

position description

Date: January 2020

Title: Research Assistant 2

Department: Genetics and Genome Sciences

School/Management Center: School of Medicine

Location: Biomedical Research Building 822

Supervisor Name and Title: Tracey Bonfield, Associate Professor

POSITION OBJECTIVE

Working under general supervision, the Research Assistant 2 will plan and carry out research projects in accordance with general plans. The goal of the project will be to culture stem cells and learn their potency and efficacy using *in vitro* tissue culture and *in vivo* modeling. This position will work with animals as well as tissue obtained from humans.

ESSENTIAL FUNCTIONS

1. Plan and carry out project in accordance with general plans. Perform sterile techniques and extensive tissue culture of mesenchymal stem cells and transformed cell lines as well as primaries. Perform flow cytometry and immunofluorescence to follow cells. (30%)
2. Conduct a series of experiments to supply scientific information as part of other projects in the laboratory by utilizing a variety of bacteria, performing microbiology studies, culturing bacteria, sterile technique, counting colonies and managing a variety of growth mediums. Assist in the *in vivo* animal studies, using our murine models of lung infection and inflammation. (30%)
3. Work with pre-established guidelines and assist in the development of new technologies or improved approaches to perform the functions of the job. Utilizing both a multiplex immunoassay, luminescence and ELISA technologies for Elastase activity and functions over time. Use reagents that will optimize the extraction of mRNA from cell pellets from patient's samples, with real time PCR as the end-point of analysis. (10%)
4. Maintain meticulous documentation from experiments and collection of data. Utilize an on-line database for transparent acquisitions and documentation of data for all bench, animal and patient *ex vivo* sample evaluation and number of bacteria colonies. Perform data analysis and present results in laboratory meetings. (10%)
5. Maintain certain equipment facilities. Oversee inventory. (10%)

NONESSENTIAL FUNCTIONS

1. Train new staff and direct the work of students. Act as mentor to students, fellows and other new individuals in the laboratory. (5%)
2. Assist in manuscript or report preparation. (4%)
3. Perform other duties as assigned. (1%)

CONTACTS

162032 Research Assistant 2 (SG10,N375)

Department: Daily contact with supervisor and daily interactions with the laboratory managers in the Bioanalyte Core, The Cystic Fibrosis Center and the Animal Core to exchange information.

University: Occasional contact with other departments and clients throughout the university to share information.

External: Limited contact with vendors or clients outside the university to exchange information.

Students: Frequent contact with students, fellows, residents and medical students as well as other employees to exchange information.

SUPERVISORY RESPONSIBILITY

No direct supervision of staff employees, may mentor students in bench work.

QUALIFICATIONS

Education/Experience: Bachelor's degree and 1 to 3 years of related experience or Associate's degree in an approved biotechnology program and 2 to 4 years of related experience.

REQUIRED SKILLS

1. Knowledge of commonly used concepts, practices and procedures within an immunology/microbiology laboratory as well as some appreciation for stem cell cultures.
2. Ability to operate laboratory equipment.
3. Must demonstrate compliance with Case Western Reserve University animal research and care (ARC) policies and procedures and compliance to regulations of the Animal Welfare Act, Public Health Service Policy, AAALAC guidelines and other applicable regulatory guidelines.
4. Must demonstrate compassion for animals within Case Western Reserve University facilities and dedication to the Animal Resource Center's mission. Must handle animals with care and respect at all times, maintaining a high standard of personal cleanliness and utilize protective gear to protect the health of the animals.
5. Previous experience working with animals preferred.
6. Knowledge and understanding of commonly-used concepts, practices and procedures of Universal Guidelines for safety.
7. Ability to perform real time PCR, immunoassays, cell culture, flow cytometry, ELISAs.
8. Professional and effective verbal and written communication skills.
9. Strong organization skills; ability to multi-task, prioritize and meet deadlines. Must demonstrate attention to detail and accuracy, time management skills and proven ability to successfully follow-through on assigned projects.
10. Ability to work effectively independently and collaboratively within a team. Must be highly motivated, responsible, dependable and a self-starter.
11. Ability to work with sensitive information and maintain confidentiality.
12. Effective problem-solving skills; must demonstrate sound judgment and good decision making.

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13. Must demonstrate flexibility and ability to work under pressure; must be able and willing to work in a fast-paced, changing environment and conform to shifting priorities, demands and timeline.
14. Familiarity with policies and procedures of IRBs, IACUCs and Biosafety.
15. Proficiency in Microsoft Office (ex: Word, Excel, PowerPoint, Access, Publisher), database applications and with internet navigation.
16. Must demonstrate willingness to learn new techniques, procedures, processes and computer programs as needed.
17. Must have a working knowledge of stem technologies and have a literature appreciation for the topic.
18. Ability to meet consistent attendance.
19. Ability to interact with colleagues, supervisors and customers face to face.

WORKING CONDITIONS

The laboratory works with mice, bacteria and human products. There should be no heavy weight requirements. Traveling due to interactions with the Cleveland Clinic may be required as well as other clients associated with the technological advances outlined in the research initiative. There may be times that the work will require flexible hours to accomplish the research initiative. Compensation for extended time will be provided.

Case Western Reserve University's animal facilities are accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) and is managed according to the "Guide for the Care and Use of Laboratory Animals" appropriate Federal Animal Welfare Regulations, and the Public Health Service "Policy on the Humane Care and Use of Laboratory Animals." This position, and all animal research personnel, are subject to internal compliance to Animal Resource Center Standard Operating Procedures and to compliance regulations of the Animal Welfare Act, Public Health Service Policy, AAALAC guidelines, the State of Ohio Veterinary Practice Act, Federal Drug Enforcement Administration regulatory guidelines, US Food and Drug Administration Center for Veterinary Medicine regulations and other applicable regulatory guidelines.