Book review

DNA Repair Protocols: Eukaryotic Systems
Daryl S. Henderson (ed.)
Humana Press (1999)
641 Pages Hardback Price $119.50, Paperback price $79.50

This comprehensive book has come to press at a time of remarkable growth in the field of eukaryotic DNA repair and consists of 52 chapters, each of which describes one of the manifold aspects of cellular responses to genomic injury. Many of the chapters describe techniques that are useful for analysing DNA repair processes in mammalian cells but important non-mammalian model organisms are also covered. The Editor has assembled an impressive list of distinguished contributors who detail, in step-by-step fashion, experimental protocols. In addition, chapters are organised to contain an introduction to the issue addressed, materials and their sources, methods, and notes where contributors list modifications that work best within their experience.

The book is divided into four parts. Part I describes approaches to screen for DNA repair mutants in genetically accessible model systems. This includes methods sharing the principle of the hypersensitive phenotype to DNA-damaging agents as a diagnostic marker of a repair (or checkpoint) defect, strategies to molecularly clone mammalian DNA repair genes, and how cDNAs of human repair genes can be used for phenotypic correction of repair-deficient cells. Part II brings together a wide variety of methodologies for characterising repair proteins and for assessing levels of DNA damage and repair. Part III describes methods for inducing double-strand breaks in DNA and/or measuring their repair, and Part IV brings together methods for studying physiological responses to DNA injury. Each chapter is well referenced and there is a useful index. As a manual I find this book to be well presented and clear in its objectives which it readily achieves.

The Editor of the book states that it is about the tools and techniques that have helped propel the DNA repair field into the mainstream of biological research. I wholly endorse that opinion and recommend this book to the readers of Mutagenesis who may wish to possess an easy-to-access manual to hand either in the laboratory or as part of their collection.

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