

Preface

This second edition retains many of the features of the original text. Its chapters are also grouped in three parts on fundamentals, applied aspects, and disease production. Revised and new chapters, like the original chapters, include the development of ideas and applications of the subject to day-to-day living. This approach serves to illustrate the roles played by microbes as the cause or solution of many of our problems and in revolutionizing many of our concepts of life processes.

Unlike many of the more advanced textbooks of general microbiology, *Introduction to Microbiology* is not based on the assumption that the student will have an extensive background in chemistry. However, the chemistry used is designed to give a simple illustration of the basic changes that are taking place.

Scientific names and scientific terms are employed without apology, but wherever possible the roots and meanings of each new scientific name or term are given the first time it appears. This, hopefully, provides a built-in glossary that will serve to clarify the reading matter.

This edition has been extensively revised. The part on fundamentals includes new chapters, "Historical Aspects of Microbiology," "The Bacteria," and "The Viruses," and extensively rewritten chapters, "Control of Microorganisms" and "Antibiotics and Chemotherapeutic Agents." The discussion of genetics in Chapter 13 includes new material on lysogeny, cloning vectors, genetic engineering, and recombinant DNA molecules.

The part dealing with disease-producing microorganisms now covers immunology in both Chapters 22 and 23 in addition to Appendix B, "Immunological Methods." Chapter 20, "Epidemiology," and Chapter 26, "Viruses and Disease," are new chapters, and along with the reorganization of several others complete the revision of this part of the text.

Many of the new and revised chapters contain examples that give the student a focus on various aspects of epidemiology. This will give the allied health student and the student in the general course an insight into the ability of microbiology to be considered from various points of view. By no means should this text be considered one devoted to epidemiology or any

other particular field; the new chapters and some of the old ones are merely flavored with diverse tastes.

Much of the taxonomic information has been removed from the body of the text and is now contained in Appendix A, which updates taxonomic changes in the field that have occurred recently.

The chapter summaries at the end of each chapter provide a brief overview of each chapter and are new to this edition.

The metric conversions on the inside front cover are included to provide a handy aid to this style of measurement even though this revision gives metric values along with their English equivalents in the body of the text.

We are grateful to Dr. Y. Hokama for allowing us to use portions of his chapter from the first edition in this revision for Chapters 22 and 23 and Appendix B.

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