



[Book] Human Reproductive Biology

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Human Reproductive Biology-Richard E. Jones 2006-05-15 This acclaimed text has been fully revised and updated, now incorporating issues including aging of the reproductive system, and updates on the chapters on conception and Gamete Transport and Fertilization, and Pregnancy. Human Reproductive Biology, Third Edition emphasizes the biological and biomedical aspects of human reproduction, explains advances in reproductive science and discusses the choices and concerns of today. Generously illustrated in full color, the text provides current information about human reproductive anatomy and physiology. The ideal book for courses on human reproductive biology - includes chapter introductions, sidebars on related topics of interest, chapter summaries and suggestions for further reading. All material competely updated with the latest research results, methods, and topics now organized to facilitate logical presentation of topics New chapters on Reproductive Senescence, Conception: Gamete Transport, Fertilization, Pregnancy: Maternal Aspects and Pregnancy: Fetal Development Full color illustrations

Human Reproductive Biology-Richard E. Jones 2013-09-28 The fourth edition of Human Reproductive Biology—winner of a 2015 Textbook Excellence Award (Texty) from The Text and Academic Authors Association—emphasizes the biological and biomedical aspects of human reproduction, explains advances in reproductive science and discusses the choices and concerns of today. Generously illustrated in full color, the text provides current information about human reproductive anatomy and physiology. This expansive text covers the full range of topics in human reproduction, from the biology of male and female systems to conception, pregnancy, labor and birth. It goes on to cover issues in fertility and its control, population growth and family planning, induced abortion and sexually transmitted diseases. This is the ideal book for courses on human reproductive biology, with chapter introductions, sidebars on related topics, chapter summaries and suggestions for further reading. Winner of a 2015 Texty Award from the Text and Academic Authors Association Beautifully redrawn full-color illustrations complement completely updated material with the latest research results, and clear, logical presentation of topics Covers the basic science of reproduction—endocrinology, anatomy, physiology, development, function and senescence of the reproductive system—as well as applied aspects including contraception, infertility and diseases of the reproductive system New companion website features full-color illustrations as PowerPoint and jpeg files for both professors and students to use for study and presentations

Human Reproductive Biology-Mark M. Jones 2012-12-02 Human Reproductive Biology focuses on the processes, concerns, and trends in human reproduction. Divided into four parts with 19 chapters, the book starts by tracing the history of human reproduction biology and the questions and choices involved. The first part focuses on the male and female reproductive systems. The text notes the different organs involved in reproduction, including the penis, scrotum, vagina, oviducts, and mammary glands. The book discusses sexual development and differentiation, particularly noting the variance of sex ducts and glands, external genitalia, and disorders of sexual development and determination. The text also looks at puberty. Concerns include gonadal changes from birth to puberty; mechanisms that influence puberty; and puberty and psychosocial adjustment. The second part deals with menstrual cycle, fertilization, pregnancy, labor, and birth. Some of the concerns include length of menstrual cycle; absence of menstruation; transport of sperm and ovum in the oviduct; and semen release. The text also highlights labor and birthing processes as well as the relationship of neonates and parents. The third part looks at the medical aspects of human reproduction, infertility, and sexually transmitted diseases. Concerns include contraception, abortion, herpes genitalis, and vaginitis. The text folds with discussions on human sexual behavior, population growth, and family planning. Concerns include sexual dysfunction; the effects of overpopulation; and population control. The book is a vital source of data for readers interested in human reproduction.

How We Do It-Robert Martin 2013-06-11 A primatologist explores the mystery of the origins of human reproduction, explaining that understanding the evolutionary past can provide insight into what worked, what didn't, and what it all means for the future of mankind.

Human Reproductive Biology-Richard Evan Jones 1997 The fourth edition of Human Reproductive Biology emphasizes the biological and biomedical aspects of human reproduction, explains advances in reproductive science and discusses the choices and concerns of today. Generously illustrated in full color, the text provides current information about human reproductive anatomy and physiology. This expansive text covers the full range of topics in human reproduction, from the biology of male and female systems to conception, pregnancy, labor and birth. It goes on to cover issues in fertility and its control, population growth and family planning, induced abortion and sexually transmitted diseases. This is the ideal book for courses on human reproductive biology, with chapter introductions, sidebars on related topics, chapter summaries and suggestions for further reading. Beautifully redrawn full-color illustrations complement completely updated material with the latest research results, and clear, logical presentation of topics Covers the basic science of reproduction - endocrinology, anatomy, physiology, development, function and senescence of the reproductive system - as well as applied aspects including contraception, infertility and diseases of the reproductive system New companion website features full-color illustrations as PPT and jpeg files for both professors and students to use for study and presentations.

Textbook of Human Reproductive Genetics-Karen Sermon 2014-04-10 This book brings together genetics, reproductive biology and medicine for an integrative view of the emerging specialism of reproductive genetics.

Human Reproductive Genetics-Juan A. Garcia-Velasco 2020-04-19 Human Reproductive Genetics: Emerging Technologies and Clinical Applications presents a great reference for clinicians and researchers in reproductive medicine. Part I includes a brief background of genetics and epigenetics, probability of disease, and the different techniques that are being used today for analysis and genetic counseling. Part II focuses on the analysis of the embryo, current controversies and future concepts. Part III comprises different clinical scenarios that clinicians frequently face in practice. The increasing amount of genetic tests available and the growing information that patients handle makes this section a relevant part of the fertility treatment discussion. Finally, Part IV concludes with the psychological aspects of genetic counseling and the role of counselor and bioethics in human reproduction. Provides an essential reference for clinicians involved in reproductive medicine Builds foundational knowledge on new genetic tests coming into the clinical scenario for physicians involved with patients Assembles critically evaluated chapters that cover basic concepts of genetics and epigenetics and the techniques involved, including preimplantation genetic testing, controversies, and more

Human Reproductive Biology-Francisco Armstrong 2019-06-27 The branch of biology which includes the study of reproduction, reproductive systems, sexual development, sexual maturity, endocrinology and fertility is known as reproductive biology. Human reproductive biology is mainly controlled through the hormones. They are responsible for the growth and maturation of the human reproductive structures as they send signals to the body. The female reproductive system and the male reproductive system are the two main components of human reproductive biology. The female reproductive system consists of the ovaries, oviducts, vagina, uterus and mammary glands, whereas, the male reproductive system consists of the sex accessory glands, testes, sex accessory ducts and external genitalia. The topics included in this book on human reproductive biology are of utmost significance and bound to provide incredible insights to readers. It studies, analyzes and upholds the pillars of human reproductive biology and its utmost significance in modern times. Students, researchers, experts and all associated with human reproductive biology will benefit alike from this book.

Reproductive Biology of the Great Apes-Charles Graham 2012-12-02 Reproductive Biology of the Great Apes: Comparative and Biomedical Perspectives discusses the great ape reproduction. The book opens with the menstrual cycle of apes as a good foundation for the subject areas that follow. Accordingly, Chapter 2 focuses on the endocrine changes during the stage of pregnancy among apes, specifically the hormonal changes in chimpanzee. Chapter 3 deals mainly on the condition postpartum amenorrhea. In Chapter 4, the reproductive and endocrine development - from fetal development, infancy, juvenile, to puberty - is discussed. Chapters 5 and 6

thoroughly discuss the female and male ape’s genital tract and their secretions. The sole topic of Chapter 7 deals mainly with the comparative aspects of ape steroid hormone metabolism. Meanwhile, Chapter 8 tackles laboratory research on apes’ sexual behavior. The succeeding chapters talk about the chimpanzee, gorilla, and orangutan reproduction in the wild. Chapters 12 and 13 basically look upon the behaviors of the great apes, specifically intermale competition and sexual selection. The next chapters (14 and 15) look at the necessity of breeding and managing apes in captivity to ensure their continued survival. Lastly, Chapter 16 highlights the significance and great value of apes as models and comparative study in human reproduction. This book will be of great use to human physiologists, comparative anatomists and zoologists, primatologists, ape breeders, and biomedical scientists.

Human Reproductive and Prenatal Genetics-Peter C. K. Leung 2018-08-28 Human Reproductive and Prenatal Genetics presents the latest material from a detailed molecular, cellular and translational perspective. Considering its timeliness and potential international impact, this all-inclusive and authoritative work is ideal for researchers, students, and clinicians worldwide. Currently, there are no comprehensive books covering the field of human reproductive and prenatal genetics. As such, this book aims to be among the largest and most useful references available. Features chapter contributions from leading international scientists and clinicians Provides in-depth coverage of key topics in human reproductive and prenatal genetics, including genetic controls, fertilization and implantation, in vitro culture of the human embryo for the study of post-implantation development, and more Identifies how researchers and clinicians can implement the latest genetic, epigenetic, and -omics based approaches

The End of Sex and the Future of Human Reproduction-Henry T. Greely 2016-05-30 Within twenty, maybe forty, years most people in developed countries will stop having sex for the purpose of reproduction. Instead, prospective parents will be told as much as they wish to know about the genetic makeup of dozens of embryos, and they will pick one or two for implantation, gestation, and birth. And it will be safe, lawful, and free. In this work of prophetic scholarship, Henry T. Greely explains the revolutionary biological technologies that make this future a seeming inevitability and sets out the deep ethical and legal challenges humanity faces as a result. “Readers looking for a more in-depth analysis of human genome modifications and reproductive technologies and their legal and ethical implications should strongly consider picking up Greely’s The End of Sex and the Future of Human Reproduction...[It has] the potential to empower readers to make informed decisions about the implementation of advancements in genetics technologies.” —Dov Greenbaum, Science “[Greely] provides an extraordinarily sophisticated analysis of the practical, political, legal, and ethical implications of the new world of human reproduction. His book is a model of highly informed, rigorous, thought-provoking speculation about an immensely important topic.” —Glenn C. Altschuler, Psychology Today

The Triumph of the Embryo-Lewis Wolpert 2008 “This is a clear and engagingly written book,” declared Nature, “recommended certainly to nonspecialists, but also to developmental biologists.” Its exploration of how single cells multiply and develop offers an accessible look at a difficult subject. Easy-to-understand descriptions of experimental studies offer fascinating insights into aging, cancer, regeneration, and evolution. 1993 edition.

Reproductive Ecology and Human Evolution-Peter T. Ellison 2017-09-04 The study of human reproductive ecology represents an important new development in human evolutionary biology. Its focus is on the physiology of human reproduction and evidence of adaptation, and hence the action of natural selection, in that domain. But at the same time the study of human reproductive ecology provides an important perspective on the historical process of human evolution, a lens through which we may view the forces that have shaped us as a species. In the end, all actions of natural selection can be reduced to variation in the reproductive success of individuals. Peter Ellison is one of the pioneers in the fast growing area of reproductive ecology. He has collected for this volume the research of thirty-one of the most active and influential scientists in the field. Thanks to recent noninvasive techniques, these contributors can present direct empirical data on the effect of a broad array of ecological, behavioral, and constitutional variables on the reproductive processes of humans as well as wild primates. Because biological evolution is cumulative, however, organisms in the present must be viewed as products of the selective forces of past environments. The study of adaptation thus often involves inferences about formative ecological relationships that may no longer exist, or not in the same form. Making such inferences depends on carefully weighing a broad range of evidence drawn from studies of contemporary ecological variation, comparative studies of related taxonomies, and paleontological and genetic evidence of evolutionary history. The result of this inquiry sheds light not only on the functional aspects of an organism's contemporary biology but also on its evolutionary history and the selective forces that have shaped it through time. Encompassing a range of viewpoints--controversy along with consensus--this far-ranging collection offers an indispensable guide for courses in biological anthropology, human biology, and primatology, along with

Reproduction and Adaptation-C. G. Nicholas Mascie-Taylor 2011-01-13 In the space of one generation major changes have begun to take place in the field of human reproduction. A rapid increase in the control of fertility and the understanding and treatment of sexual health issues have been accompanied by an emerging threat to reproductive function linked to increasing environmental pollution and dramatic changes in lifestyle. Organised around four key themes, this book provides a valuable review of some of the most important recent findings in human reproductive ecology. Major topics include the impact of the environment on reproduction, the role of physical activity and energetics in regulating reproduction, sexual maturation and ovulation assessment and demographic, health and family planning issues. Both theoretical and practical issues are covered, including the evolution and importance of the menopause and the various statistical methods by which researchers can analyse characteristics of the menstrual cycle in field studies.

Mammalian Endocrinology and Male Reproductive Biology-Shio Kumar Singh 2015-09-04 Mammalian Endocrinology and Male Reproductive Biology provides comprehensive and current coverage of the area of endocrinology and male reproductive biology, covering not just humans, but mammals in general. Written by international experts in their respective fields, this multi-author book also covers the latest developments in genomics of androgen action and male infertility. The book begins by covering sexual dimorphism in the central nervous system; structure, control of secretion and function of GnRH; and gonadotropins of pituitary origin and their role in gonadal functions. This is followed by an account of hormonal regulation of spermatogenesis, and the role of apoptosis in this process. Subsequent chapters center around epididymis, regulation of growth and function, and sperm motility regulation. The last chapters in the book discuss the structure and function of male accessory sex glands with associated pathologies as well as recent updates in male contraception, mechanism of androgen action, and genomics of male infertility. Wherever necessary, tables and figures have been added for a better understanding. Each chapter is appropriately referenced and contains current information on the latest developments in the field.

Scientific and Medical Aspects of Human Reproductive Cloning-National Research Council 2002-06-17 Human reproductive cloning is an assisted reproductive technology that would be carried out with the goal of creating a newborn genetically identical to another human being. It is currently the subject of much debate around the world, involving a variety of ethical, religious, societal, scientific, and medical issues. Scientific and Medical Aspects of Human Reproductive Cloning considers the scientific and medical sides of this issue, plus ethical issues that pertain to human-subjects research. Based on experience with reproductive cloning in animals, the report concludes that human reproductive cloning would be dangerous for the woman, fetus, and newborn, and is likely to fail. The study panel did not address the issue of whether human reproductive cloning, even if it were found to be medically safe, would be acceptable to individuals or society.

Hormones and Reproduction of Vertebrates-David O. Norris 2010-11-25 This series of volumes represents a comprehensive and integrated treatment of reproduction in vertebrates from fishes of all sorts through mammals. It is designed to provide a readable, coordinated description of reproductive basics in each group of vertebrates as well as an introduction to the latest trends in reproductive research and our understanding of reproductive events. Whereas each chapter and each volume is intended to stand alone as a review of that topic or vertebrate

group, respectively, the volumes are prepared so as to provide a thorough topical treatment across the vertebrates. Terminology has been standardized across the volumes to reduce confusion where multiple names exist in the literature, and a comprehensive glossary of these terms and their alternative names is provided. A complete, essential and up to date reference for research scientists working on vertebrate hormones and reproduction - and on animals as models in human reproductive research Covers the endocrinology, neuroendocrinology, physiology, behaviour and anatomy of vertebrate reproduction Structured coverage of the major themes for all five vertebrate groups allows a consistent treatment for all Special chapters elaborate on features specific to individual vertebrate groups and to comparative aspects, similarities and differences between them

Kisspeptin Signaling in Reproductive Biology-Alexander S. Kauffman 2013-04-02 Kisspeptin has been shown to be both necessary and sufficient for activation of the reproductive axis, during puberty and later in adulthood. This makes kisspeptin a fundamental component of the reproductive axis. Kisspeptin has been deemed the single most potent stimulator of GnRH neurons yet known. The importance of kisspeptin has been documented in humans as well as non-human animal models, ranging from monkeys, sheep, and rodents to numerous fish species, thus signifying a highly conserved nature of its reproductive function. Importantly, kisspeptin neurons seem to mediate many of the regulatory effects of other signals, whether they are metabolic, circadian, hormonal, or stress. This places kisspeptin neurons in a unique position to be key nodal points and conduits for conveying numerous endogenous and exogenous signals to the reproductive axis.

Encyclopedia of Reproduction- 2018-06-29 Encyclopedia of Reproduction, Second Edition comprehensively reviews biology and abnormalities, also covering the most common diseases in humans, such as prostate and breast cancer, as well as normal developmental biology, including embryogenesis, gestation, birth and puberty. Each article provides a comprehensive overview of the selected topic to inform a broad spectrum of readers, from advanced undergraduate students, to research professionals. Chapters also explore the latest advances in cloning, stem cells, endocrinology, clinical reproductive medicine and genomics. As reproductive health is a fundamental component of an individual's overall health status and a central determinant of quality of life, this book provides the most extensive and authoritative reference within the field. Provides a one-stop shop for information on reproduction that is not available elsewhere Includes extensive coverage of the full range of topics, from basic, to clinical considerations, including evolutionary advances in molecular, cellular, developmental and clinical sciences Includes multimedia and interactive teaching tools, such as downloadable PowerPoint slides, video content and interactive elements, such as the Virtual Microscope

Reproductomics-José A. Horcajadas 2018-07-23 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

Human Reproductive Behaviour-Laura Betzig 1988-03-31

Exploring the Biological Contributions to Human Health-Institute of Medicine 2001-07-02 It's obvious why only men develop prostate cancer and why only women get ovarian cancer. But it is not obvious why women are more likely to recover language ability after a stroke than men or why women are more apt to develop autoimmune diseases such as lupus. Sex differences in health throughout the lifespan have been documented. Exploring the Biological Contributions to Human Health begins to snap the pieces of the puzzle into place so that this knowledge can be used to improve health for both sexes. From behavior and cognition to metabolism and response to chemicals and infectious organisms, this book explores the health impact of sex (being male or female, according to reproductive organs and chromosomes) and gender (one's sense of self as male or female in society). Exploring the Biological Contributions to Human Health discusses basic biochemical differences in the cells of males and females and health variability between the sexes from conception throughout life. The book identifies key research needs and opportunities and addresses barriers to research. Exploring the Biological Contributions to Human Health will be important to health policy makers, basic, applied, and clinical researchers, educators, providers, and journalists-while being very accessible to interested lay readers.

Concepts of Biology-Samantha Fowler 2018-01-07 Concepts of Biology is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives. Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons, Concepts of Biology is grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at hand. We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Knobil and Neill's Physiology of Reproduction-Tony M. Plant 2014-11-15 The Fourth Edition of Knobil & Neill continues to serve as a reference aid for research, to provide the historical context to current research, and most importantly as an aid for graduate teaching on a broad range of topics in human and comparative reproduction. In the decade since the publication of the last edition, the study of reproductive physiology has undergone monumental changes. Chief among these advances are in the areas of stem cell development, signaling pathways, the role of inflammation in the regulatory processes in the various tissues, and the integration of new animal models which have led to a greater understanding of human disease. The new edition synthesizes all of this new information at the molecular, cellular, and organismal levels of organization and present modern physiology a more understandable and comparative context. The Fourth Edition has been extensively revised, reflecting new fundamental advancements in this rapidly advancing field. Provides a common language for researchers across the fields of physiology, endocrinology, and biology to discuss their understanding of reproduction. Saves academic researchers time in quickly accessing the very latest details on reproductive physiology, as opposed to searching through thousands of journal articles.

Exam Prep for: Human Reproductive Biology-

Development and Reproduction in Humans and Animal Model Species-Werner A. Mueller 2015-01-03 This book describes human development including sexual reproduction and stem cell research with the development of model organisms that are accessible to genetic and experimental analysis in readily understandable texts and 315 multi-colored graphics. The introductory account of model organisms selected from the entire animal kingdom presents general principles, which are then outlined in subsequent chapters devoted to, for example, sexual development; genes controlling development and their contemporary molecular-analysis methods; production of clones and transgenic animals; development of the nervous and circulatory systems; regenerative medicine and ageing. Finally the evolution of developmental toolkits and novelties is discussed including the genetic basis of the enlargement of the human forebrain. Separate boxes are devoted to controversial questions such as the benefits and problems of prenatal diagnostics or the construction of ancient body plans.

Human Reproductive Biology-Sylvia S. Mader 1992

Endocrinology and Reproductive Biology-

Bioenvironmental Issues Affecting Men's Reproductive and Sexual Health-Suresh C Sikka 2017-11-14 Bioenvironmental Issues Affecting Men's Reproductive and Sexual Health is structured into two parts related to men's reproductive and sexual health with eight sections designed to enable a logical flow of such knowledge. The book is focused on the biology of key organs involved in male reproduction and the environmental influences affecting their functions with particular emphasis on clinical aspects. Individual chapters within the book range from basic to translational aspects, but all hold clinical relevance. This is an essential reference for those working and learning in the field of human reproduction, reproductive toxicology and environmental influences on reproductive and sexual health. Brings together the leading authorities working in the field of male reproduction and sexual health and how the environment affects these issues. Provides guidelines and reference values of various reproductive hormones, semen parameters, inclusion/exclusion criteria for clinical trials. Discover the most efficient methods by which to design clinical protocols for sperm safety studies and reproductive toxicology trials.

Plant Physiology-Philip Stewart 2011-12-15 The field of plant physiology includes the study of all chemical and physical processes of plants, from the molecular-level interactions of photosynthesis and the diffusion of water, minerals, and nutrients within the plant, to the larger-scale processes of plant growth, dormancy and reproduction. This new book covers a broad array of topics within the field. Plant Physiology focuses on the study of the internal activities of plants, including research into the molecular interactions of photosynthesis and the internal diffusion of water, minerals, and nutrients. Also included are investigations into the processes of plant development, seasonality, dormancy, and reproductive control. The chapters focus on various aspects of plant physiology, including phytochemistry; interactions within a plant between cells, tissues, and organs; ways in which plants regulate their internal functions; and how plants respond to conditions and variations within the environment. Given the environmental crises brought about by pollution and climate change, this is a particularly vital area of study, since stress from water loss, changes in air chemistry, or crowding by other plants can lead to changes in the way a plant function. Readers of this book will gain the information they need to stay current with the latest research being done in this essential field of study.

Human Reproductive Biology-Hing-Sing Yu 1994-03-22 This book covers most aspects of human reproductive biology, including basic reproductive anatomy and physiology, neuroendocrinology, environmental issues in reproductive toxicology, impact and ethics of fertility control, sexual behavior, and human sexuality. Selected important issues are discussed in detail throughout the twelve chapters, with information in such areas as gene regulation and molecular biology techniques. Recent controversies associated with AIDS, homosexuality, and RU486 are reviewed with the latest findings. With elaborated diagrammatic illustrations, Human Reproductive Biology is an excellent textbook for advanced courses. These diagrams are powerful teaching tools for instructors in helping students to understand and integrate the presented concepts. The book is also designed to be used as a quick reference on this subject.

Biology for AP® Courses-Julianne Zedalis 2017-10-16 Biology for AP® courses covers the scope and sequence requirements of a typical two-semester Advanced Placement® biology course. The text provides comprehensive coverage of foundational research and core biology concepts through an evolutionary lens. Biology for AP® Courses was designed to meet and exceed the requirements of the College Board's AP® Biology framework while allowing significant flexibility for instructors. Each section of the book includes an introduction based on the AP® curriculum and includes rich features that engage students in scientific practice and AP® test preparation; it also highlights careers and research opportunities in biological sciences.

Reproductive Sciences in Animal Conservation-Pierre Comizzoli 2019-08-30 This second edition emphasizes the environmental impact on reproduction, with updated chapters throughout as well as complete new chapters on species such as sharks and rays. This is a wide-ranging book that will be of relevance to anyone involved in species conservation, and provides critical perspectives on the real utility of current and emerging reproductive sciences. Understanding reproductive biology is centrally important to the way many of the world's conservation problems should be tackled. Currently the extinction problem is huge, with up to 30% of the world's fauna being expected to disappear in the next 50 years. Nevertheless, it has been estimated that the global population of animals in zoos encompasses 12,000 - 15,000 species, and we anticipate that every effort will be made to preserve these species for as long as possible, minimizing inbreeding effects and providing the best welfare standards available. Even if the reproductive biology community cannot solve the global biodiversity crisis for all wild species, we should do our best to maintain important captive populations. Reproductive biology in this context is much more than the development of techniques for helping with too little or too much breeding. While some of the relevant techniques are useful for individual species that society might target for a variety of reasons, whether nationalistic, cultural or practical, technical developments have to be backed up by thorough biological understanding of the background behind the problems.

Clinical Reproductive Science-Michael Carroll 2018-06-19 The comprehensive and authoritative guide to clinical reproductive science The field of clinical reproductive science continues to evolve; this important resource offers the basics of reproductive biology as well as the most recent advance in clinical embryology. The author - a noted expert in the field - focuses on the discipline and covers all aspects of this field. The text explores causes of male and female infertility and includes information on patient consultation and assessment, gamete retrieval and preparation, embryo culture, embryo transfer and cryopreservation. Comprehensive in scope, the text contains an introduction to the field of clinical reproductive science and a review of assisted reproductive technology. The author includes information on a wide range of topics such as gonadal development, the regulation of meiotic cell cycle, the biology of sperm and spermatogenesis, in vitro culture, embryo transfer techniques, fundamentals of fertilisation, oocyte activation and much more. This important resource: Offers an accessible guide to the most current research and techniques to the science of clinical reproduction Covers the fundamental elements of reproductive science Includes information on male and the female reproductive basics - everything from sexual differentiation to foetal development and parturition Explores the long-term health of children conceived through IVF Contains the newest developments in assisted reproductive technology Clinical Reproductive Science is a valuable reference written for professionals in academia, research and clinical professionals working in the field of reproductive science, clinical embryology and reproductive medicine.

Reproductive Biology of the Crocodylia-Valentine Lance 2020-11-01 Reproductive Biology of the Crocodylia is based on over 40 years of research on global crocodiles, alligators, and caimans. It brings together data and information previously scattered across publications to synthesize knowledge of the history, ecology, physiology, and anatomy as it relates to the reproductive biology of crocodylians. The book begins with a deep look into the evolutionary history of Crocodylia species, dating back to some of the first research conducted in Ancient Egypt, and provides a comprehensive look at the physiology, current taxonomy, ecology, and sexual maturity factors of these reptiles. It then delves into detail regarding the anatomy and the cycles of both male and female reproduction systems, including nesting and incubation, temperature-dependent sex determination, and sex ratios across various species populations. This book also focuses on conservation efforts to protect the reproductive cycle of the Crocodylia, taking factors such as pollution, climate change, and human disruption into consideration. Reproductive Biology of the Crocodylia is the ideal resource for wildlife biologists and herpetologists seeking up-to-date and thorough research data on Crocodylia conservation efforts. This book is also helpful for exotic animal veterinarians, zookeepers, and alligator or crocodile farmers. Focuses on crocodylian reproduction and how it is impacted by seasons, social interactions, pollution, and more Provides a thorough overview by a globally-recognized expert on crocodylia reproduction and endocrinology Explores conservation efforts and offers insight for protecting crocodylian reproduction cycles against current factors, including pollution, environmental effects, and human interference

Human Embryos and Preimplantation Genetic Technologies-E. Scott Sills 2019-05-01 Human Embryos and Preimplantation Genetic Technologies: Ethical, Social, and Public Policy Aspects presents the first holistic analysis of PGD and PGS as it is practiced and regulated worldwide. In addition to scientific and technical aspects, the book provides perspectives on the ethical, legal, religious, policy and social implications of global assisted reproduction technologies, including in Africa, Asia, Europe, North and South America, and Australia. Chapters cover history, ethics, feminism, family dynamics, psychological and interpersonal factors, the current state of PGD and PGS in 20 different sovereign nations and religious communities, and provide an analysis of public policy concerns and future directions. Provides an in-depth discussion of PGD and PGS as practiced and regulated worldwide Offers an accessible resource for researchers, medical professionals, patients, regulators and policymakers seeking expert opinions on PGS and PGD Contains chapters contributed by international clinicians, researchers and thought leaders in the field of assisted reproductive technology

Biology 2e-Mary Ann Clark 2018 Biology 2e (2nd edition) is designed to cover the scope and sequence requirements of a typical two-semester biology course for science majors. The text provides comprehensive

coverage of foundational research and core biology concepts through an evolutionary lens. Biology includes rich features that engage students in scientific inquiry, highlight careers in the biological sciences, and offer everyday applications. The book also includes various types of practice and homework questions that help students understand -- and apply -- key concepts. The 2nd edition has been revised to incorporate clearer, more current, and more dynamic explanations, while maintaining the same organization as the first edition. Art and illustrations have been substantially improved, and the textbook features additional assessments and related resources.

Reproductive Sciences in Animal Conservation-William V. Holt 2014-08-04 Reproductive biology is more than the development of techniques for helping with too little or too much breeding. While some of the relevant techniques are useful for individual species, technical developments have to be backed up by thorough biological understanding of the background behind the problems. This book is therefore threefold; (1) it provides a snapshot of the state of the art in terms of species-specific reproductive technologies, whether for individual animals or whole taxonomic groups; (2) it sets the reproductive problems in context and emphasizes the links between animal-based problems and the wider world, e.g. reproductive fitness and (3) it looks forward and presents realistic assessments of how effective some of the more recently developed techniques in reproductive technology might be at combating extinctions. This is a wide-ranging book that will be relevant to anyone involved in reproductive biology or in species conservation and provides provide them some useful perspectives about the real utility of current and emerging technologies. It has contributions from experts in reproduction and related fields.

Renin-Angiotensin System-Anna Tolekova 2017-07-12 Exploring the contractile activity of smooth muscle segments isolated from various organs of healthy animals and animals with experimentally induced diabetes, she

obtained original data about angiotensin II-induced force and time parameters. For the first time, she established the effect of ghrelin on angiotensin II-provoked contraction of the urinary bladder. Original data on the role of both types of angiotensin receptors for the contractile activity of the various segments of the gastrointestinal tract and bladder were obtained. By applying specific software for force and time parameter analysis, the contribution of different types of angiotensin receptors on muscle contractility has been shown. The new methodology was used to analyze the data obtained during the registration of smooth muscle relaxation activity, which allows the determination of not only the magnitude of the mechanical response but also the parameters related to the time and speed of the contractions. Plasma renin activity models have been developed using mathematical approaches to predict the effect of different drug doses on the behavior of the system.

Reproductive Toxicology, Third Edition-Robert W. Kapp 2016-04-19 Thoroughly examining the popular and expanding field of reproductive toxicology, this newly revised and expanded third edition provides the latest, cutting-edge scientific developments in this constantly evolving discipline. Reproductive Toxicology's contributors are experienced regulatory agency and Clinical Research Organization representatives who currently utilize the new techniques discussed in the text and continue to revolutionize reproductive toxicology research. This groundbreaking resource includes: New and important critical mechanistic topics such as epigenetics and omics The first significant compilation of epigenetic mechanisms An in-depth analysis of the role of genomics, proteomics, and metabolomics in human reproduction New guidelines with respect to the latest research applications in the field