

Modification of Proteins During Aging

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Edited by R.C. Adelman and E.E. Dekker

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This short book comprises 8 articles based on a symposium held in St. Louis in June 1984. Each of the papers concentrates on work from the authors' own laboratories, but gives some background review material. Unfortunately, the background material is very limited, and not sufficient to be useful to either those familiar with the field, or those seeking a first knowledge of it. Similarly the descriptions of the work from the authors themselves are too brief and uncritical to be valuable.

It is not appropriate to detail the scientific incompleteness of the presentations, which no doubt derive from limitations of space and brief given to the authors. A couple of examples must suffice. One of the most interesting and novel pieces of work described is that of Reznick et al., describing the occurrence in normal and aged cells of detectable quantities of inactive degradation intermediates from several proteins. This work is based on antisera raised against purified but denatured proteins, which then detect fragments of inactive protein in cells, particularly from livers of old rats. Evidence from limited proteolysis supports the view that the fragments do derive from the native polypeptides, particularly in the case of

aldolase. But most of the evidence presented is based on demonstration of polypeptides in Western blots which bind the antibodies raised against the denatured enzyme. This data is presented in an unsatisfying manner (though the work may well be persuasive when seen in its entirety). For instance, controls to demonstrate the specificity of the blotting reactions are not mentioned; and one is worried by the fact that the antiserum, though raised against the denatured but complete aldolase polypeptide, does not react with denatured complete enzyme on blots of SDS gels. There are also inaccuracies in the bibliographies, and in the relationship between text and figures, in spite of the fact that the book is prepared from authors' camera-ready copy.

The volume is very slight, and by now quite ancient. And although all the articles do relate to protein modification, one (as far as is known presently) has no bearing on aging. There has been no obvious attempt to interrelate the presentations.

In sum I am afraid I cannot recommend the volume. It is also very expensive for the 115 or so pages of text!

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