



Third Edition

Human molecular genetics

Peter Sudbery and Ian Sudbery

This third edition of *Human Molecular Genetics* continues to provide a clear introduction to this complex and fast-moving field. Now updated and revised throughout, the material covered has been carefully selected and structured to provide a concise overview for students studying the subject as part of a general biology, genetics or medical degree.

In the last few years the sequence of a reference human genome has been determined to a high standard. Spin-off technologies have made it possible to document genetic variation on a genome-wide scale within populations. As result, alleles associated with common diseases are at last being reliably detected. An extensive role for small RNAs has been uncovered in gene regulation and disease. Next-generation sequencing technologies promise to make sequencing of individual genomes routine, opening up new vistas in the study of molecular human genetics. All of these exciting developments have been incorporated into the extensively revised third edition of this popular text.

Features

- Concise up-to-date introduction to human molecular genetics.
- Fully revised chapter on complex diseases, including the use of population-based genome-wide association studies to identify risk alleles.
- New chapter on small RNAs and their role in gene regulation and disease.
- Fully revised chapter on genome sequencing and associated technologies, including how the draft human genome sequence was finished and the advent of next-generation sequencing technologies.
- Updated chapter on single gene disorders, reviewing advances in our understanding of their underlying molecular pathologies.

The text is aimed at courses in human genetics, human molecular genetics and the molecular basis of disease taught within biology, biochemistry, biomolecular sciences, biomedical sciences, genetics, and medical and other health-care degrees.

Peter Sudbery holds the Roper Chair of Genetics at the Department of Molecular Biology and Biotechnology, University of Sheffield.

Ian Sudbery is a post-doctoral research associate at the Wellcome Trust Sanger Institute.

The Cell and Molecular Biology in Action series provides introductions to key, exciting areas of cell and molecular biology, stimulating students' imaginations and initiative to bridge the gap between memorising concepts and the active approach needed for research and literature review projects. This active learning series also introduces students to experimental design and information retrieval and analysis, including exploration of the World Wide Web.



Cover image: A Genome-Wide Association Study Identifies IL23R as an Inflammatory Bowel Disease Gene, Science, 314, pp. 1461-1463 (Duerr, R.H., et al. 2006).
Reprinted with permission from AAA.

ISBN 978-0-132-05157-6



9 780132 051576 >

www.pearson-books.com