

Intro to Biotech lab series for Honors Scholars

At the DNA Learning Center – Pearl Second Floor (entry at 62 Tillary St)

DNA Fingerprinting

Thursday, September 25 – 1:00-2:00 PM

Human DNA is more alike than different, so how do we find the differences? Restriction enzymes are proteins that recognize specific DNA sequences and can be used to determine whether a particular DNA sequence is present. In this lab, DNA from "evidence" and "suspects" will be compared using restriction enzyme digest and agarose gel electrophoresis. DNA analysis will then be combined with crime scene data to draw conclusions about each suspect.

Glowing Genes

Thursday, October 16 – 1:00-2:00 PM

Two genes, for antibiotic resistance and fluorescence, are introduced into the bacterium *E. coli*. Following overnight incubation, transformed bacteria are compared to non-transformed bacteria for their ability to grow in the presence of ampicillin and glow when exposed to ultraviolet light.

Protein Purification

Thursday, November 13 – 1:00-2:00 PM

In this lab, green fluorescent protein (GFP) is isolated from genetically engineered bacterial cells. Using a technique called hydrophobic interaction chromatography (HIC), GFP is separated from cellular proteins through binding with a hydrophobic resin. Upon completion of the lab, tubes of purified GFP fluoresce bright green when exposed to UV light.

LOCATIONS

BROOKLYN

DNALC NYC at City Tech

62 Tillary Street Brooklyn, NY 11201

Mail: 300 Jay Street Brooklyn, NY 11201

718-285-0389

ΜΑΝΗΑΤΤΑΝ

Harlem DNA Lab

2351 First Ave at 120th Street East Harlem, NY 10035 516-367-5170

LONG ISLAND

Dolan DNA Learning Center

334 Main Street Cold Spring Harbor, NY 11724

Mail: 1 Bungtown Road Cold Spring Harbor, NY 11724

516-367-5170

WESTCHESTER

Regeneron DNALC

1 Rockwood Road Sleepy Hollow, NY 10591 914-800-9991

NEW JERSEY

DNALC at Passaic County Biotechnology Innovation Center

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