BIOCHEMISTRY OF PARASITIC HELMINTHS

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Preface

It is the aim of this book to give a comparative account of the biochemistry of parasitic helminths and to relate the biochemistry of parasites not only to that of mammals but also to that of free-living invertebrates. The emphasis is on regulation and deals with metabolic control both at the cellular and at the developmental level.

A difficulty in parasite biochemistry is that the information is patchy, some aspects are known in great detail and others not at all. In the text, I have tried to indicate those areas of parasite biochemistry that have been neglected, in the past, since, in some ways, what is not known about helminths is almost as interesting as what is known.

The book does not deal with nerve-muscle physiology, nor with osmoregulation, and nor does it discuss, in detail, the mode of action of anthelmintics. However, a table of the possible biochemical modes of action of the more important anthelmintics is given in Appendix 7.1.

For the purpose of this book, I have taken helminths to include acanthocephalans, cestodes, trematodes, nematodes and nematomorphs. Throughout the text, *Ascaris lumbricoides* is used, rather than *A. suum* or var. *suis*. In almost all cases, it is the ascarid from pigs which has been investigated and not the human worm.

The literature has been covered up to December 1978, and the sheer number of references poses a severe problem. The compromise I have adopted is to have a general reading list composed of relevant reviews at the end of each chapter, as well as the specific references. Any reference that can easily be found from the general reading list is not included in the specific list; in particular, T. von Brand's book, *The Biochemistry of Parasites* (2nd edn, 1973), gives comprehensive references to all of the literature prior to 1973. In this way, it should be possible to find the reference to any particular point of interest, yet keep the reference lists to manageable proportions.

It is inevitable that some of the information in this book will rapidly become out of date or prove to be incorrect. What I hope the text will provide is a framework within which the reader can place new developments in context.

In conclusion, I should like to thank those colleagues who have sent me reprints or allowed me to quote from their unpublished work. Also, I am grateful to R. W. Walker, J. M. Paul and, in particular, G. M. Lloyd for reading and commenting on various aspects of the manuscript.