

was invited to bring their experience and expertise, from the world of DNA damage and repair, to evaluate the current state of knowledge of cellular defence mechanisms and to apply this knowledge to estimate the risks to human health from exposure to genotoxic compounds. The outcome of this workshop was a state-of-the-art review of current understanding, covering mechanisms and dosimetry of DNA damage, biological consequences from mutation induction to carcinogenesis, cellular pathways for repairing DNA damage, and methods for monitoring and assessing exposure in the population. The participants also made recommendations for the future direction of research from the perspective of this meeting.

The focus of the Workshop was not restricted to man but included an up-to-date and brief account of our knowledge of the repair capacities of other species. This served two purposes. First, we are not the only species threatened by environmental exposure to chemicals, and it is essential that we understand how other organisms interact and deal with DNA damaging agents in order to make an assessment of the environmental impact of genotoxic chemicals. Secondly, studies on organisms as divergent as yeast and man have been crucial to building our understanding of the cellular mechanisms for coping with DNA damage.

The Workshop recommendations and overviews have been collected together and published as this monograph. The text is divided into two parts. The first part is a joint report of the Workshop setting out the broad issues of risk assessment, the key information available and the recommendations for future research. The second part is a collection of individual contributions providing an in-depth but succinct overview of the relevant fields. Each chapter is well written and presented. The clarity of the work reflects the high level of expertise of the authors in each area.

This monograph will be an invaluable aid to any professional or student with an interest in environmental risk assessment. However, the greatest strength of the book is seen in the way it brings together a collection of first rate reviews relevant to the broader field of DNA damage and repair. As a concise overview of this exciting and rapidly expanding field, it is an excellent general reference document for those students and scientists requiring a general understanding and broad perspective of the field.

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Protocols for Gene Analysis. Methods in Molecular Biology (Vol. 31). Adrian J. Harwood. Humana Press Inc., Totowa. 1994. Pp. 411. Price £40.00 paperback (combined). ISBN 0 89603 258 2.

'Protocols for Gene Analysis' is the 31st volume in the comprehensive 'Methods in Molecular Biology' series. As such, it has a similar style to the previous volumes, each chapter having a recipe-like format designed for direct practical use within the laboratory. The starting point in this volume is 'so you have a piece of DNA, possibly a gene-what do you do next?'. The subject areas covered are wide. The first section of the book deals with basic recombinant DNA techniques and subsequent chapters are grouped under the headings of *in vitro* mutagenesis, genomic structure, sequence variations, gene expression, protein-DNA interactions and protein function. Each section has selected protocols, for instance 'Protein Function' comprises techniques for recombinant protein expression/purification, production of radio-labelled proteins in bacteria for use as molecular probes, and the preparation/screening of a lysogen library.

Adrian Harwood claims in the preface that the aim of the book is to provide a contemporary set of protocols for each of the subject areas, not a comprehensive set of methods, and this is where the limitations of an otherwise successful book lie. In fact, this is a book which is virtually flawless in terms of style but which fails on the wider level of content: the broad subject areas covered seem rather disjointed when presented merely as a collection of 'selected protocols'. However the logical progression in which the protocols are presented compensates to some extent for this lack of cohesion.

The protocols and introductory text of each chapter are clearly presented with the aid of uncomplicated figures. Each chapter has different contributing expert authors but the standard of the text is consistent throughout. The protocols themselves are reassuringly presented. Many have accompanying notes sections containing words of caution or hints for success and each section is followed by a bibliography. The volume as a whole therefore fulfils its promise of being user-friendly, right down to its comb binding for 'easy benchtop use'.

On whose benchtop then would 'Protocols for Gene Analysis' be of most use? Given that this is not a comprehensive collection of methods it will mainly help researchers who have some knowledge in the field and intend to use the text in conjunction with other sources of information. What you see is what you get and this will be a convenient starting point for people with £40.00 to spare.

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