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can only be controlled by changing the activity of the rate limiting enzyme in that pathway. This can be achieved by either increasing and decreasing the number of enzyme molecules (induction and repression), or by changing the activity of pre-existing enzyme molecules. This book is concerned solely with the latter type of effect.

The study of enzyme regulation has two major goals.

(a) To identify the enzyme in a pathway which is rate limiting at a particular state of metabolic activity.

(b) To characterize the mechanisms which regulate the activity of the rate limiting enzyme *in vivo*, and to understand how such controls

operate in the intact cell. The first goal is the second of those given in the preface of this study. The second goal of the study is to describe the mechanisms which regulate the activity of the rate limiting enzyme in the intact cell. The very nature of the subject is such that the reader must have a knowledge of the pathways of metabolism, and the way in which they are regulated, and the way in which they are regulated by the other, and some of the basic concepts in general chemistry and enzyme kinetics.

Enzyme systems which are drawn from a wide range of biological systems. An attempt has been made to describe them in sufficient depth, that the limitations of currently available information and the way in which future research might proceed will be appreciated. Perhaps the most striking feature to emerge from a first reading is the great variety of mechanisms which organisms have adopted for the control of enzyme activity. Hopefully, some most general themes will start to emerge as the book progresses, and the brief summaries at the end of each chapter are designed to help the reader make an overall synthesis of the current state of the art.

References

- [1] Arima, T., and Cori, C. F. (1966), *Adv. Enzymol.* 14, 1-107.
- [2] Cori, C. F., and Cori, C. L. (1958), *Adv. Enzymol.* 1, 1-107.