This is a multi-authored state of art compendium about the significant advances in the field of nanotechnology offering new tools, opportunities and scope which are expected to have a great impact on many areas in disease diagnostics and therapeutics. The book series in essence features the Proceedings of the 2nd Else Kroner – Fresenius Symposium and the title of the book and the contents clearly showcase the concept that nanotechnology has emerged as a discipline having enormous potential as carrier for spatial and temporal delivery of bioactives and diagnostics, and provides smart materials for therapeutic purpose. The book is divided into discrete chapters rationally grouped into six sections (the 1st section being about the authors at the symposium) where each section is written by authors proficient in their fields of study. Each section highlights one facet of nanotechnology and the individual topics under each section have been dealt with in a lucid way.

The introductory chapter summarizes the use of materials in nanoscale which provides unparallel freedom to modify fundamental properties of materials such as solubility, diffusivity, blood circulation half-life, drug release characteristics, and immunogenicity resulting in formulation of nanoparticles. The snapshots of recent research in nano drug-delivery systems provided in the section entitled “Nano scale drug delivery/ drug design” prove that personalized health care, rational drug design, and targeted drug delivery are some of the benefits of a nanomedicine-based approach to therapy.

There are several confounding unresolved issues, which warrant the application of nanotechnology in its full bloom. Some concerning issues like safety, toxicity hazards, bioethical issues, physiological and nanotoxicity pharmaceutical challenges are yet to be resolved by the scientists. The section about toxicity deals with this issue in a comprehensive way hinting for further research on nanotoxicity.

The section entitled “Diagnostics and Imaging” is about the development of tumour-targeted contrast agents based on a nanoparticle formulation offering enhanced sensitivity and specificity for in vivo tumour imaging using currently available clinical imaging modalities. By applying a vast and diverse array of nanoparticles cancer nanotechnology promises solutions to several of the current obstacles facing cancer therapies. In fact, the article about “Cancer stem cells-new targets for diagnostics and therapy” is very lucrative and paves way for the development of platform for targeted theranostics.

In the past two decades, there has been a progressive increase in the number of commercially available nanoparticle-based therapeutic products. The medical application of nanoparticles is gaining popularity. In this milieu, the segment about “Therapeutic application” of nanoformulation gives an overview about the increasing momentum in the pace of discovery about the therapeutic implications of nanoparticles for a myriad of clinical indications particularly cancer. The subject of “Antibody therapy” highlights another modality which can be exploited for cancer therapy in near future.

Overall, the book series is highly specialized but easily comprehensible. The meticulous representation of facts makes the book highly resourceful and is recommended for all researchers both clinical and non clinical working in the field of nanotechnology.

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The popularity of this publication is evident by the fact that this is the 4th edition since 1992. A major reason for its relevance and popularity is that endocrinology is not a major component of a general paediatrics teaching curriculum. At the same time, endocrine testing often involves knowledge not just of the names of hormones, but of numerous prerequisites and pitfalls in the conduct and interpretation of these tests. As a result, the paediatrician is often not well equipped and such a book forms a valuable resource for teachers, students and practitioners of paediatrics, paediatric endocrinology and endocrinology, physiology, and adolescent gynaecology, among others. In addition to chapters devoted to each of the endocrine systems related to paediatric endocrinology, there are also chapters related to laboratory techniques and assay validation, molecular genetic diagnosis in endocrine disorders and radiological and radionuclide evaluation. The new chapters in this 4th edition are devoted to bone densitometry, and bone metabolite and body composition analysis. There are flow charts highlighting the approach to common paediatric endocrinology clinical presentations, including metabolic emergencies such as hypocalcemia, hyponatremia, polyuria and hypoglycemia in the neonate and older child. However, this is not a book with just a collection of flow charts and testing protocols. The physiology and pathophysiology of each system are discussed in great detail. Exhaustive lists of references are given supporting various methodologies and normal values.

The authors of all chapters are stalwarts in their respective fields from UK and Europe. Overall, the book reflects experience and perspective, and is highly recommended for paediatricians and paediatric endocrinologists.

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Corneal dystrophies are bilateral hereditary disorders of cornea affecting the epithelium/basement membrane/stroma or the endothelium individually or in a combination. This disorder leads to loss of corneal transparency and in some cases to recurrent corneal erosions. Till date, this group of disorders was classified based on the level of the abnormality as epithelial/stromal/endothelial dystrophies.

The possibility of phenotypic and genotypic heterogeneity is now well known. The presence of phenotypic heterogeneity and the fact that there exist different nomenclatures for the same clinical condition lead to confusion amongst ophthalmologists. A standardized nomenclature for corneal dystrophies incorporating the clinical features, genetic and pathological information was of prime importance and resulted in the new nomenclature of corneal dystrophies as proposed by a panel of experts in the IC3D. This book edited by a couple of panelist in the elite group of experts takes on from the classification presented by the expert panel and gives a detailed description of various corneal dystrophies.

The classification system allows the reader to know about the level of evidence available regarding the genetic basis of a particular dystrophy helping the ophthalmologist in deciding about genetic counselling for the affected patient and their families.

The chapter on clinical landmarks in corneal dystrophy gives an account of the descriptions that can be found in different dystrophies and gives a differential diagnosis for the same helping the ophthalmologist in identifying the particular pattern and coming to a definite diagnosis.

The chapter on the histological landmarks on corneal dystrophy gives a detailed description of the pathology in various dystrophies including the light microscopic findings, electron microscopic findings and confocal imaging findings making it a comprehensive literature for pathologists/ophthalmologists.

The chapter on genetics of corneal dystrophy provides an overview and deals with the clinical and genetic aspects of dystrophies and discusses the limits of both anatomical and genetic classification systems. The discovery of mutations that cause dystrophies might be the starting point for initiating strategies to treat.
The chapter on Schnyders corneal dystrophy gives the various clinical manifestation of the rare dystrophy along with a list of differential diagnoses which include metabolic disorders, drug toxicity, multiple myeloma and infectious crystalline keratopathy.

The chapter on gelatinous drop-like dystrophy gives a detailed description, the genetic basis and the pathogenesis of the dystrophy along with available treatment options for the same. The chapter on stage related therapy of corneal dystrophies explains various options available for managing these conditions. The role of phototherapeutic keratectomy and its limitation in different dystrophies is described in detail. The techniques of anterior and posterior lamellar and full thickness keratoplasty with respect to dystrophy are also covered.

Overall, this is a well written book which covers all aspects of corneal dystrophy in great detail. The most useful part of the book is the 43 colour images showing various dystrophies. The histopathological images are also a highlight of the book. This book holds a wealth of information useful to ophthalmologists, cornea specialists and geneticists and pathologists.

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