

ELLIS HORWOOD SERIES IN
MOLECULAR BIOLOGY

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COMPUTER MODELLING OF BIOMOLECULAR PROCESSES

JULIA M. GOODFELLOW and DAVID S. MOSS, Department of Crystallography, Birkbeck College, London

This book brings together many exciting areas of study, which together are classed as molecular modelling, relevant to modern molecular biology. Many of these areas involve basic techniques, already covered in basic textbooks: the application of these techniques to the field of molecular biology is novel, and usually only covered in specialist journals or books based on scientific meetings covering only one week.

The book consists of twelve chapters, each covering specific techniques or applications to specific systems. Mathematical techniques are summarized, with references pointing towards more detailed texts. This is a highly topical area, relevant to molecular biology reviewing ongoing research areas, and the book will be valuable to the many large chemical and pharmaceutical companies which have installed large computers and computer graphics systems for research programmes in molecular modelling.

Readership: Molecular biologists, biochemists, organic and physical chemists in academic research and in the chemical pharmaceutical, agrochemical and medicinal chemical industries.

Julia Goodfellow is a Reader in Molecular Biology, in the Department of Crystallography at Birkbeck College, London, but is currently on research leave with a Fellowship from the Wellcome Trust. Her research interests focus on the conformation and dynamics of macromolecular and their interactions with their environment and small ligands. As well as using computer simulation and modelling techniques in her research, she has set up the M.Sc. in Computer Modelling with David Moss.

David Moss is a Reader in Crystallography at Birkbeck College. His research interests include the structure and function of enzymes and eye lens proteins, including the application of X-ray diffraction and molecular dynamics to understanding molecular recognition. He lectures on an M.Sc. course in molecular modelling and also teaches crystallography.

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