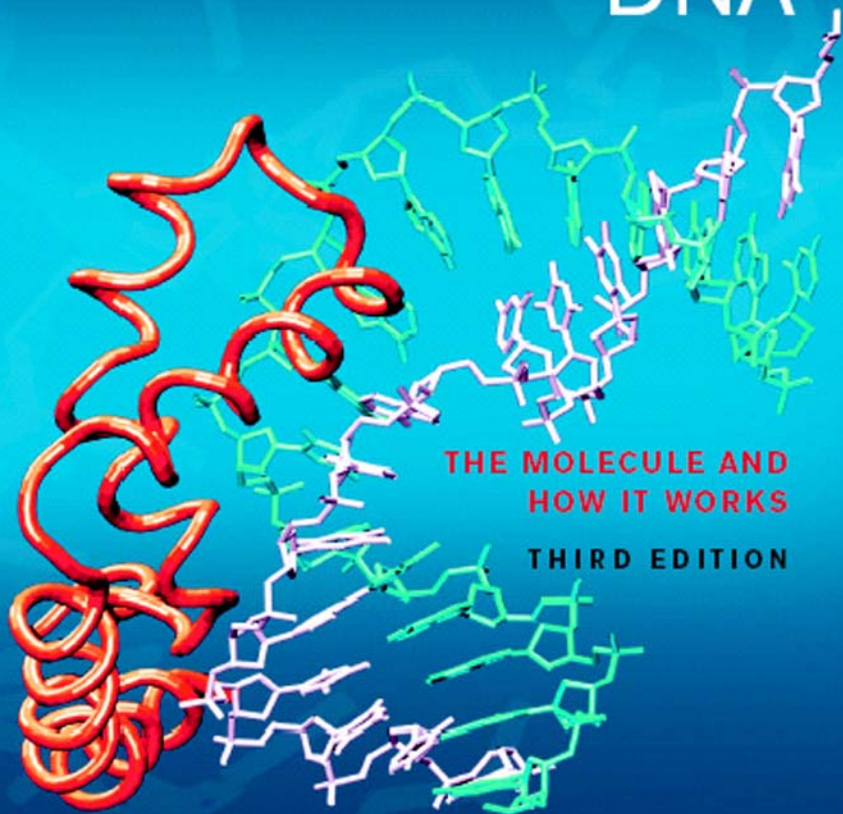




# Understanding DNA



**THE MOLECULE AND  
HOW IT WORKS**

**THIRD EDITION**

Chris R Calladine  
Horace R Drew  
Ben F Luisi  
Andrew A Travers

# UNDERSTANDING DNA

The Molecule & How It Works

**Third Edition**

## From reviews of earlier editions

A systematic and comprehensive analysis of the structure of DNA from a wonderfully fresh perspective. The book is a systematic effort to understand this fascinating molecule from the inside out, building from the first, and simplest, principles . . . . I recommend it very highly.

*Trends in Genetics*

We see DNA structures so often that it is often taken for granted that the molecule should not be anything but an aesthetically appealing, spiraling helix. But why should it assume such a nice structure? The book offers an absolutely delightful answer to this and other similarly mischievous questions. 'Understanding DNA' is a great book that will surely prove to be a valuable teaching tool.

*The Biochemist*

Among the strengths of the book are the clarity of the explanations of some quite difficult concepts and the novel way in which certain ideas are treated, perhaps causing the reader to think again about certain aspects of DNA structure. I enjoyed reading this book and would encourage colleagues working in the general area of DNA research to read it.

*Heredity*

Stylish . . . beautifully crafted, with a logical step-by-step approach to the subject. A book from which the advanced undergraduate will benefit, and which will also generate a refreshing perspective for experts.

*Nature*

Authoritative and lucid.

*Aaron Klug*

# UNDERSTANDING DNA

## The Molecule & How It Works

**Third Edition**

by

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The cover picture shows a complex between a protein called 'HMG-D' from fly chromosomes, and a particular sequence of DNA to which it binds strongly.

The two strands of double-helical DNA are shown in white and yellow respectively, while the protein is shown with less detail in red.

The strongly curved and untwisted structure of DNA in this complex illustrates our modern understanding of the molecule's biological action, in terms of its three-dimensional structure, which may be recognized and bound specifically by a regulatory protein.

Thus the DNA structure itself contains important information, in addition to the well-known one-dimensional Genetic Code written in the sequence of bases A, T, C and G.

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