Research Associate Position – Flow Cytometry
Research Core Facility
LSUHSC - Shreveport

Task Statement:

The primary duties of this position will be to operate one or more of the instruments in the Research Core Facility at LSUHSC-Shreveport. The instruments include four flow cytometers, a DNA array analysis workstation, two mass spectrometers, and two confocal microscopes. In this capacity, the incumbent will be a member of a team of four Research Associates assigned to the operation of the Research Core Facility. Responsibilities will include assuring the proper operation of the Facility equipment, maintaining scientific and administrative records, and interacting with the various Principal Investigators using the Research Core Facility services. The incumbent will be under the supervision of the Research Core Facility Manager.

The incumbent will have primary responsibility for the operation of the **Flow Cytometry** component of the Research Core Facility. This will include the operation and maintenance of Becton Dickinson FacsAria and FacsVantage DiVa cell sorters, FacsCalibur and LSRII flow cytometry analyzers, and other equipment relating to this component of the Research Core Facility. The incumbent will consult with the various principal investigators, research associates, post-docs and students using this component of the Research Core Facility in matters regarding specific research protocols, experimental design, reagent selection, and data analysis and interpretation.

Normal working hours will be Monday through Friday from 8:00 a.m. to 5:00 p.m. However, there may be occasions where weekend and holiday work will be necessary. Overtime may also be required. Lunch and breaks are dictated by workflow.

Incumbent will maintain a customer-oriented awareness in acknowledging and responding to needs as they occur to assure that customer satisfaction is met at all times.

Regular attendance is required to perform the functions below.

Qualification Requirements

Required: Bachelor's degree in medical technology, biology, biochemistry, or a related field. Experience working in a biomedical research laboratory is preferred, but not essential. Prior experience with flow cytometry is highly desirable.

Supervision Exercised:

None

Essential Functions:

50% - Perform flow cytometry experiments as per the needs of the individual Principal Investigators using the Research Core Facility with minimal supervision. The incumbent may also be cross-trained in realtime PCR, confocal microscopy, and DNA array analysis. Maintain data files of these experiments.

10% - Assist the Research Core Facility Manager in the processing of charges.

5% - Interact with the Faculty Oversight Group to establish policies and procedures relating to the operation of the Research Core Facility.

5% - Interact with the Scientific Director for the flow cytometry component of the Research Core Facility on scientific matters relating to the operation of that component.

15% - Consult with Principal Investigators and their technical staff regarding specific research protocols, experimental design, reagent selection, and data analysis and interpretation.

5% - Troubleshoot problems as they arise and recommend alterations as necessary.

5% - Order laboratory equipment and supplies as specified by the Research Core Facility Manager.

Marginal Functions:

3% - Perform other responsibilities involving laboratory maintenance including preparation of media and solutions.

2% - Perform related special projects as assigned. Assist the Faculty Oversight Group in developing short and long range goals and objectives of the Research Core Facility.

Required Knowledge, Skills, and Abilities:

Individuals must possess the knowledge, skills, and abilities to perform the essential functions of the job, with or without reasonable accommodation. The incumbent must possess the necessary physical abilities with or without the aid of mechanical devices to safely perform the essential functions of the job.

1. Data: The applicant must have sufficient training in biological or physical sciences to analyze data to discover facts and/or develop concepts.

2. People: Ability to interact with other researchers in the laboratory and to present research results in a semi-formal environment, including a laboratory group meeting. This requires minimally the ability to speak and write fluent English.

3. Things: Requires the ability to access the laboratory and to work with the hands. It is essential that the worker exhibit sufficient hand dexterity to hold and dispense materials from a graduated laboratory glassware and to accurately read these graduations, as well as grasp, adjust, and dispense small volumes from small volume dispensers such as a laboratory pipetteman.

4. Minimum reasoning ability: Apply principles of logic and scientific thinking to a wide range of intellectual and practical problems and to deal with nonverbal symbols, including scientific formulas and equations.

5. Minimum math ability: Ability to perform simple algebraic calculations.

6. Minimum Computer ability: Familiarity and competence in the use of word processing programs, spreadsheets, and graphics art software. Possess familiarity and competence in the use of computers to easily learn analysis software applications.

7. Minimum reading ability: Ability to read scientific and technical journals and abstracts such that relevant information can be extracted and presented to supervisor or fellow workers.

8. Minimum level of verbal aptitude: Ability to read and comprehend complex technical materials.

9. Minimum level of numerical aptitude: Ability to apply mathematical techniques to science.

10. Minimum level of spatial aptitude: Ability to visualize and understand the spatial relations of objects and forces involved in a situation and resultant effect on each other.

11. Minimum level of form perception: Ability to read measuring instruments such as pipettes and graduated cylinders and flasks.

12. Minimum level of clerical perception: Ability to read, record and type data accurately. Ability to develop and maintain an organized record keeping system.

13. Minimum level of motor coordination: Ability to coordinate eyes and hands under a dissecting microscope. This level of coordination is generally associated minimally with the upper third of the population.

14. Minimum level of finger dexterity: Ability to move knobs and switches on a control panel; ability to type from a computer keyboard; ability to manipulate objects.

15. Minimum level of manual dexterity: Ability to use a step stool to stack items on an overhead shelf.

16. Minimum level of hand/eye/foot coordination: A minimum level of this aptitude is thought to be required to move through a crowded lab, handle containers, climb and place containers on shelves, without knocking over or damaging fragile containers, bottles of liquids, or sensitive instruments.

17. Minimum level of color discrimination: A minimum level of this aptitude is thought to be required to be able to distinguish primary colors often used to color code reagents.

18. Temperaments: Ability to talk and interact with other researchers as part of a research team.

19. Interests: Interests in leading others through activities involved in high-level verbal and numerical abilities.

20. Degree of physical demands: Ability to lift a minimum of 20 pounds from the floor to chest height, and to manipulate objects of this weight while on step stools. This is done occasionally to place or remove supplies from storage shelves.

21. Type of physical demands:

Talking: Must be able to express or exchange ideas by means of the spoken word in order to communicate rapidly and efficiently with staff and supervisors.

Hearing: Must be able to perceive the nature of sounds and to hear the spoken word.

Near acuity: Clarity of vision at 20 inches or less.

Depth perception: Three-dimensional vision.

Accommodations: Adjustment of the lens of the eye to bring an object into sharp focus when doing near point work at varying distances from the eye.

22. Environmental conditions: The experiments often require that working hours are altered from those traditional hours to accommodate experimental protocols. Thus, procedures must often be performed before 8:00 am, after 5:00 PM, or on weekends. Some stress is involved as proper performance of the experiments is required to generate valid data and conclusions, whereas the consequences of being unable to perform experiments properly could be poor laboratory productivity, which ultimately could affect the ability to procure funds to operate the laboratory.

23. Environmental hazards: The worker will be required to work with small amounts of radioactive materials (using institutionally approved procedures), laboratory chemicals (some of which are toxic if handled incorrectly), and high voltage equipment with safety interlocks.

24. Machines: centrifuges, vacuum devices, ultraviolet and visible light measuring devices such as spectrophotometers, balances, sterilization equipment (autoclaves), scintillation counters, computers, fraction collectors, micro manipulators, and pumps.

For additional information or to apply, please contact:
Deborah Chervenak at (318) 675-5765.