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**Book Reviews**


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**Laskowski, W.: Biologische Strahlenschäden und ihre Reparatur.** Berlin, New York: de Gruyter 1981. X/88 pp., 43 figs., 8 tabs. Soft bound DM 22,-.

This book, although small (88 pages), is one of the most complete available on the biological effects of radiation and repair of damage so caused and is written especially for biologists and those in the medical field. Although being written in German will mean a reduction in readership, the book is never-the-less useful to many more because of its copious illustration of the chemistry and physics behind even the simplest step being described. Medical aspects find good treatment in this volume, but not at the expense of chemistry, so that chemical formulae are to be found right through the book wherever even the smallest point has to be made.

The first half of the book concerns itself with the nature of ionizing and non-ionizing radiation, absorption of the energy of radiation by living cells and the biological effects of such impact. Much attention, accompanied again by excellent illustrations, is given to the question of the site of damage of radiation, leading of course to DNA and the chemical and biological repercussions of radiation effects on the DNA.

The second half of the book deals with the repair mechanisms that exist in the cell for making good this damage. Thus the pre-replicative photo-repair, excision-repair and repair of strand breaks, as well as the post replicative mechanisms of recombinational and SOS repair are dealt with. The final three chapters deal with such interesting topics as repair defects in man, radiation therapy and repair and evolution.

It is finished off with an index; literature cited appears at the end of each chapter. A useful book, particularly for those in the medical field.

J. F. Jackson, Glen Osmond (South Australia)

**Nicolau, C., Paraf, A.: Structural and Kinetic Approach to Plasma Membrane Functions.** Proceedings in Life Sciences, 1st. Ed. Berlin, Heidelberg, New York: Springer 1977. 204 pp., 119 figs., 31 tabs. Hard bound DM 58,-.

The book contains 13 invited lectures to a 1976 meeting on "Structural and Kinetic Approach to Plasma Membrane Functions" which was "intended as a discussion forum for physicists, physicochemists, biochemists, biologists, and medical scientists, in an attempt to find as much 'contact surface' as possible" (from the preface).

The book title is so colourless because the volume covers a very broad spectrum of membrane topics which are mostly presented as hybrids of minireviews and short progress reports frequently not presented in a formal manner. A more common denominator of 12 papers is the question of occurrence and significance of long-, middle-, and short-range interactions between the various membrane components including the following items: cooperative state transitions in biomembranes – a refined version of the Changeux hypothesis (Wallach), domain formation in membranes (Hartmann et al., Benedetti et al.); lipid boundary halo around penetrating membrane proteins (Kleemann; Sardet; Warren and Metcalfe), organizational changes in the relations between penetrating and adjacent membrane proteins (Bauer et al.), lipid organization (Zwaal et al.) and mobility (Nicolau et al.) in model and receptor-effector complex formation (Paraf et al.; Jard et al.), interaction between structural elements of lipids and peptide chains (Stoffel et al.). These problems were tackled, partly in respect of the understanding of membrane functions on a great variety of objects representing all organizational levels and configurational complexities by means of various physical, chemical and biochemical techniques and partly also in their combination. The style and content of the papers are only occasionally refreshing and readable.

The terribly broad spectrum of specific topics and technical approaches and the poor camera-ready printing layout was felt to be a deterrent by this reviewer and would probably seem so to the usual membranologist to say nothing of the interested non-specialist. The synthesis of advances in the field of membrane research promised on the back cover of the book was clearly not attained, the more so as the certainly helpful discussion of the lectures was regrettably enough not included in this unnecessarily hard-bound, overpriced book.

R. K. H. Repke, Berlin-Buch