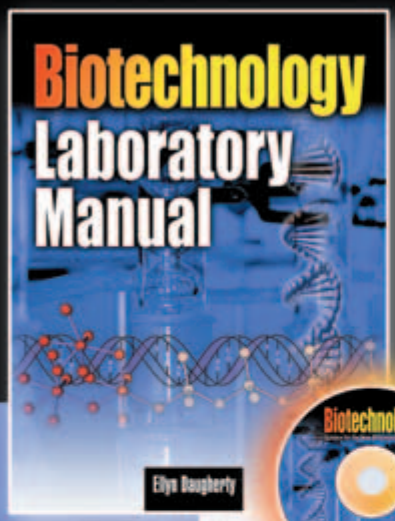

Biotechnology Laboratory Manual

0-7638-2902-1

Join the
Biotechnology Revolution!

Laboratory Manual Features:

- Nearly 100 lab activities spanning 14 chapters teach the standard lab operating procedures (SLOP) for working in a biotechnology facility
- Addresses key topics, including DNA and protein isolation and analysis, cell culture, recombinant DNA and transformations, DNA synthesis, and PCR
- Integrates the strategies, methods, and documentation required to design and analyze experiments and apply the resulting data
- Emphasizes laboratory safety procedures, including clean-up, storage, and disposal
- Builds problem-solving and troubleshooting skills required in job settings

Components:

- **Text and Encore Multimedia CD**
  - Lab Tutor: Flash animations of key lab skills
  - Quizzes
  - Glossary and Image Bank
  - Crossword Puzzles
  - Flash Cards
- **Lab Manual** with activities and experiments for every chapter; packaged with Encore Multimedia CD
- **Lab Notebook** to record results and analyses
- **Instructor's Guide** (printed) and **CD-ROM Package**: Includes course planning tools, teaching hints, detailed lesson plans, model answers, and evaluation guides
- **Test Generator and Item Bank**: create your own tests or use predefined, ready-to-activate tests
- **Internet Resource Center**: Student and Instructor resources at www.emcp.com
- **Class Connections**: Course materials in WebCT and Blackboard

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Call: 800-535-6865
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Fax: 800-328-4564
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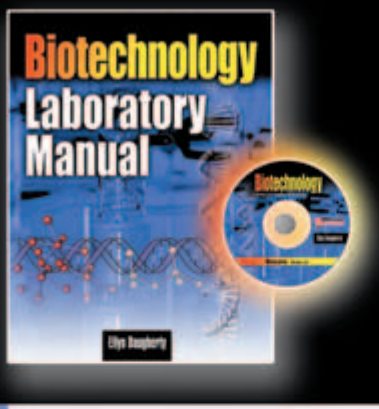

Biotechnology Laboratory Manual

Laboratory Manual Contents:

Companion Lab Manual Sample Chapter 4: DNA Isolation and Analysis

Introduction (p. 63): The chapter begins with an overview of the activities and techniques to be explored, along with the significance of this work. This helps the student focus on what is to be learned and why.

Lab Experiments (pp. 64, 65, 68, 69, 71, 74, 76, 79, 82, 85): Each lab chapter consists of several experiments organized into parts and processes based on the scientific method and standard lab operating procedures.

Background (p. 64): The foundation information for each experiment is presented to provide a context for discovery.

Purpose (p. 64): This brief statement presents the "why" of the work. What is the goal?

Materials (p. 64): This list identifies the materials and equipment required and the order in which they will be used.

Procedure (p. 64): Sometimes divided into two or more parts, the *Procedure* section presents the heart of the experiment in clearly defined steps. Safety precautions and troubleshooting hints are highlighted. Students are directed to record their data and results in a Laboratory Notebook (available as a product ancillary or students may buy one on their own).

Thinking Like a Biotechnician (p. 65): At the end of every experiment, a series of questions require students to reflect on the results, analyze the data, and propose reasons for the outcome and next steps, if applicable.

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