

Part-time Positions available at
The Bergen County Academies Bioresearch Program
For graduate biology students

Program Description

The goal of the Bergen County Academies' **Bioscience Research Program** is to enable a student to learn how biologists work as scientists in the research laboratory. There are two components to the program; the major portion on the program occurs during the school year, followed by a six-week intensive summer program. There is a diverse array of sophisticated instrumentation spread over multiple labs.

Schedule

The program is fully active 5 days a week, Monday to Friday from 8AM till 5 PM. Access to the lab is available evenings and weekends by appointment with the supervisor. No student is ever allowed in the lab without supervision.

Required skills

After entry-level training under the general supervision of faculty, a student intern would be responsible for independently performing routine tests in a research laboratory and contributing to general maintenance of the laboratory, equipment and supplies.

The student intern:

Follows established procedures or protocols and utilizes aseptic technique to perform experiments. These may require basic tissue culture, and/or cell separation methods, and laboratory methods/techniques associated with biochemistry or molecular biology such as: purifications; quantitative and qualitative analyses, and localizations; as well as other functional and enzymatic assays.

May also perform recombinant DNA library construction; screening, isolation and mapping clones; oligonucleotide hybridization; plasmid subcloning, and/or screening DNA libraries.

Operates basic laboratory equipment such as centrifuge, pH meter, analytical balance, scintillation counter, spectrophotometer, light microscope, and/or utilizes laminar flow hood. May also utilize sophisticated instrumentation such as flow cytometer, electron microscope and/or fluorescence or luminescence spectrophotometer and ELISA reader. May perform specific analyses using techniques such as column chromatography, affinity chromatography for protein purification, and/or ELISA's. Operates lab computers for data entry.

May utilize in vivo models in experiments. May dissect animal remains as required. Prepares tissue for study utilizing histochemical techniques.

Maintains accurate data records.

Maintains and makes minor adjustments to equipment, e.g. calibrating, alignment.

Complies with biohazard safety standards through proper handling of potentially hazardous chemical and biological agents in the workplace.

Uses sterile techniques to avoid contaminating lab experiments.

Uses universal safety precautions to protect self and co-workers from biohazardous materials, including blood-borne pathogens.

Prepares solutions, reagents, and stains following standard laboratory formulas and procedures.

Monitors inventory levels, orders materials and supplies in accordance with established policies and procedures, counts orders upon receipt.

Decision Making:

Carries out duties and responsibilities with supervision. Makes decisions and establishes work priorities on essentially procedure-oriented operations.

Authority:

Does not direct the activities of staff or students.

Certification:

Required: No Requirements

Physical Requirements:

Work produced is subject to precise measures of quantity and quality

Work environment may include areas of unpleasant extremes of cold or heat

Biohazardous conditions such as the risk of radiation exposure, fumes or airborne particles, and/or toxic or caustic chemicals may be present in this work environment which mandate attention to safety considerations

Near vision to see objects clearly within 20 inches

Sharp focus to adjust vision when doing close work that changes in distance from eyes

Full spectrum vision to identify and distinguish color

Finger dexterity required to manipulate objects with fingers rather than with whole hand(s) or arm(s), for example, using a keyboard

Handling by seizing, holding, grasping, turning or otherwise working with the hand or hands, but without finger dexterity

Sitting in a normal seated position for extended periods of time

Occasionally lifting, carrying objects weighing 10 lbs. or less

Occasionally pushing, pulling objects weighing 30 lbs. or less

Ability to move about

Send letters of interest and resumes to
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