

Preface

Students:

Welcome to the microbial world! I think you will find it fascinating to understand how microbes interact with us, and with our environment. The interesting thing is that each of you has already had a lot of experience with microbiology. For one thing, you are thoroughly populated with microbes right now, and much of your own genetic material actually came from viruses and other microbes. And while you have probably had some bad experiences with quite a few microbes, in the form of diseases, you have certainly been greatly benefited by them as well.

This book is suited for all kinds of students and doesn't require any prerequisite knowledge of biology or chemistry. If you are interested in entering the health care profession in some way, this book will give you a strong background in the biology of microorganisms, without overwhelming you with unnecessary details. Don't worry if you're not in the health professions. A grasp of this topic is important for everyone—and can be attained with this book.

This has been called the Age of Biology. The 20th century was often thought of as the Age of Physics, with the development of quantum theories and the theory of relativity. The Human Genome Project is just the most visible sign of the Biology Age; in the 21st century we have an unprecedented understanding of genes and DNA, and a new respect for the beauty and power of microorganisms. This book can give you the tools you'll need to read about and interpret new biological discoveries in the years ahead.

—Kelly Cowan

I dedicate this book to all public health workers who devote their lives to bringing the advances and medicines enjoyed by the industrialized world to all humans.