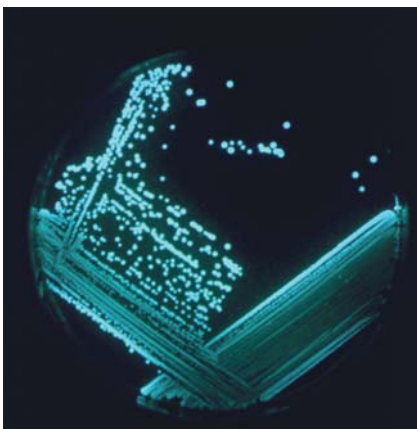


MolecuLab 115

Bioluminescent Bacterial Transformation

**AP Lab 6
Techniques**



About Bacterial Bioluminescence

Many organisms have the ability to emit biologically produced light. Perhaps some of the most bizarre and fascinating of these are marine fish and squid, which have a variety of unique light organs. However, most luminescent marine animals do not produce bioluminescence themselves, but harbor bioluminescent bacteria in specialized light organs.

Unraveling DNA: Molecular Biology for the Laboratory
Winfrey, Rott, Wortman
Prentice Hall

In this exercise, your students will transform recombinant plasmids containing the *lux* operon for bacterial bioluminescence into *E. coli*. After transformation, students will see bioluminescent colonies on an agar plate. This exercise fulfills requirements for AP Biology Laboratory #6.

This exercise requires three 45-50 minute class periods. This includes time for students to transform *E. coli*, plate onto agar, analyze transformants, and isolate bioluminescent colonies. Designed for six teams of students.

Because of the perishable nature of some components, we recommend you request kit delivery approximately 2 weeks prior to use.

Ordering Information:

MolecuLab™ 115	Replacement Biologicals 115
E1-1115\$75	E1-2215 (shaded in blue below)\$60

MolecuLab™ 115 Includes:

- *E. coli* strain DH5 α
- Plasmid solution
- LB/Amp agar plates
- LB agar plates
- Instructor control strains
- Sterile CaCl₂
- Sterile inoculating loops
- Sterile LB broth
- Cell spreaders
- Sterile culture tubes
- One CD containing student protocols and instructor's manual