Sperm Chromatin For The Researcher A Practical Guide

New Cell Apoptosis ResearchA Clinician's Guide to Sperm DNA and Chromatin DamageAir Pollution Research AdvancesThe Indian Journal of Medical ResearchPaternal Influences on Human Reproductive SuccessResearch in Progress, FY 1992Research Grants IndexReproductomicsGamete ResearchResearch ReportFlow CytometryResearch Awards IndexAnnual Report - National Dairy Research InstituteAdvances in Male Mediated Developmental ToxicityMale Infertility: Understanding, Causes and TreatmentNew Discoveries in EmbryologyThe Sperm CellJournal of Cancer ResearchReactive Oxygen Species (ROS) in Living CellsIllinois ResearchOxidative Stress in Human ReproductionThe Journal of NIH ResearchSpermatozoaSouth Dakota Farm & Home ResearchChromatin and Chromosomal Protein ResearchAndrological Evaluation of Male InfertilityGenetics of Human InfertilityPopulation and Reproduction Research AbstractsThe Genetics of Male InfertilityIndonesian Agricultural Research & Development JournalArchives of Medical ResearchSperm ChromatinSperm Chromatin for the ResearcherGenetics of Male InfertilityInstitutional Research & DevelopmentDirectory of Graduate ResearchGenomic ImprintingOxidants, Antioxidants, and Impact of the Oxidative Status in Male ReproductionFamily Planning and Population Research, 1970Scientific Report - Institute for Cancer Research and the Lankenau Hospital Research Institute

New Cell Apoptosis Research

A Clinician's Guide to Sperm DNA and Chromatin Damage

Air Pollution Research Advances

The Indian Journal of Medical Research

Oxidants, Antioxidants and Impact of the Oxidative Status in Male Reproduction is an essential reference for fertility practitioners and research and laboratory professionals interested in learning about the role of reactive oxygen species in sperm physiology and pathology. The book focuses on unravelling the pathophysiology of oxidative stress mediated male infertility, recruiting top researchers and clinicians to contribute chapters. This collection of expertise delves into the physico-chemical aspects of oxidative stress, including a new focus on reductive stress. Furthermore, the inclusion of clinical techniques to determine oxidative stress and the OMICS of reductive oxidative stress are also included. This is a must-have reference in the area of oxidative stress and male reproductive function. Offers comprehensive information on oxidative stress and its role in male reproduction, including new therapeutic approaches Deals with current approaches to oxidative stress using OMICS platform□/li> Designed for fertility practitioners, reproductive researchers, and laboratory professionals interested in learning about the role of reactive oxygen species in sperm physiology and pathology

Paternal Influences on Human Reproductive Success

Faculties, publications and doctoral theses in departments or divisions of chemistry, chemical engineering, biochemistry and pharmaceutical and/or medicinal chemistry at universities in the United States and Canada.

Research in Progress, FY 1992

Research Grants Index

Reproductomics

Flow cytometry - Select Topics is a collection of chapters that illustrate the constantly evolving application of flow cytometry to diverse areas of research or clinical investigations. It includes chapters on the utilization of flow cytometry in the fields of human reproduction and fertility, platelet function, apoptosis, inflammation research, leukemia immunophenotyping, and transplantation.

Gamete Research

In this book, twenty-one researchers and clinicians review the study of the genetics of male infertility, the tools available in the laboratory and clinic, the current state of knowledge, and the future of research and translation into clinical diagnostics and treatments. New tools discussed are discussed. This book therefore serves as a guide to evidence-based clinical applications, and a preview of future possibilities.

Research Report

Flow Cytometry

Animal individual life begins as combination of sperm and oocyte, which results in the embryogenesis from ovum fertilization to fetal stage. Embryology has become one central discipline for many modern biotechnologies. Although this subject has been studied for more than a century, new discoveries appear continuously. This book contains some new discoveries and updates some theories and technologies in animal and human embryology. Major content include new findings in gamete biology, new theories and discoveries in embryo implantation by three-dimensional imaging technology and new concept and actual application of embryology. Thus, this book will greatly update knowledge in embryology field and provide some basic theories and technologies for animal scientists and breeders as well as embryologists and anthropologists.

Research Awards Index

Annual Report - National Dairy Research Institute

Originally published in 2006, this is a comprehensive and definitive account of the human male gamete. The volume summarizes many unique and revealing characteristics of the sperm cell.

It provides a detailed overview of human sperm production, maturation and function, and looks at how these processes affect and influence fertility, infertility and ART. The volume thus provides a detailed review of the most important research and developments, augmented with pertinent references. This book will appeal to all practitioners and scientists in reproductive medicine and in particular to clinical scientists, graduate and post-graduate scientists, and laboratory personnel.

Advances in Male Mediated Developmental Toxicity

Sperm DNA damage is common and has been associated with reduced rates of conception, impaired embryonic development and increased risk of miscarriage. Although the exact causes of sperm DNA damage are unknown, it is clear that infertile men possess substantially higher levels of sperm DNA damage than do fertile men. Written by leading, internationally renowned clinicians and basic scientists with expertise in sperm DNA, Sperm Chromatin: Biological and Clinical Applications in Male Infertility and Assisted Reproduction provides readers with a thoughtful and comprehensive review of the biological and clinical significance of sperm DNA damage. The work covers the fundamental principles of sperm chromatin architecture and function, the proposed modes of DNA damage and repair, the tests of sperm DNA damage, the clinical aspects of DNA damage and the impact of DNA damage on reproductive outcome. Unlike any other title on the topic, Sperm Chromatin: Biological and Clinical Applications in Male Infertility and Assisted Reproduction is an invaluable addition to the literature and will serve as an indispensable resource for basic scientists with an interest in sperm biology and for urologists, gynecologists, reproductive endocrinologists, and embryologists working in the field of infertility.

Male Infertility: Understanding, Causes and Treatment

New Discoveries in Embryology

Oxygen represents only 20% of the Earth's atmosphere, yet it is vital for the survival of aerobic organisms. There is a dark part of the use of oxygen that consists in generating reactive species that are potentially harmful to living organisms. Moreover, reactive oxygen species can combine with nitrogen derivatives and generate many other reactive species. Thus, living organisms are continuously assaulted by reactive species from external or internal sources. However, the real danger comes in the case of high concentrations and prolonged exposure to these species. This book presents an image of the mechanisms of action of reactive species and emphasizes their involvement in diseases. Inflammation and cancer are examined to determine when and how reactive species turn the evolution of a benign process to a malignant one. Some answers may come from recent studies indicating that reactive species are responsible for epigenetic changes.

The Sperm Cell

This book covers the latest research on male infertility. The topics discussed range from understanding the genetic basis of infertility, to its causes and treatment. Since infertility is also of great interest to the general public, the book also includes a detailed description of what infertility is and how one can understand the different types. Given the complex etiology of infertility, the book includes a number of chapters defining the known and probable causes of

male infertility. Providing detailed information suitable for patients and clinicians alike, it also features a separate section on treatment, the ultimate goal.

Journal of Cancer Research

Reactive Oxygen Species (ROS) in Living Cells

Illinois Research

Apoptosis is the regulated form of cell death. It is a complex process defined by a set of characteristic morphological and biochemical features that involves the active participation of affected cells in a self-destruction cascade. This programmed cell death plays a critical role in physiological functions such as cell deletion during embryonic development, balancing cell number in continuously renewing tissues and immune system development. Additionally, a dysregulation of apoptosis is underlying in numerous pathological situations such as Parkinson, Alzheimer's disease and cancer. A number of studies have pointed out an association between consumption of fruits and vegetables, and certain beverages such as tea and wine, which are rich in polyphenols, with reduced risk of chronic diseases, including cancer. Apoptosis is also the regulatory mechanism involved in the removal of unnecessary cells during development and in tissue homeostasis in a wide range of organisms from insects to mammals. The aim of this book is to provide new studies in the field of apoptosis research.

Oxidative Stress in Human Reproduction

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

The Journal of NIH Research

Infertility affects more than one in ten couples worldwide and is related to highly heterogeneous pathologies sometimes only discernible in the germ line. Its complex etiology often, but not always, includes genetic factors besides anatomical defects, immunological interference, and environmental aspects. Nearly 30% of infertility cases are probably caused only by genetic defects. Thereby experimental animal knockout models convincingly show that

infertility can be caused by single or multiple gene defects. Translating those basic research findings into clinical studies is challenging, leaving genetic causes for the vast majority of infertility patients unexplained. Nevertheless, a large number of candidate genes have been revealed by sophisticated molecular methods. This book provides a comprehensive overview on the subject of infertility written by the leading authorities in this field. It covers topics including basic biological, cytological, and molecular studies, as well as common and uncommon syndromes. It is a must-read for human geneticists, endocrinologists, epidemiologists, zoologists, and counsellors in human genetics, infertility, and assisted reproduction.

Spermatozoa

South Dakota Farm & Home 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.

Chromatin and Chromosomal Protein Research

This book discusses the role of oxidative stress in the reproductive system. The book reviews endogenous sources, methods of determining its levels in body fluid/tissues, the physiological roles of ROS, as well as its negative effects on the human reproductive processes. Also discussed are multiple extrinsic factors that could induce oxidative stress in the reproductive system. This volume covers various clinical pathologies related to the reproductive system that arise from or produce oxidative stress, both in the male and female. The use of antioxidants as a therapeutic measure to keep ROS levels in check are highlighted, describing the outcome of various clinical studies involving antioxidant supplementation in infertile patients. Infertility is a global disease that affects 15-25% of all couples, and oxidative stress arising from a multitude of sources has been implicated as one of the major contributing factors to the decline in human fertility. As such, this book provides an up-to-date review on the significance of ROS in human reproduction.

Andrological Evaluation of Male Infertility

Air pollution is a chemical, physical, or biological agent that modifies the natural characteristics of the atmosphere. Enforced air quality standards, like the Clean Air Act in the United States, have reduced the presence of some pollutants. This book presents research dealing with air pollution.

Genetics of Human Infertility

METHODS IN CELL BIOLOGY,VOLUME 18: CHROMATIN AND CHROMOSOMAL PROTEIN RESEARCH III.

Population and Reproduction Research Abstracts

The Genetics of Male Infertility

Historically, sperm have been seen as simply a mechanism of transferring a haploid set of chromosomes to the oocyte. However, data from assisted reproduction therapies (ART) have demonstrated that in many couples the sperm appears to be responsible for abnormal embryogenesis. Recent advances in genetic and epigenetic techniques have identified key mechanisms by which the sperm, and the DNA carried by the sperm, can affect early embryonic development. Paternal Influences on Human Reproductive Success examines the genetic and epigenetic influences on embryogenesis, as well as practical clinical factors related to the male contribution to reproductive success. It also provides 'cutting edge' data and analysis of recent evaluations of the role of advanced paternal age, environmental influences and lifestyle factors on male reproductive fitness, making this an invaluable text for physicians treating patients for infertility, recurrent pregnancy loss, and developmental anomalies, as well as basic scientists studying embryogenesis and spermatogenesis.

Indonesian Agricultural Research & Development Journal

This comprehensive, up-to-date text, which brings together the key practical elements of the rapidly evolving field of sperm DNA and chromatin abnormalities, is divided thematically into five main sections. Part I discusses human sperm chromatin structure and nuclear architecture, while part II presents laboratory evaluation of sperm DNA damage, including SCSA, SCD, TUNEL and Comet assays, and cytochemical tests. Biological and clinical factors in the etiology of sperm DNA damage are discussed in part III, including oxidative stress, abortive apoptosis, cancer, and environmental and lifestyle factors. Part IV presents clinical studies on the utility of sperm DNA damage tests, both with natural and ART-assisted pregnancies, and debates the clinical utility of such tests. Finally, part V discusses current treatment options, such as antioxidant therapy, varicocelectomy, advanced sperm processing techniques and the use of testicular sperm. We are now beginning to better understand the unique organization of the sperm chromatin, as well as the nature and etiology of sperm DNA damage. Written and edited by worldwide experts in andrology, A Clinician's Guide to Sperm DNA and Chromatin Damage is an excellent resource for reproductive medicine and REI specialists, urologists, reproductive biologists and any professional working with the infertile male.

Archives of Medical Research

Sperm Chromatin

Sperm Chromatin for the Researcher

Genetics of Male Infertility

This state-of-the-art laboratory manual includes 20 clinical protocols used daily for the investigation of the infertile male, presented with easy to understand, step-by-step methodology. The protocols are arranged from routine to advanced laboratory procedures common to clinical practice, including computer-assisted semen analysis, sperm preparation for IUI by density gradient and swim-up, sperm cryopreservation, and sperm DNA fragmentation test by TUNEL method, among others. The methodology in each protocol follows best practice guidelines made clearer by professionally hand-drawn illustrations covering most of the important steps and equipment. The authors, hailing from the world-renowned Andrology Center at Cleveland Clinic, have over 50 years of combined first-hand experience in managing very busy diagnostic and research facilities in male infertility and andrology. The book will be an indispensable resource for thousands of laboratory technologists, clinicians and reproductive professionals (andrologists, embryologist, etc.) engaged in the diagnosis and management of infertile men around the world.

Institutional Research & Development

Directory of Graduate Research

This unique, case-based guide provides a thoughtful and comprehensive overview of the genetic basis of male infertility for the practicing clinician. In addition to discussing the molecular foundations of sperm production and the consequences of genetic abnormalities on various stages of sperm development, it examines the clinical aspects of acknowledged genetic disorders and their implications on male fertility. In so doing, it offers the necessary tools required by the clinician for the diagnosis and treatment of infertile men with genetic abnormalities. Moreover, it provides essential algorithms that may aid in counseling patients in the clinic. The text is arranged in four thematic sections for easy reference. The genetic foundation of male reproduction is presented in part 1, including regulation of sperm production, the structure of sperm chromatin, and spermatogenesis. The impact of genetic abnormalities on male infertility is the subject of part 2, covering sperm defects, mitochondrial function and DNA fragmentation. The clinical case material in part 3 illustrates real-world examples of genetic etiologies and the current diagnostic and therapeutic strategies for conditions such as vas asplasia, cryptorchidism, immotile cilia syndrome, sperm aneuploidy and other challenging scenarios. Casting forward, the fourth and final section presents an overview of future possibilities for management of genetic causes of male infertility, including gene editing. Fully exploring the clinical context of these genetic conditions in a practical manner that appeals to the practicing clinician, Genetics of Male Infertility is an exciting and essential text for reproductive medicine specialists, andrologists, urologists, researchers and all other clinicians treating infertile patients.

Genomic Imprinting

It is nearly a decade since the first Male Mediated Developmental Toxicity conference was held in Pittsburgh. The continuing public/scientific interest, growing amounts of animal data, introduction of innovative technologies, and increasing quantity of human epidemiological studies all suggest that male-mediated developmental toxicity is of major concern. A number of researchers concluded that a Second International Confer ence on Male Mediated

Developmental Toxicity was necessary. The ensuing volume is particularly timely because it impacts on areas of special emphasis in many countries, with respect to children's and reproductive health, as well as to basic molecular mecha nisms of environmental insult, and genetic susceptibility and predisposition. The Programme and Local Organizing Committee, composed of Barbara Hales (Chair, McGill University), BernardRobaire (McGill University), Daniel G. Cyr (INRS/ Armand Frappier), Jacquetta M. Trasler (McGill University), Andrew F. Olshan (Uni versity of North Carolina), Sally Perreault Damey (US EPA), Donald R. Mattison (March of Dimes), and Jan M. Friedman (University of British Columbia), spent over two years identifying individuals who had made key contributions in this field over the past decade and planning various aspects of the meeting. The meeting was held in Montreal in June 2001. A total of 132 persons, coming from five continents and representing some 18countries, took an active role in the proceedings. The conference was considered by all attendees to be a rousing success. Important discussions were held in the four break-out sessions, with a preliminary set of recommendations for action being presented by each panel.

Oxidants, Antioxidants, and Impact of the Oxidative Status in Male Reproduction

The goal of this book is neither to provide a basic introduction to imprinting, nor to provide a comprehensive survey of the current state of the field. Rather, the book covers more recent advances, drawing attention to the emerging subtleties and complexities associated with imprinted genes. Genomic imprinting refers to a recently discovered phenomenon in which the expression pattern of an allele depends on whether that allele was inherited from the mother or the father.

Family Planning and Population Research, 1970

This concise, truncated version of Zini and Agarwal's Sperm Chromatin: Biological and Clinical Applications in Male Infertility and Assisted Reproduction offers select, research-oriented chapters for a handy, more affordable, state-of-the-art resource. Sperm Chromatin for the Researcher addresses such vital issues as: - Structure and function of human sperm chromatin - Biological determinants of sperm chromatin damage - Laboratory evaluation of sperm chromatin - Protocols to measure sperm chromatin damage Ideal for novice and experienced researchers alike, Sperm Chromatin for the Researcher contains all of the need-to-know information about these cutting-edge topics in reproductive medicine.

Scientific Report - Institute for Cancer Research and the Lankenau Hospital Research Institute

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