

Schmid, G.H., Radunz, A., Gröschel-Stewart, U.: **Immunologie und ihre Anwendung in der Biologie**. - Thieme Verlag, Stuttgart - New York 1993. 247 pp. Paperback DM 39.00.

A short and nevertheless comprehensive text on immunology was missing so far. Immunology is not only an important field of knowledge, but also offers an array of methods which increasingly broadly conquer the laboratories of plant physiologists. Thus, a handy treatment of the subject was overdue. The first chapter, a theoretical introduction on about 70 pages more than fulfills all expectations. It is a densely informative text, succinct and masterly written. With functioning of the immuno system in animals, explanations of the structure of immunoglobulins, the complement system, immuno-responses and their regulation, requirements for antigens, antigene-antibody interactions, and phylogenetic considerations everything is explained what one basically needs to know. A large clientele, busy researchers who apply immunological techniques but have not been educated in the field and often lack time for more extensive basic studies, newcomers and students, who look both an introduction and a summary suitable for preparing for exams, they all must likewise welcome this excellent basic briefing.

The following three chapters are dedicated to applications, production of antibodies against proteins and low molecular compounds like lipids, phytohormones and herbicides, and the use of antibodies in research. These chapters provide very useful information. Unfortunately some frictions and strong redundancies inherent in the whole book become evident here. Redundancies in particular regard the Ouchterlony tests and the functional structure of antibodies, which are repeatedly treated in detail at very different places in the book, but also other topics. Recipes are scattered over the text. More stringent planning of the book as a whole could have much improved the overall presentation.

While, naturally, immunology has its origin in animal physiology of which chapter 1 takes care, effectively, most examples presented in the book come from the plant sciences. The plant physiologist certainly will welcome this circumstance. A very important application of antibodies is in studies of the molecular structure of membranes and an outstanding example is the thylakoid membrane of chloroplasts, which is covered in the last, *i.e.* the 5th chapter. This is a very exciting topic in itself, which certainly would deserve a separate treatment. Presumably many readers would not expect to find such a treatment of chloroplasts in a basic introductory text on immunology. The chapter is a mixture of description of basic thylakoid function - about the presentation of which the authors themselves must have been undecided, since it is split up and some important parts are in an appendix to the chapter - of approaches of actual studies and of recipes. We feel, that both development of the thylakoid story and the explanation of research strategies for studying membranes have suffered likewise by the attempt to provide an interactive coverage on a few pages. Nevertheless, the chapter gives a good impression of the powerful possibilities inherent in application of immunology to the elucidation of structures of lipo-protein membranes.

The book is very well illustrated with diagrams and schemes using two colours and halftone figures of high quality. There is a useful glossary and an index.

In conclusion, the book is recommendable and should be a useful acquisition for the shelves of many laboratories as well as the briefcases - or in our modern times the rucksacks - of students. Hopefully, the price - which appears rather high for a small pocket book - does not prevent the latter.

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