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Atlas of Human Sperm Morphology Evaluation-Thinus F. Kruger 2004-07-26 Sperm morphology evaluation by strict criteria is the gold-standard used by IVF and andrology units around the world. It is based on an approach to sperm morphology evaluation that utilizes optimal preparation methods, evaluation procedures, and criteria for a morphological normal spermatozoon based on biological evidence. Featuring fresh perspectives from the founders of the Tygerberg strict criteria, Atlas of Human Sperm Morphology Evaluation provides state-of-the-art information on crucial aspects of male factor infertility. The atlas consists of an introductory teaching manual that gives readers the ability to train and test their diagnostic capabilities and enables laboratories to implement quality control measures. Together with a team of internationally renowned experts in the field of human reproduction, the editors explore every avenue you need to know to successfully evaluate and manage male factor infertility. An accompanying interactive CD-ROM training program, STRICT 1-2-3® is available from the editors. STRICT 1-2-3® has been developed alongside the atlas to provide not only a complete theoretical background on sperm morphology, but also self-training facilities. Laboratory directors and technicians will now be able to set up their own internal quality control program for sperm morphology evaluation.

Atlas of Human Sperm Ultrastructural Morphology-Wei-Jie Zhu 2020-08-31 This atlas provides ultrastructural morphological images of human spermatozoa. Sperm morphology plays an essential role in sperm-oocyte interactions and early embryonic development, and human sperm ultrastructural morphology offers a valuable reference tool for assessing certain etiologies of male infertility and reproductive failure. However, the ultrastructural morphology of human sperm has not been systematically evaluated or thoroughly described in the literature. Using 470 original and unpublished images, the book shows various ultrastructural morphological phenotypes; defects of the sperm head, neck, middle piece, principal piece, and terminal piece; as well as artefacts of sperm ultrastructural morphology and phenomena related to inadequate preparation, demonstrating many sperm phenotypes and surface structural appearances for the first time. As such, it helps researchers and practitioners in andrology, reproductive medicine, and reproductive pathology gain a better understanding of human sperm ultrastructural morphology.

Atlas of Human Semen Examination-Donatella Paoli 2020-06-17 This atlas provides valuable information on crucial aspects of sperm examination as well numerous meaningful color illustrations. It discusses successful evaluation of the sperm morphology and the cellular elements other than spermatozoa, enabling readers to
unambiguously interpret seminal cytologic images and compare reports for diagnostic, therapeutic and prognostic purposes. With its extensive collection of colored images, the book is intended as a reference resource for students and technicians in the field of andrology as well as practitioners and clinicians in andrology, urology, pathology, IVF and other ART programs.

**Atlas of Human Semen Examination**
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**Clinical Atlas of Sperm Morphology**
Achyut M. Phadke 2008 This atlas is an illustrated guide intended to be read and used as a reference for students, technicians and practitioners in the diverse fields of andrology, urology, pathology, gynecology, IVF and other ART programs. It embodies the basic concepts of sperm morphology, and with pedagogical use of over 140 colour figures, the book is a comprehensive guide to the subject. Dr Phadke has drawn upon his 52 years of knowledge and experience, and his vast collection of slide photographs to produce an outstanding work. The book is divided into 3 sections - Clinical Atlas, Pictorial Atlas and Key Appendices, and the colour figures are clearly and beautifully presented and explained throughout the text. It will be a valuable educational resource for andrologists and spermatologists around the world.

**WHO Laboratory Manual for the Examination of Human Semen and Sperm-Cervical Mucus Interaction**

**Spermatology**
Gerd Ludwig 2012-12-06 The analysis of ejaculate, known as the spermiogram, is the crucial investigative technique in the andrological check-up for childlessness. Although other important factors such as medical history, physical examination, hormone analysis and tests, biochemical, microbiological, immunological, and genetic tests, and histological and histochemical investigations must all be considered before a final assessment can be made of male fertility, the spermiogram is the guiding factor in estimating the prospects of fertility. Furthermore, the improvement in insemination techniques in recent years and the development of in vitro fertilization have enhanced the importance of the accurate analysis of sperm morphology and function. In view of the multiplicity of andrological investigative techniques listed above, urologists, gynecologists, physicians specializing in endocrinology and immunology, general practitioners, pathologists, and dermatologists are routinely involved in semen analysis today. We hope in this book to address people working in all these different medical specialities. Having regard for the requirements of daily practice, we will intentionally restrict ourselves to the spermiogram, which we hope to present step by step by means of a large number of illustrations. A substantial part of the book is devoted to the morphological assessment of normal and pathological forms of spermatozoa and other cellular elements, in the form of generously illustrated atlas. Dr. Rovan has given us outstanding assistance in preparing the majority of photomicrographs.

**Atlas of Fine Structure of Human Sperm Penetration, Eggs, and Embryos Cultured in Vitro**
A. Henry Sathananthan 1985 This atlas covers the origins of the morphology of human in vitro fertilization (IVF) including advances made since 1978. It is the combined effort of three world renowned scientists: an embryologist, a reproductive scientist, and a gynecologist. They helped develop the successful IVF program in Australia, which has the largest collection of electron micrographs of human sperm in the world. This volume brings together the results of intensive research on the ultrastructural aspects of human in vitro fertilization, where over 300 preovulatory eggs, both normal and abnormal, have been assessed for maturation, fertilization, and early development. These electron microscopy studies--combined with such...
noninvasive methods as phase and interference microscopy--provide the basis for improving and simplifying IVF techniques.

**Atlas on the Human Testis**- Davor Jezek
2012-10-18 Atlas on the Human Testis: Normal Morphology and Pathology presents histological illustrative material from paraffin and semi-thin sections of the human testis which are routinely used in the assessment of testicular morphology, allowing an early detection of carcinoma in situ and more advanced pathological changes of the testicular parenchyma. The early detection of cancer in situ is based on the careful morphological investigation of the biopsy and immunohistochemistry (IHC). Therefore, this atlas contains detailed descriptions of IHC methods as well as modern molecular biological methods such as DNA microarrays and proteomics and advanced microscopy techniques related to the testicular biopsy. Adequate evaluation of the testicular biopsy leads to high cure rates of testicular neoplasms which can be used as a basis to successfully treat infertility in men. Atlas on the Human Testis: Normal Morphology and Pathology is a valuable reference tool which will appeal to andrologists, urologists, pathologists, clinical embryologists, as well as reproductive biology scientists.

**A Practical Guide to Basic Laboratory Andrology**- Lars Björndahl 2010-04-01 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.

**Andrological Evaluation of Male Infertility**- Ashok Agarwal 2016-07-26 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.

**Textbook of Clinical Embryology**- Kevin Coward 2013-10-31 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.
Atlas of Oocytes, Zygotes and Embryos in Reproductive Medicine-Marc Van den Bergh 2012-07-05 The assessment and selection of oocytes and embryos is fundamental to the live birth rate data of all IVF units, the parameter that is used to gauge a clinic’s success and credibility. This new atlas contains over 1000 high-quality images of oocytes, zygotes and embryos, presented with accompanying data on indications for treatment, stimulation type and duration, as well as short medical histories of each couple and final outcome of treatment. All images in the book can be downloaded from the accompanying CD-ROM. Structured on a patient-by-patient basis, the atlas describes 100 clinically documented case studies that follow the evolution of oocytes and zygotes between day two and day five. Pronuclear morphology and synchrony as well as embryo morphology are reported and described for each case. Written and produced by experienced embryologists, this practical atlas is an important resource for clinical embryologists and physicians in reproductive medicine.

Practical Guide to Sperm Analysis-Nicolás Garrido 2017-05-25 This is a reference manual for daily use in the Reproductive Medicine or Andrology laboratory, which goes beyond the literature available in the scientific journals by compiling insights into a detailed and applied clinical approach. All established practitioners in Reproductive Medicine will find much of practical relevance about the latest insights into sperm selection and analysis.

An Atlas of Human Gametes and Conceptuses-Lucinda L. Veeck 1999-04-15 Replacing and superseding all other works in this area, Dr. Lucinda L. Veeck’s An Atlas of Human Gametes and Conceptuses is the only book now in print that shows the typical and atypical morphology of human oocytes, sperm, and preembryos collected and cultured during the course of in vitro fertilization treatment. Brilliantly illustrated with hundreds of original photographs in color as well as black and white, the book also details and fully illustrates specific new reproductive technologies and provides the reader with both a glossary and a concise history of in vitro fertilization. Includes bibliographic references and index.

Atlas on the Human Testis-Davor Ježek 2012-10-17 Atlas on the Human Testis: Normal Morphology and Pathology presents histological illustrative material from paraffin and semi-thin sections of the human testis which are routinely used in the assessment of testicular morphology, allowing an early detection of carcinoma in situ and more advanced pathological changes of the testicular parenchyma. The early detection of cancer in situ is based on the careful morphological investigation of the biopsy and immunohistochemistry (IHC). Therefore, this atlas contains detailed descriptions of IHC methods as well as modern molecular biological methods such as DNA microarrays and proteomics and advanced microscopy techniques related to the testicular biopsy. Adequate evaluation of the testicular biopsy leads to high cure rates of testicular neoplasms which can be used as a basis to successfully treat infertility in men. Atlas on the Human Testis: Normal Morphology and Pathology is a valuable reference tool which will appeal to andrologists, urologists, pathologists, clinical embryologists, as well as reproductive biology scientists.

Culture Media, Solutions, and Systems in Human ART-Patrick Quinn 2014-03-27 This volume describes culture media and solutions used in human ART; how they have been developed for in vitro human pre-implantation embryo development, the function and importance of the various components in media and solutions and how they interact, and how the systems in which these are used can influence outcomes. Chapters discuss inorganic solutes, energy substrates, amino acids, macromolecules, cytokines, growth factors, buffers, pH, osmolality, and the interaction of these parameters. The role of incubators and other physical factors are reviewed, along with the relevance and prospects of emerging technologies: morphokinetic analysis using time-lapse imaging and dynamic fluid incubation systems. Results of prospective randomized trials are emphasized to ascertain the added value of these techniques for selecting viable embryos. This comprehensive guide will be invaluable for embryologists, physicians and all personnel involved in the fluid products used in human ART seeking to optimize their successful use of these components.
Infertility in the Male-Larry I. Lipshultz 2009-09-24 The new edition of this canonical text on male reproductive medicine will cement the book's market-leading position. Practitioners across many specialties - including urologists, gynecologists, reproductive endocrinologists, medical endocrinologists and many in internal medicine and family practice - will see men with suboptimal fertility and reproductive problems. The book provides an excellent source of timely, well-considered information for those training in this young and rapidly evolving field. While several recent books provide targeted 'cookbooks' for those in a male reproductive laboratory, or quick reference for practising generalists, the modern, comprehensive reference providing both a background for male reproductive medicine as well as clinical practice information based on that foundation has been lacking until now. The book has been extensively revised with a particular focus on modern molecular medicine. Appropriate therapeutic interventions are highlighted throughout.

Current Frontiers in Cryobiology-Igor Katkov 2012-03-09 Almost a decade has passed since the last textbook on the science of cryobiology, Life in the Frozen State, was published. Recently, there have been some serious tectonic shifts in cryobiology which were perhaps not seen on the surface but will have a profound effect on both the future of cryobiology and the development of new cryopreservation methods. We feel that it is time to revise the previous paradigms and dogmas, discuss the conceptually new cryobiological ideas, and introduce the recently emerged practical protocols for cryopreservation. The present books, "Current Frontiers in Cryobiology" and "Current Frontiers in Cryopreservation" will serve the purpose. This is a global effort by scientists from 27 countries from all continents and we hope it will be interesting to a wide audience.

A Comparative Overview of Mammalian Fertilization-Bonnie S. Dunbar 2013-06-29 In 1964, the Fertilization and Gamete Physiology Research Training Program (FERGAP) was established at the Marine Biological Laboratories, Woods Hole, Massachusetts. Over the course of the next 12 years, under the directorship of Dr. Charles B. Metz, FERGAP brought together, trained, and inspired a generation of students in reproductive biology from all over the world. As students of C. B. Metz and as FERGAP trainees, we would like to dedicate this collected work on comparative mammalian fertilization to our teacher and mentor, Dr. Charles B. Metz. Like a number of authors contributing to this volume, we have been struck by the significant impact that C. B. Metz and FERGAP had on the development of students of reproductive biology. Applying both the classical and molecular techniques of cell biology and immunology to problems of gamete biology, Dr. Metz emphasized a comparative and analytical approach that was reflected in his own research on fertilization in Paramecia, sea urchins, frogs, and mammals. It is hoped that this selecting gametes and embryos brings the insight of international authors with knowledge and expertise, highlighting practical tips and key points. The book offers a starting point for applying successful selection strategies for reducing the rate of high-risk multiple gestations while maintaining or increasing viable pregnancy rates.

A Practical Guide to Selecting Gametes and Embryos-Markus Montag 2014-06-16 Among the many recent advances in assisted reproduction therapies (ART), improved technologies for identifying viable oocytes, sperm, and embryos are of primary importance. Paradoxically, the latest advances presented at conferences and symposia are often slow to become part of the daily routine in IVF laboratories. Detailing established and developing techniques, A Practical Guide to Selecting Gametes and Embryos provides a user-friendly text of ready-to-use ARTs that can be utilized effectively in the lab. In this volume, renowned embryologist and educator Markus Montag and his expert panel highlight sophisticated and proven selection strategies and emphasize the importance of proper lab practice in handling gametes and embryos. Topics include: Steps undertaken for the analysis of a semen sample Quality control and prevention of exposure to toxins in oocyte collection and embryo culture Morphological selection of gametes and embryos Both commonly used and innovative techniques for gamete and embryo selection, such as oxygen respiration and time-lapse imaging Invasive techniques, including polar body, embryo, and blastocyst biopsies as well as aneuploidy testing by FISH and array-CGH Accompanied by numerous figures and descriptions, this guide to

Human Preimplantation Embryo Selection-Jacques Cohen 2007-09-26 The most profound dilemma in assisted reproduction to date is the inability to recognize potentially viable embryos before their replacement into the reproductive tract. Application of increasingly advanced new technology has allowed the field of embryo evaluation to evolve rapidly and dramatically over the past five years. Human Preimplantation Emb

Andrology for the Clinician-Wolf-Bernhard Schill 2006-08-26 Andrology for the Clinician consists of two parts: In Part One, the busy clinician can easily find the problem-orientated information he or she needs on such issues as male factor fertility problems, male contraception, and male genital tract infection and tumours. Part Two contains in-depth subject-orientated information and adds important scientific background information to the recommendations received in Part One. Several leading experts have contributed to this work, which has been extensively subedited by world-renowned editors to ensure a well-structured didactic design and homogeneous content. This outstanding book is of great value for all Urologists, Andrologists, Dermatologists, Endocrinologists, Gynaecologists, Reproductive Biologists, GPs, Gerontologists, Psychologists, Psychiatrists, Paediatricians and anyone else interested in the problems of male sex and constitution.

Textbook of Assisted Reproductive Techniques Fourth Edition-David. K Gardner 2012-06-27 Textbook of Assisted Reproductive Techniques has become a classic comprehensive reference for the whole team at the IVF clinic. The fourth edition comes more conveniently as a set of two separate volumes, one for laboratory aspects and the other for clinical applications. The text has been extensively revised, with the addition of several important new contributions on laboratory aspects including developing techniques such as PICS, IMSI, and time-lapse imaging. The second volume focuses on clinical applications and includes new chapters on lifestyle factors, tailored ovarian stimulation, frozen-thawed embryo transfer, viral disease, and religious perspectives. As before, methods, protocols, and techniques of choice are presented by eminent international experts. The two volume set includes: Volume One - Laboratory Perspectives Volume Two - Clinical Perspectives

Genetics of Male Infertility-Mohamed Arafa 2020-03-14 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.

Clinical Andrology - Lars Björndahl 2010-06-03
This reference work on andrology begins with a discussion of male infertility. It discusses genetic causes, conventional treatment, non-surgical methods for sperm retrieval, and assisted reproduction techniques. It also covers andrological endocrinology with chapters on clinical investigation and laboratory analysis in male hypogonadism, as well as testosterone deficiency syndrome. Additional topics include urogenital infections and STDs, erectile dysfunction, psychological abnormalities of male sexual function, and reproductive cancers. The book emphasizes contemporary concern for evidence-based practice, minimizing interventions, and promoting male reproductive health.

Spermatogenesis - Lori Barnard 2012-09-20
Deficiencies in sperm function are usually the result of spermatogenic defects. Spermatogenesis is a biologically complex and essential process during which spermatogonia undergo meiotic recombination, reduction of the genome to a haploid state, and extensive cellular modifications that result in a motile cell capable of traversing the female reproductive tract, withstanding various potential assaults to viability, and finally successfully fertilizing a mature oocyte to give rise to an embryo. Defects in any step of spermatogenesis or spermatogenesis can lead to male infertility, a disease that affects approximately 5-7% of the population. Spermiogenesis and Spermatogenesis: Methods and Protocols details protocols used in the study of spermatogenesis, clinical analytical protocols, and basic techniques used in clinical andrology laboratories, such as obtaining accurate results for a sperm count, and advanced procedures, such as genome-wide genetic study tools and evaluation of nuclear proteins. Written in the successful Methods in Molecular BiologyTM series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols, and notes on troubleshooting and avoiding known pitfalls. Authoritative and easily accessible, Spermiogenesis and Spermatogenesis: Methods and Protocols is unique in its breadth, and will be a useful reference for clinicians and researchers alike.

Color Atlas of Cytology, Histology, and Microscopic Anatomy - Wolfgang Kühnel 2003
This timeless pocket atlas is the ideal visual companion to histology and cytology textbooks. First published in 1950 and translated into eight languages, Kuehnel's Pocket Atlas of Cytology, Histology and Microscopic Anatomy is a proven classic. The fully revised and updated fourth edition contains 745 full-color illustrations almost 200 more than were included in the third edition. Superb, high-quality microphotographs and pathologic stains are accompanied by legends, informative texts, and numerous cross-references. Key features of the updated fourth edition: More than 700 high-quality illustrations using advanced techniques in histology and electron microscopy Practical, information Concise and focused text Key concepts and ideas illustrated in less than 550 pages Ideal for exam preparation, this world-class book is an indispensable visual study tool for medical, dental and biology students. It can also serve as an outstanding review and refresher text.

HUMAN CELL AND TISSUE FINE STRUCTURE FOR TEACHING AND RESEARCH IN STEM CELLS - PROFESSOR ARUNACHALAM HENRY SATHANANTHAN 2015-01-06 This EBook covers the fine structure of human cells and tissues as seen with the transmission and scanning electron microscope (TEM & SEM). To the author's knowledge there is no book of this kind expressly devoted to human cells and tissues. The book is concise and is primarily intended to help in the teaching of microanatomy to first-year medical and health-science students, paramedical students and first-year science and other university students. It can also be used to teach university entrance students in secondary schools and technical staff in anatomical pathology in hospitals and
specifically those involved in stem cell research. There are innumerable texts in light microscopy (LM) of basic histology that are now available for comparison to all and on line, particularly on Google, Wikipedia, PubMed and other search engines. Microanatomy is essentially a visual subject and the author firmly believes that a picture is worth a thousand words. The cell is the fundamental unit of structure in the human body. Cells and their products form the tissues and the various organs and organ systems of the human body. Understanding their structure is not only basic to microanatomy it is also of importance in the study of physiology and pathology and of course, gross anatomy. Now with dawn of stem cell research, it can be used as guide to understand adult and embryonic stem cell microstructure in conjunction with LM and immuno-fluorescent microscopy (FM). As an innovation to the original atlas we have added, exquisite colour images (SEM) by Prof. Pietro Motta, a world leader in electron microscopy, author and publisher of many atlases aided by his co-workers in La Sapienza, University of Roma, Italy, to appreciate the third dimension in microstructure. Some images of the testis are credited to Professors. David de Kretser & Jeff. Kerr, my colleagues at Monash University. Prof. de Kretser, of course, is one of my role models since he is an electron microscopist, clinician and expert on the testis and male infertility. He was founder Director of the Institute of Reproduction & Development, where I was honorary associate professor. He is also a born Sri Lankan and was Governor of Victoria. To help interpretation of the electron micrographs, the structure of each type of cell and/or tissue is illustrated diagramatically, and an attempt has been made to relate this to function. Where possible, such interpretative diagrams are printed adjacent to the electron micrographs of that particular type of cell/tissue. Some of these diagrams were coloured by computer. In addition, brief descriptions of the anatomy of the cells/tissues and legends that describe the electron micrograph are included. Each section will briefly introduce the reader to the type of cell, tissue or organ that is being illustrated. Since there are many advanced atlases and textbooks on the fine structure of cells and tissues, the present publication is intended to be a simple reference for the student and researcher. One of the greatest difficulties readers have in the interpretation of cell structure using LM is that they do not see the outlines of cells and for the most part they do not see the internal structure of the cell very clearly. This is because the cell membrane and most of the internal structures are beyond the high resolution of the LM. Electron microscopy, on the other hand, magnifies cell organelles and enhances their resolution, making the interpretation of cell structure more precise and objective. However, there are limitations in the study of ultrastructure since only a very small section of the cell is viewed. Electron microscopy, as we all know, is laborious and very time consuming and has been used widely in biomedical research since 1935. We were the first to study embryonic stem cells by TEM, a logical progression of our extensive research on human gametes, fertilization and embryos in IVF & ART. The reader is advised to study images of cells and tissues in semi-thin epoxy sections (LM). This EBook (atlas) will be a valuable supplement to the numerous textbooks of histology, especially those with colour LMs of wax and epoxy sections. It covers the ultrastructure of the human cell, the basic tissues of the human body and some of the more important organs of the human body. It is specifically targeted to researchers involved in current stem cell research (both adult and embryonic). Finally, this publication is not intended to be a complete atlas of human cells and tissues since there are several excellent publications for the advanced study of electron microscopy, a few listed in the references.

Intra-Uterine Insemination-Ben Cohlen 2013-12-20 Intra-uterine insemination (IUI) is a widely used fertility treatment for couples with unexplained and male subfertility. Although it is less invasive and less expensive than I other treatment options such as in vitro fertilization, several factors affect its outcome. In addition, IUI remains controversial due to concerns about some of the possible aspects of treatment, including side-effects such multiple pregnancies. This comprehensive evidence-based book from an international IUI expert team explores all of these topics and provides clear guidelines for daily practice.

An Atlas of Human Gametes and Conceptuses-Lucinda Veeck Gosden 1999 Replacing and superseding all other works in this area, Dr. Lucinda L. Veeck's An Atlas of Human Gametes and Conceptuses is the only book now in print that shows the typical and atypical morphology of human oocytes, sperm, and
preembryos collected and cultured during the course of in vitro fertilization treatment. Brilliantly illustrated with hundreds of original photographs in color as well as black and white, the book also details and fully illustrates specific new reproductive technologies and provides the reader with both a glossary and a concise history of in vitro fertilization. Includes bibliographic references and index.

Sperm Chromatin—Armand Zini 2011-08-04 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.

Time-Lapse Microscopy in In-Vitro Fertilization—Marcos Meseguer 2016-01-31 This innovative book is one of the first resources to describe in detail the technique of digital time-lapse microscopy, a state-of-the-art analytical tool which is revolutionizing the field of assisted reproduction. Over 180 high-quality video sequences, accessible online via the password included in the book, provide a practical and highly visual guide to this new technology and the wealth of detail it can reveal about human embryo development. Written by a team of experts from across numerous clinical and scientific subspecialties, this book is a comprehensive guide to all aspects of the technique. It covers both the general principles of time-lapse microscopy and the specifics of working with various devices, with chapters on EmbryoScopeTM, Primo VisionTM and EevaTM as well as set-up and troubleshooting. Full electronic access to all text, images and supplementary videos makes this the ideal everyday reference for embryologists, clinicians and others working in IVF laboratories.

Textbook of Assisted Reproductive Techniques—David K. Gardner 2017-11-09 Already established as a classic comprehensive reference for the whole team at the IVF clinic, this new edition has been extensively revised, with the addition of several important new contributions on laboratory (including advanced sperm selection techniques for ICSI, human embryo biopsy procedures, oocyte activation, managing an oocyte bank, artificial gametes, and epigenetics) as well as on clinical topics (including GnRH agonist triggering, segmentation of IVF treatment, uterus transplantation, and risk and safety management). As previously, methods, protocols, and techniques of choice are presented by eminent contributors internationally.

A Color Atlas for Human Assisted Reproduction—Pasquale Patrizio 2003 Featuring more than 300 full-color photographs, this atlas is a comprehensive guide to the complex procedures used in assisted reproduction. It shows readers how to utilize the latest technologies and correlates the laboratory and clinical components of assisted reproduction. The book depicts oocytes, embryos, and blastocysts at various stages of division and offers guidelines for assessing oocytes and embryos. The authors give detailed instructions on ovarian stimulation, intracytoplasmic sperm injection, assisted hatching, cryopreservation, extended in vitro culturing, preimplantation genetic diagnosis, and embryo transfer techniques. Close attention is also given to assessment of oocytes and embryos from patients with endometriosis and other pathologies.

The Sperm Cell—Christopher J. De Jonge 2006-04-06 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.


**Principles & Practice of Assisted Reproductive Technology (3 Vols)** - Kamini Rao

Three volume set - complete guide to ART Each volume dedicated to specific topic – Infertility, IVF & Related Procedures, and Atlas of Embryology Includes nearly 1000 photographs with descriptions Invaluable reference for practising clinicians

**Reproductive Endocrinology and Infertility** - Douglas T. Carrell 2010-03-23 Management of the modern reproductive endocrinology and infertility clinic has become very complex. In addition to the medical and scientific aspects, it is crucial that the modern director be aware of of incongruent fields such as marketing, accounting, management, and regulatory issues. Reproductive Endocrinology and Infertility: Integrating Modern Clinical and Laboratory Practice was developed to assist the practicing reproductive endocrinologist and/or laboratory director by providing an overview of relevant scientific, medical, and management issues in a single volume. Experts in all pertinent areas present concise, practical, evidence-based summaries of relevant topics, producing a key resource for physicians and scientists engaged in this exciting field of medicine. As novel technologies continue to amplify, Reproductive Endocrinology and Infertility: Integrating Modern Clinical and Laboratory Practice offers insight into development, and imparts extra confidence to practitioners in handling the many demands presented by their work.