

# LECTINS

## Second Edition

**Nathan Sharon and Halina Lis**

This monograph, aimed at graduate students and researchers in biology and related areas, deals with lectins, an exceedingly important class of diverse and widely occurring proteins that bind carbohydrates. They possess the unique ability to decode the information encoded in carbohydrates and thus to act as recognition determinants in diverse biological processes, normal and pathological. Their study is therefore inextricably linked to glycobiology, a subject now in a stage of explosive growth.

Since the publication of the first edition of this book in 1989, great strides have been made in several areas of lectin research. Numerous lectins have been isolated from a variety of sources, and their functions in infection, in inflammation and in immunity, both innate and acquired, have been clarified. In addition, the three-dimensional structures of close to 200 lectins, and of many of their complexes with carbohydrates have been elucidated, providing an insight into the molecular basis of their specificity. As a result, the book is about 470 pages long (four times the size of the first edition), with over 200 figures and some 30 tables.

The book starts with an overview of lectin research. This is followed by a survey of the occurrence of lectins in nature and a detailed description of their properties, with emphasis on specificity, structure and interaction with ligands at the atomic level. The biosynthesis and genetics of lectins are then discussed, as are their numerous applications in biology and medicine. A summary of the nutritional effects of lectins follows, and finally their functions in nature are dealt with.

The book should be of use to anybody who wishes to learn more about this unique and fascinating class of protein and to use them for a variety of purposes.

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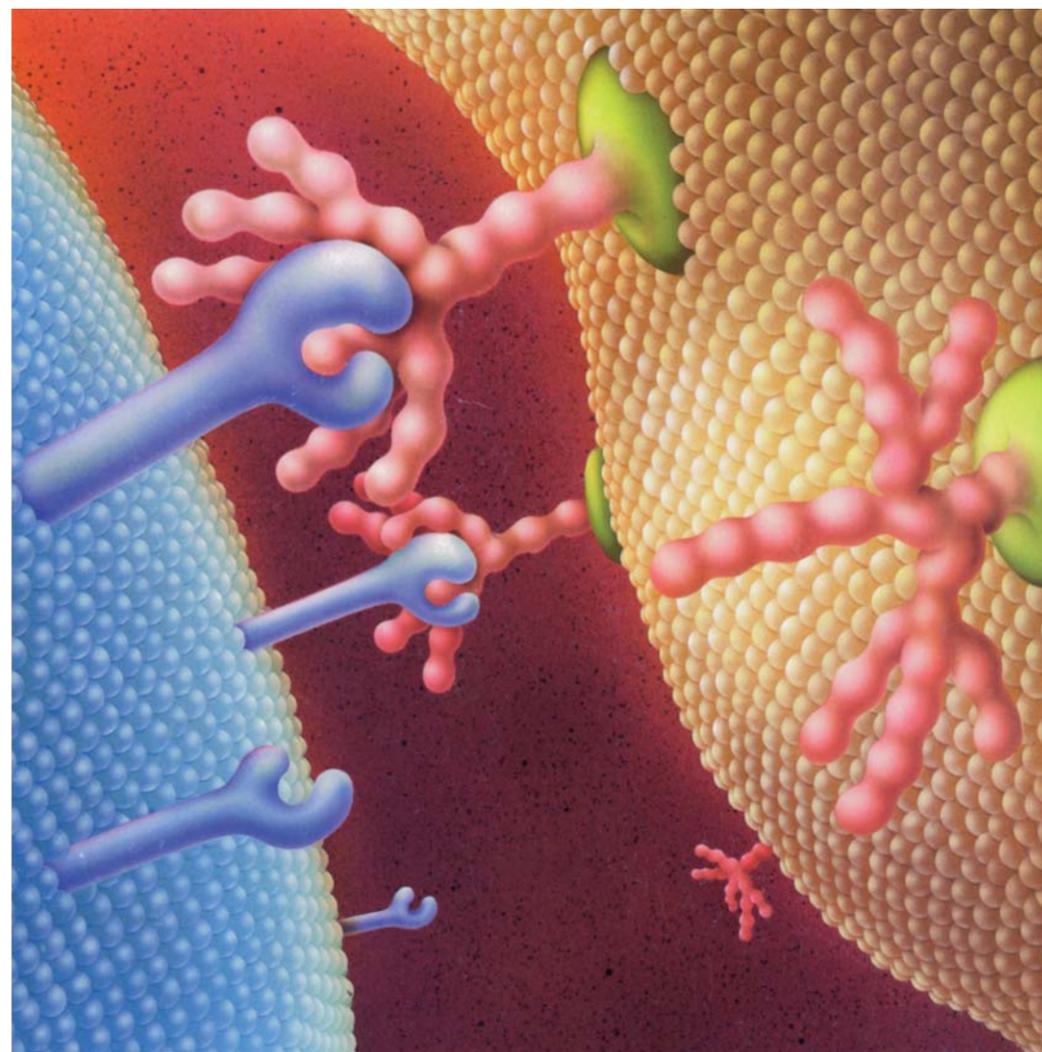
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