Book review

The Human Genome

Edited by C Dennis and R Gallagher
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The Human Genome is a beautifully assembled and well-written publication, enriched with high-quality photographs and diagrams that will appeal to both students and professional scientists and educators. This seven-chapter book begins with an appropriate foreword by Nobel laureate James Watson, the codiscoverer of the structure of DNA. Watson concludes his remarks with, 'The human genome script that we are now finalizing will be regarded as the most important book ever to be read'. One wonders if even James Watson could have predicted the astounding rate at which the Human Genome Project has accelerated.

The first chapter presents an easy-to-understand basic introduction to DNA structure and function, the historic experiments and scientists who identified DNA as the inherited genetic material, and mutations and their influence on traits and disease susceptibility. In Chapter 2, The Art of DNA Sequencing, the basics of cloning, sequencing, and analyzing genome information is discussed along with a brief overview of the history of recombinant DNA technology and scientists who made significant contributions to the field. Background information presented in these chapters is effectively described in a straightforward manner with a conservation of words, providing an outstanding introduction to the genome project.

An outstanding section titled 'The Project, The People, the Product' presents an at-a-glance summary of pertinent facts about the Human Genome Project and

its overall goals, scientists involved in the project, and the result of work to date including numerous Internet links to genome resources. Chapter 3 provides highlights of significant findings of the genome project covering issues such as SNPs, gene duplication, genome complexity, and explanations of how alternative splicing can produce combinations of proteins from a smaller than originally expected number of human genes. *The Human Genome* also contains thought-provoking chapters on genome headlines in the news, ethical, legal, and social implications of genome data, and a look at where the project will go beyond its initial draft.

Another outstanding feature of this publication is the inclusion of two historic publications representing landmark scientific discoveries in the genome story separated by nearly 50 years. Watson and Crick's famous paper on the structure of DNA published in *Nature* in April 1953 is included, as is the February 2001 paper by the International Human Genome Sequencing Consortium's paper entitled, *Initial Sequencing and Analysis of the Human Genome*. One omission that prevents this book from being a complete all-in-one useful resource for genome information is that it lacks the complementary paper by Venter *et al*, published in *Science*. Perhaps, the unavoidable disadvantage of *The Human Genome* is how quickly some of the genome data presented will be quickly outdated as the project rapidly advances. Nonetheless, Dennis and Gallagher have assembled an excellent resource of genome reference materials that is wonderful reading – highly recommended for anyone with an interest in the Human Genome Project.

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