

The human genome is a linear sequence of roughly 3 billion bases, and information regarding this genome is accumulating at an astonishing rate. Inspired by these advances, *The Human Genome in Health and Disease: A Story of Four Letters* explores the intimate link between sequence information and biological function. A range of sequence-based functional units of the genome are discussed and illustrated with inherited disorders and cancer. In addition, the book considers valuable medical applications related to human genome sequencing, such as gene therapy methods and the identification of causative mutations in rare genetic disorders.

The primary audiences of the book are students of genetics, biology, medicine, molecular biology, and bioinformatics. Richly illustrated and containing review questions provided for each chapter, the book helps students without previous studies of genetics and molecular biology. It may also be of benefit for advanced non-academics who, in the era of personal genomics, want to learn more about their genome.

Key Features

- Molecular sequence perspective, explaining the relationship between DNA sequence motifs and biological function.
- Aids in understanding the functional impact of mutations and genetic variants.
- Material presented at basic level, making it accessible to students without previous studies of genetics and molecular biology.

Tore Samuelsson is a professor in biochemistry and bioinformatics at the Institute of Biomedicine, University of Gothenburg, Sweden. He started out his career as a molecular biologist, but in the last 20 years he has focused on teaching and research in the area of bioinformatics. He has been particularly interested in problems related to biological sequences, and he has studied molecular evolution and computational methods designed to understand the origin and evolution of both protein and non-coding RNA genes.



Related titles

Brown, T. A. *Genomes 4* (ISBN 978-0-8153-4508-4)

Haber, James E. *Genome Stability: DNA Repair and Recombination* (ISBN 978-0-8153-4485-8)

Jobling, M. et al. *Human Evolutionary Genetics, 2nd edition* (ISBN 978-0-8153-4148-2)

Armstrong, L. *Epigenetics* (ISBN 978-0-8153-6511-2)

A : T C : G



CRC Press

Taylor & Francis Group

an informa business

www.crcpress.com

CRC Press titles are available as eBook editions in a range of digital formats

ISBN: 978-0-8153-4591-6

