Over the past decade, there has been unprecedented progress in our understanding of the genetic basis of type 2 diabetes driven largely by technological advances which have facilitated genome-wide studies. Bringing together comprehensive synopses written by leaders in the field, this book discusses the recent progress in defining the genetic basis for type 2 diabetes and related traits. The opening section focuses on the impact of genome-wide association studies on our understanding of the genetic landscape of type 2 diabetes, whilst later chapters explore how variants affecting relevant metabolic traits influence diabetes susceptibility. The impact of next-generation sequencing on gene discovery efforts in both type 2 diabetes and mendelian forms of diabetes and insulin resistance is covered in detail. Particular attention is also given to efforts to increase our understanding of sequence annotation in diabetes-relevant tissues and how this can be harnessed to leverage molecular mechanisms for genetic association signals. Finally, efforts to translate this improved knowledge into both molecular mechanisms and clinical care are discussed.

Providing a comprehensive overview of the current knowledge of the genetic basis for type 2 diabetes and related traits, this book is essential reading for researchers with an interest in the etiology of diabetes and human genetics.
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Continued by B.M. Knoppers (2009–2011), M. Gwinn (2012–2013) and
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(b) Papers published only with DOI numbers: Theoharides TC, Boucher W, Spear K. Serum interleukin-6 reflects disease severity and osteoporosis in mastocytosis patients. Int Arch Allergy Immunol DOI: 10.1159/000163858.

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A fresh look at basic and clinical aspects of DSD

Understanding Differences and Disorders of Sex Development (DSD)

Editors
Olaf Hiort
S. Faisal Ahmed

Ten years ago a group of experts assembled in Chicago to develop a consensus on the management of conditions previously described as intersex. The consequences of this consensus have been far reaching, including a change in nomenclature, the development of greater collaboration across geographical boundaries, and a move towards greater involvement of patients and parents. Moreover, an international registry was established, as well as research and clinical networks.

This book brings together a thorough overview on all these topics. Furthermore, the major technological advances in diagnostic genetic and biochemical capabilities over the past 10 years are outlined in detail.

Offering a comprehensive update on various aspects of disorders of sex development (DSD), this book will be essential reading for all clinicians who are involved in delivering health care to patients with a DSD, as well as scientists involved in biomedical research related to DSD.

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Next Generation Linkage Analysis

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With the advent of affordable high-throughput genetic sequence, the human genetics community is returning to a focus on family data. Sequencing family members can facilitate data cleaning by identifying non-Mendelizing putative variants. It can provide a powerful mechanism for discerning the relevant sequence variants, by focusing on those segregating with the phenotype of interest. By the same token, sequencing holds out the possibility of capitalizing on earlier gene localization findings based on analyses of family data – findings that have provided numerous tantalizing loci for a wide range of complex phenotypes, but to date have resulted in relatively little definitive identifications of specific causal genes. This special issue of ‘Human Heredity’ is intended to showcase some of the advances in the statistical and computational technologies now available for linkage analysis. As the field returns to an appreciation of the power of linkage analysis, the collection of papers will convey the flavor of what is now possible.

Human geneticists and scientists involved in gene mapping studies will gather information on new methods and computer programs available for linkage analysis to parallel sequencing experiments.
Cleft lip and palate is a complex, multifactorial and relatively common craniofacial disorder, which arises because of disrupted facial development in the embryo. The manifestations of this condition can be life-long and associated with significant morbidity. In the last decade, progress has been made in our understanding of how clefts of the lip and palate arise in human populations, and laboratory studies are beginning to elucidate the molecular mechanisms that control development of the lip and palate. In addition, advances in surgical and medical care, and long-term rehabilitation are improving outcome and quality of life for affected individuals. Written by international experts in their respective fields, this publication covers in detail the epidemiology and genetic basis of cleft lip and palate, the developmental biology of lip and palate formation and provides current concepts in the management of patients affected by this condition. Thus, the book provides a contemporary overview of the epidemiology, aetiology and treatment of cleft lip and palate, and will be of use to a wide range of individuals, including students, biologists and clinicians, who have an interest in this subject.

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The emerging field of nutrigenetics and nutrigenomics is rapidly gaining importance, and this new international journal has been established to meet the needs of the investigators for a high-quality platform for their research. Endorsed by the recently founded ‘International Society of Nutrigenetics/Nutrigenomics’ (ISNN), the Journal of Nutrigenetics and Nutrigenomics welcomes contributions not only investigating the role of genetic variation in response to diet and that of nutrients in the regulation of gene expression, but is also open for articles covering all aspects of gene-environment interactions in the determination of health and disease. Original papers and reviews cover the genetic basis for the variable responses to diet and lifestyle factors in chronic conditions (e.g. cardiovascular disease, obesity, diabetes, cancer), methods to assess gene-environment interactions and other related relevant topics, with research drawing from both human and animal studies.
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