Preface

I thas been exactly 25 years since I completed the first edition of this text, and its evolution is not yet complete. Continued from the previous edition are some boxed questions for students to read and think about before moving on to the next section. The **Thinking Ahead** boxes are intended to prod the students to make predictions based on their existing knowledge before reading the new material. The **Applications** boxes are intended to encourage the students to try their hands at experimental design. The answers to these latter questions are provided in an appendix, usually in the form of a reference to a research paper that addressed that specific question.

For instructors who have used the fourth edition of this book, there is only one major rearrangement of material. The material on DNA and chromosome structure has moved from Chapter 2 to Chapter 1 to allow room for more discussion of analytic techniques. Once again, the final four chapters are shorter and much less dependent on each other, so they can be used in any order or

Preface

omitted at an instructor's discretion. All chapters contain updated material, but there are significant additions to Chapters 14, 16, and 17. I have tried to convey the concept of the "Age of Phage" as a theme throughout the book.

There is an appendix that provides Internet addresses where current information about maps and organisms is located because the amount of detail now available precludes publishing current maps in a book of this size. A supporting Web site for this book is located at http://lifesciences.asu.edu/bactgen/

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