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## PREFACE to first edition

In its most recent growth, immunology has expanded from its origins in the medical sciences to permeate all of biology. The recognition by biologists of immunologic methods as important and sensitive research weapons has been responsible in a large measure for this rebirth of immunology. At the same time the utilization of modern biochemical knowledge and technology has given immunologists a new insight into their own science. These developments have presented additional problems to both students and teachers of immunology. On the one hand, undergraduate students who have had little opportunity to master complex chemical and biologic problems are drawn early to immunology as an exciting and "new" science. On the other hand, students who might have been content to continue in their chosen specialty now see a need to include immunology in their curriculum. The teacher is thus presented with a more varied audience than ever before. A partial solution to this dilemma is a textbook of immunology that will be equally useful to undergraduate and graduate students. This does not necessarily mean that the interests of students in the health sciences have been ignored, as is pointed out below.

To meet the demands of a broad audience the contents of this book have been tailored in several ways. First, the book is intended as a general textbook of immunology—one that overemphasizes neither immunochemistry nor immunobiology.

Consequently complementary sections on the chemistry of the immunoglobulins and immunochemistry are balanced by sections on the phylogeny of the immune response and cellular aspects of the immunoglobulin response. A similar balance has been attempted in other sections. For example, the chapters on immunity and hypersensitivity, subjects of considerable interest to students in the medical and paramedical sciences, have been developed from the viewpoint that the fundamentals of these topics are essential to all students of immunology. Second, the references have been limited and chosen to emphasize reviews and specialty books. Several excellent immunologic review series are now available. These provide extended discussions of various items and lengthy bibliographies. In this way a broad base of additional readings has been provided without the necessity of a voluminous and, all too soon, outdated bibliography in this volume. Only a few students have the time for extensive outside reading during their course work in any case. Third, a brief appendix, which summarizes the highlights of macromolecular biochemistry, is included for those who are as yet uninitiated or need a quick refresher on the subject. Fourth, a genuine effort has been made to use a concise and intelligible writing style.

Introspection is an unreliable witness to the origin of ideas, and this is no more evident than in authorship. Many of the concepts incorporated

here were derived from my past professors, current colleagues, and perhaps, most vitally, interested students. To this legion, I give a salute of gratitude, with the hope that my efforts have in some small measure been worthy of them. Of those persons whom I wish to name, that of my

wife, Barbro, must come first, both for her many hours of silent support and her active participation as an artist. To those wonderful girls at the typewriters, especially Anne, Carol, Linda, and Vera, I give my thanks for a job well done.

**J.T.B.**