanning millennia.

This book provides a comprehensive overview of endocrinology of the male reproductive system, explaining how it works and how, sometimes, it fails to work. World-class specialists present state of the art knowledge on all aspects, including anatomy, physiology, molecular biology, genetics, pathophysiology, clinical manifestations of testicular diseases, endocrine aspects of andrological and sexual diseases, and therapy. Extensive consideration is given to sexual development, testicular function, the clinical approach to disorders of male reproduction, male hypogonadism, sexual dysfunction, and male infertility. In addition, sociodemographic, psychological, and ethical aspects of male reproductive disorders are discussed. The book is intended as a major reference for endocrinologists, andrologists, and sexologists, as well as basic and clinical scientists. It is published as part of the SpringerReference program, which delivers access to living editions constantly updated through a dynamic peer-review publishing process.

A succinct reference for those assessing and managing the reproductive functionality of male animals, this practical manual contains both generic and species-specific information suitable for widespread worldwide application. It covers all relevant aspects such as handling and restraint, physical examination, reproductive examination, important reproductive diseases, biosecurity, semen collection and its assessment, mating behaviour, and the fundamentals of semen handling and preservation for artificial breeding. With information presented in a manner that will remain useful for years to come, Manual of Animal Andrology is an essential resource for veterinarians, theriogenologists, animal breeders, and students of veterinary and animal sciences.

Genetic-based animal biotechnology has produced new food and pharmaceutical products and promises many more advances to benefit humankind. These exciting prospects are accompanied by considerable unease, however, about matters such as safety and ethics. This book identifies science-based and policy-related concerns about animal biotechnologyâ€"key issues that must be resolved before the new breakthroughs can reach their potential. The book includes a short history of the field and provides understandable definitions of terms like cloning. Looking at technologies on the near horizon, the authors discuss what we know and what we fear about their effectsâ€"the inadvertent release of dangerous microorganisms, the safety of products derived from biotechnology, the impact of genetically engineered animals on their environment. In addition to these concerns, the book explores animal welfare concerns, and our societal and institutional capacity to manage and regulate the technology and its products. This accessible volume will be important to everyone interested in the implications of the use of animal biotechnology.

Throughout the world cotton is broadly adapted to growing in temperate, sub-tropical, and tropical environments, but growth may be challenged by future climate change. Production may be directly affected by changes in crop photosynthesis and water use due to rising CO2 and changes in regional temperature patterns. Indirect effects may result from a range of government regulations aimed at climate change mitigation. While there is certainty that future climate change will impact cotton production systems; there will be opportunities to adapt. This review begins to provide details for the formation of robust frameworks to evaluate the impact of projected climatic changes, highlight the risks and opportunities with adaptation, and details the approaches for investment in research. Ultimately, it is a multi-faceted systems-based approach that combines all elements of the cropping system that will provide the best insurance to harness the change that is occurring, and best allow cotton industries worldwide to adapt. Given that there will be no single solution for all of the challenges raised by climate change and variability, the best adaptation strategy for industry will be to develop more resilient systems. Early implementation of adaptation strategies, particularly in regard to enhancing resilience, has the potential to significantly reduce the negative impacts of climate change now and in the future.

Crowdsourced Data Management: Industry and Academic Perspectives aims to narrow the gap between academics and practitioners in this burgeoning field. It simultaneously introduces academics to real problems that practitioners encounter every day, and provides a survey of the state of the art for practitioners to incorporate into their designs.

The environment is an all-encompassing component of the ecosystem of "Blue planet - the earth", made up of the hydrosphere, atmosphere and lithosphere. These three spheres have biotic and abiotic components which exhibit ecological homeostasis that provides the most appropriate survival chances for the members of biotic component and geochemical balance with abiotic components. This ecosystem is subjected to relatively harsh conditions, mostly created by the disastrous activities due to natural calamities and intentional and/or accidental anthropogenic activities. Biotechnology has become a potential tool to dissipate such environmental impacts because of the advancement it has undergone recently. Emerging Trends in Environmental Biotechnology is an outstanding collection of current research that integrates basic and advanced concepts of biotechnology such as genomics, proteomics, bioinformatics, sequencing, and imaging processes to improvise and protect the environment. This book is particularly attractive for scientists, researchers, students, educators and professionals in environmental science, agriculture, veterinary and biotechnology science. The book will enable them to solve the problems about sustainable development with the help of current innovative biotechnologies such as recombinant DNA technology and genetic engineering which have tremendous potential for impacting global food security, environmental health, human and animal health and overall livelihood of mankind. Features Presents easy-to-read chapters Information is presented in a very accessible and logical format Identifies and explores biotechnological approaches for environmental protection Encompasses biodegradation of hazardous contaminants, biotechnology in waste management, nanotechnology, and issues in environmental biotechnology research

Spermatozoa, the haploid male gametes, are highly specialized cells capable to fertilize eggs in order to produce diploid zygote. The biogenesis of spermatozoa requires finely modulated occurrence of mitotic, meiotic, and differentiation events. Hence, the production of high-quality spermatozoa impacts fertilization with outcomes on the health of the offspring. This book provides a comprehensive

overview on the biogenesis, maturation, functions and activities of spermatozoa in both physiological conditions and infertility. Particular attention has been addressed to the impact of environment on sperm quality and to the appropriate selection of high-quality spermatozoa for in vitro fertilization. Taken together, this book targets a wide audience of basic and clinical scientists, teachers and students, and offers a better understanding of spermatozoa health and disease.

Important Notice: The digital edition of this book is missing some of the images or content found in the physical edition. Gerontological Nursing: Competencies for Care, Second Edition is a comprehensive and student-accessible text that offers a holistic and inter-disciplinary approach to caring for the elderly. The framework for the text is built around the Core Competencies set forth by the American Association of Colleges of Nursing (AACN) and the John A. Hartford Foundation Institute for Geriatric Nursing. Building upon their knowledge in prior medical surgical courses, this text gives students the skills and theory needed to provide outstanding care for the growing elderly population. It is the first of its kind to have more than 40 contributing authors from many different disciplines. Some of the key features include chapter outlines, learning objectives, discussion questions, personal reflection boxes, and case studies.

Now in its second edition, the Oxford Textbook of Endocrinology and Diabetes is a fully comprehensive, evidence-based, and highly-valued reference work combining basic science with clinical guidance, and providing first rate advice on diagnosis and treatment.

Using first-person stories and approachable scientific reviews, this volume explores how zoos conduct and support science around the world.

Blackwell's Five-Minute Veterinary Consult: Ruminant, Second Edition keeps practitioners completely current with the latest in disease management for ruminants and camelids. Updates the first all-in-one ruminant resource designed specifically for quick information retrieval Provides identically formatted topics for easy searching by alphabetical listing or by discipline, with each topic indicating the species affected Offers fast access to the accumulated wisdom of hundreds of veterinary experts Adds more than 100 new topics, with significant revisions to existing topics Includes access to a companion website with additional topics, client education handouts, and figures

These proceedings of the 2018 XIII International Symposium on Spermatology focus on comparative biology, and encourages discussion and the exchange of ideas. The aim of this Symposium was to provide a unique opportunity and bring together scientists from a wide spectrum of research fields – human, domestic animals and other mammals, vertebrates, insects, and plants. The underlying focus is on the function of the spermatozoon – a common feature for sexual reproduction, but extremely varied. By exploring the variability, a better understanding of male reproductive functions can develop. These proceedings address the mechanisms of physiology and pathophysiology, rather than diagnosis and treatment. The symposium featured keynote lectures by invited speakers, followed by presentations on specific aspects of the general topic of the session. Experimental studies are given priority over clinical studies of patient populations. The proceedings comprise both keynote speakers' texts and selected free communications. Posters were considered for publication in the proceedings, and the volume includes exhibited materials on the work of prominent spermatologists, highlighting their important past achievements in the field.

Understanding animal andrology is fundamental to optimising genetic breeding traits in domestic and wild animals. This book provides extensive coverage of male reproductive biology, discussing the essentials of sperm production, harvest and preservation before covering the applications to a range of animals including cattle, horses, pigs, small ruminants, camelids, cats and dogs, poultry and exotic species. It also examines the laboratory procedures that provide the basis of general fertility research.

This practical, extensively illustrated handbook covers the procedures that are undertaken in andrology and ART laboratories to analyse and assess male-factor infertility, and to prepare spermatozoa for use in assisted conception therapy. The content is presented as brief, authoritative overviews of the relevant biological background for each area, plus detailed, step-by-step descriptions of the relevant analytical procedures. Each technical section includes pertinent quality control considerations, as well as the optimum presentation of results. In addition to the comprehensive 'basic' semen analysis, incorporating careful analysis of sperm morphology, the handbook provides established techniques for the use of computer-aided sperm analysis and sperm functional assessment. Throughout the handbook the interpretation of laboratory results in the clinical context is highlighted, and safe laboratory practice is emphasized. It is an invaluable resource to all scientists and technicians who perform diagnostic testing for male-factor infertility.

No single human invention has transformed war more than the airplane—not even the atomic bomb. Even before the Wright Brothers’ first flight, predictions abounded of the devastating and terrible consequences this new invention would have as an engine of war. Soaring over the battlefield, the airplane became an unstoppable force that left no spot on earth safe from attack. Drawing on combat memoirs, letters, diaries, archival records, museum collections, and eyewitness accounts by the men who fought—and the men who developed the breakthrough inventions and concepts—acclaimed author Stephen Budiansky weaves a vivid and dramatic account of the airplane’s revolutionary transformation of modern warfare. On the web: http://www.budiansky.com/

This book offers a state-of-the-art, evidence-based reference to all aspects of veterinary cytology. Truly multidisciplinary in its approach, chapters are written by experts in fields ranging from clinical pathology to internal medicine, surgery, ophthalmology, and dermatology, drawing the various specialties together to create a comprehensive picture of cytology's role in diagnosis and treatment of animal disease. Firmly grounded in the primary literature, the book focuses on companion animals, with special chapters for species with fewer publications. Chapters are logically organized by body system, with additional chapters on tumors of particular import and diagnostic decision making. The first two sections of Veterinary Cytology focus on cytology techniques, quality control, and special laboratory techniques. Subsequent sections are organ/tissue-based and reflect what is known about the canine, feline, and equine species. This is followed by chapters on non-traditional species, including exotic companion mammals, rabbits, cattle, camelids, non-human primates, reptiles and birds, amphibians, fish, invertebrates, and sheep and goats. The last section highlights some unique features of the applications of cytology in industry settings. Provides a gold-standard reference to data--driven information about cytologic analysis in companion animal species Brings together authors from a wide range of specialties to present a thorough survey of cytology's use in veterinary medicine Offers broader species coverage and greater depth than any cytology reference currently available Veterinary Cytology is an essential resource for clinical and anatomic pathologists and any

specialist in areas using cytology, including veterinary oncologists, criticalists, surgeons, ophthalmologists, dermatologists, and internists.
This book presents basic principles and discusses the state-of-the-art methods of sperm sexing in livestock. It reviews the challenges and critical opinions on the conventional sperm sexing methods and characteristic features of spermatozoa of farm animals which could help to develop novel methods of sperm sexing. The book also presents principles and applications of flow cytometry for sperm separation. The chapters of the book elucidate methods and difficulties in developing sperm sexing methods. Notably, it covers recent research on immunological and nanotechnology-based sperm sexing methods. The book also provides information on the development of semen extenders. Towards the end, the book examines ethical and commercial aspects of sperm sexing. It is an ideal reference book for students, researchers and professionals working towards improving livestock production.

Male infertility is a clinician-orientied book aimed at the clinician dealing with the infertile couple because rational, effective management is only possible if the couple are considered together. The aim of the work is to provide advice to the clinician and to give reference to the underlying science. This will not only enable clinicians to understand the underlying science but will also give scientists an insight to clinical work. This blend of science and clinical work is reflected in the contributors who are experts drawn from both fields.
Ample literature covering various aspects of Veterinary Andrology and frozen semen technology is available but need for a book incorporating practical aspects of the subject was always felt for the students of andrology and semen biology and scientists working in the area. This book is aimed to fill this void in literature by providing insight into various applied aspects of veterinary andrology, frozen semen technology and artificial insemination with the help of relevant illustrations based on author's experience and research in the subject. Theoretical aspects of the subject have been deliberately omitted as ample literature on the topic has already been published. This book has been written to supplement the requirements of the scientists and Managers working in frozen semen production station, Semen Quality Control Laboratories, Andrological Diagnosis Laboratories and students of Andrology and Artificial Insemination. It incorporates the topics mentioned in syllabus for Practical course of Andrology and Artificial Insemination of undergraduate students of Veterinary Science. This will also be helpful to the graduate students of Animal Reproduction or Veterinary Andrology as a teaching aid.
Even as classic cytogenetics has given way to molecular karyotyping, and as new deletion and duplication syndromes are identified almost every day, the fundamental role of the genetics clinic remains mostly unchanged. Genetic counselors and medical geneticists explain the "unexplainable," helping families understand why abnormalities occur and whether they're likely to occur again. Chromosome Abnormalities and Genetic Counseling is the genetics professional's definitive guide to navigating both chromosome disorders and the clinical questions of the families they impact. Combining a primer on these disorders with the most current approach to their best clinical approaches, this classic text is more than just a reference; it is a guide to how to think about these disorders, even as our technical understanding of them continues to evolve. Completely updated and still infused with the warmth and voice that have made it essential reading for professionals across medical genetics, this edition of Chromosome Abnormalities and Genetic Counseling represents a leap forward in clinical understanding and communication. It is, as ever, essential reading for the field.
Offers a comprehensive guide to assisted reproductive technology surveillance, describing its history, global variations, and best practices.

Compiles current research into the analysis and design ofpower electronic converters for industrial applications andrenewable energy systems, presenting modern and future applicationsof power electronics systems in the field of electricalvehicles With emphasis on the importance and long-term viability of PowerElectronics for Renewable Energy this book brings together thestate of the art knowledge and cutting-edge techniques in variousstages of research. The topics included are not currentlyavailable for practicing professionals and aim to enable the readerto directly apply the knowledge gained to their designs. The bookaddresses the practical issues of current and future electric andplug-in hybrid electric vehicles (PHEVs), and focuses primarily onpower electronics and motor drives based solutions for electricvehicle (EV) technologies. Propulsion system requirements and motorsizing for EVs is discussed, along with practical system sizingexamples. Key EV battery technologies are explained as well ascorresponding battery management issues. PHEV power systemarchitectures and advanced power electronics intensive charginginfrastructures for EVs and PHEVs are detailed. EV/PHEV interfacewith renewable energy is described, with practical examples. Thisbook explores new topics for further research needed world-wide,and defines existing challenges, concerns, and selected problemsthat comply with international trends, standards, and programs forelectric power conversion, distribution, and sustainable energydevelopment. It will lead to the advancement of the currentstate-of-the art applications of power electronics for renewableenergy, transportation, and industrial applications and will helpadd experience in the various industries and academia about theenergy conversion technology and distributed energysources. Combines state of the art global expertise to present thelatest research on power electronics and its application intransportation, renewable energy and different industrialapplications Offers an overview of existing technology and future trends,with discussion and analysis of different types of converters andcontrol techniques (power converters, high performance powerdevices, power system, high performance control system and novelapplications) Systematic explanation to provide researchers with enoughbackground and understanding to go deeper in the topics covered inthe book
Equine Reproductive Physiology Breeding and Stud Management, 5th Edition provides a thorough grounding in equine reproductive anatomy and physiology and applies it to all aspects of breeding and stud management. This includes detailed coverage of the management of mares, stallions and foals, as well as stud management practicalities such as infertility, artificial insemination and advanced reproductive techniques. This textbook, which has been updated throughout with additional material and references, continues to provide an authoritative treatise on equine reproduction for students, practising veterinary surgeons and stud managers.
This book contains 19 chapters that discuss theoretical and applied andrology for domestic, zoo and wild animals. Topics include semen and its constituents; sperm production and harvest; determinants of sperm morphology; sperm preparation for fertilization; practical aspects of semen cryopreservation; evaluation of semen in the andrology laboratory; genetic aspects of male reproduction; emerging techniques and future development of semen evaluation and handling and applied andrology in cats, dogs, fowls, turkeys, sheep, goats, cervids, horses, cattle, zebu, buffaloes, pigs, camelids,

zoo animals and wild animals. It will be of use for those teaching animal physiology at a tertiary level and a reference for those interested in male animal reproductive evaluation, performance and in semen evaluation, handling and use for artificial breeding.