**Company Sponsored High School Summer Internship Program in Molecular Biology**

**Introduction**

The following materials provide time lines, standard operating protocols (SOPs) and lesson plans used to develop summer internships to recruit/train high school seniors and juniors in the basic skill sets used in a small company molecular biology laboratory.

**Duration**

The internship is devised to run for five to six weeks during high school summer break. An optional component is included as a work study program.

**Structure**

The internship has two components.

Component 1 consists of concepts and skills required to move target DNA sequences into a cloning plasmid and then into an expression vector. Time permitting, the expression vector is transformed into an expression system and recombinant material produced for analysis. The expression system targeted here is based on *B. subtilis* and the shuttle / expression vector used is pHT43 which is designed for cloning in *E. coli* and *B. subtilis* recombinant protein production and secretion into the culture media.

Component 2 consists of company personnel and interns developing an intellectual pursuit that is synergistic with new product development and company commercialization goals. For small start-up companies this is a program used to develop SBIR funding concepts and recruit employees.

**Cost Structure**

Equipment

Reagents

Intern Labor: $10.00 / hr (~20 hr / week).

Company Personnel (Instructor)

Overhead: rent, lease, utilities.

Administrative: payroll and ordering reagents.

Insurance