position description

Date: September 2021

Title: Research Assistant 4

Department: Genetics and Genome Sciences

School: Medicine

Location: BRB

Supervisor Name and Title: Thomas LaFramboise, PhD, Associate Professor

POSITION OBJECTIVE

Working with a high degree of independence and under general direction, the Research Assistant 4 will perform research tasks involving extensive *in vitro* and *ex vivo* (organoid) experiments related to cancer research and drug discovery. The research assistant will coordinate, design, implement, test and validate data collection and analysis methods in molecular biology and genetics. The individual will work closely with laboratory undergraduate, graduate students, and postdocs, also helping to train some of these personnel in various experimental techniques.

ESSENTIAL FUNCTIONS

1. Coordinate major activities of lab. Oversee, develop procedures, optimize experiments in cell line manipulation and drug screening, as well as in genetic perturbations and assays in organoid systems. (25%).
2. Provide input and recommendations to principal investigator regarding significant developments in research projects. Key complex tasks include the creation of cytoplasmic hybrids (“cybrids”), coordination of cell culture, and inducing overexpression/knockouts in *in vitro* and *ex vivo* models. (20%)
3. Perform the most complex quantitative analytical procedures. Specific tasks include the design of new plasmid pools, immunohistochemistry, and general molecular biology work (plasmid cloning, PCR, DNA extractions, etc.). (20%)
4. Train or instruct others in research techniques and standard laboratory policies as well as basic molecular genetics research techniques. May supervise research assistants, technicians and students. (20%)
5. Assist in developing procedures. Review the efficiency of *in vitro* genetic engineering techniques and complex quantitative precision of experiments. Coordinate information with others as needed. (10%)
6. Co-author research projects and provide data to the principal investigator for sponsor progress reports, manuscripts, grant and pilot applications. Participate in manuscript and grant writing, review data and figure quality. (5%)

NONESSENTIAL FUNCTIONS

Perform other duties as assigned. (<1%)

CONTACTS

Department: Daily contact with supervisor and laboratory personnel to discuss research projects.

University: Occasional contact with other departments and clients throughout the university, and with cross-institutional collaborations to discuss research.

External: Limited or no contact with vendors to exchange information.

Students: Frequent contact with students, fellows, and medical students to exchange information.

SUPERVISORY RESPONSIBILITY

May supervise research assistants, technicians and students.

QUALIFICATIONS

Experience: 5 to 8 years of related experience required.

Education/Licensing: Bachelor's degree in Science required.

REQUIRED SKILLS

1. Has knowledge of commonly used concepts, practices, and procedures within a particular field.
2. Relies on instructions and pre-established guidelines to perform the functions of the job.
3. Ability to operate laboratory equipment.
4. Must be able and willing to learn new techniques, procedures, processes.
5. Strong molecular biology skills (PCR, DNA library prep, cloning, Retroviral constructs).
6. Strong organization skills and good habit of maintaining a clean lab working environment; demonstrate attention to detail and accuracy, time management skills, and proven ability to successfully follow-through on assigned projects.
7. Professional and effective verbal and written communication skills and good interpersonal skills with the ability to work and communicate with various individuals within and external to the university.
8. Ability to work effectively independently and collaboratively within a team (must be highly motivated, responsible, dependable and a self-starter).
9. Ability to maintain meticulous, complete, and easily retrievable laboratory data.
10. Ability to willingly learn new techniques and procedures as needed, follow established protocols or laboratory procedures and request clarification if necessary.
11. Ability to meet consistent attendance.
12. Ability to interact with colleagues, supervisors and collaborators face to face.

WORKING CONDITIONS

General laboratory environment: The lab is an open floor plan with abundant bench space. Ample desk space with computers is provided. The lab is equipped with one shared fume hood for storage of hazardous and non-hazardous materials. Handling of recombinant vectors requires BSL-2 training. The shared cell culture room nearby is equipped with incubators, culture hood, and microscope. The employee should expect frequent interactions with lab members and must be willing to collaborate.