

**FUNCTIONAL JOB DESCRIPTION:**  
Post-Doctoral Associate

Department of Urology  
Position Code: 093

02.27.2024

**Reports to: Phillip Rappold MD, PhD**

**GENERAL PURPOSE:**

The purpose of the position is to provide advanced, doctoral level scientific research for the Rappold research laboratory and projects in the Department of Urology. Research projects focus on finding novel strategies to overcome immunosuppressive mechanisms and biomarkers of therapeutic response in renal cell carcinoma. Currently we are exploring novel sources of and regulation of adenosinergic signaling in the tumor microenvironment as well as how stereotactic ablative radiation might be synergistically combined with immune checkpoint inhibitors to maximize clinical responses and improve patient outcomes. Projects will be multidisciplinary integrating experiments utilizing cell culture, animal models, as well as human tissue obtained from the operating room. Under general direction and with considerable latitude for independent scientific judgment, this position provides significant research contributions by directing and executing small, complex research projects or major aspects of larger research projects. May work as an independent researcher in a scientifically unique phase of research or as part of a larger, complex project. Provides significant contributions to research data analysis, scientific assessment of relevance of findings, manuscript preparation, protocol development and modifications. Orients and assists other staff members, such as, but not limited to technicians, laboratory aides, graduate students, undergraduate students, postdoctoral appointees and professional staff; assists with troubleshooting and solving technical problems and provides suggestions and advises others.

Priority will be given to energetic and motivated candidates with a background in either cancer biology or immunology, methods of analyzing gene and protein expression, manipulation of gene expression, mouse handling, and flow cytometry

**SPECIFIC RESPONSIBILITIES:**

Under general direction from supervising PI and with considerable scientific latitude for independent scientific judgment contributes to the knowledge and scientific research tasks related to kidney cancer.

- 15% Assists in developing and implements research projects or sub-projects. Writes protocol for the conduct of research, which include purpose of study, design of experiments, lists of materials and methods to be used and the schedule for activities. Ensures all aspects and phases of projects fulfill aims and goal of the overall scientific research goals.
- 15% Analyzes and evaluates scientific results of complex and novel experimental data and provides interpretation of results within the scope of the research study. Examines and assesses the importance of scientific findings in relation to the general areas of human and murine cell culture, protein and gene analysis assays, lentiviral production, cell transfection/transduction, animal models of kidney cancer. May work as an independent researcher in a scientifically unique phase of research or as part of a larger, complex project.
- 15% Independently operates complex equipment. Modifies test methods; selects procedures for data collection and data handling; utilizes computer programs for conversions and for the statistical analysis of data. Examples include but are not limited to murine recovery surgery, quantitative PCR, electrophoresis, and flow cytometry equipment. Evaluates the performance of research equipment and makes design changes or develops new approaches for their use.
- 35% Implements and evaluates gene expression knockdown and editing using siRNA/shRNA and CRISPR/Cas9 techniques that will meet overall project goals. Handles experiments related to learning mouse recovery surgery techniques, tissue harvesting and processing for immunostaining, flow cytometry, RNA sequencing, Western blot. Monitors, evaluates and makes scientific interpretations of the findings of experimental cells following gene editing within the scope of the research project; studies the effects of depletion of targeted proteins on cancer cell lines. Collects and analyzes protein, genetic materials. Writes reports on all phases of laboratory work. Contributes significantly to manuscript preparation resulting from the research and its findings, thereby meeting all expectations for, at a minimum, co-authorship of scientific publications. Significantly contributes to the applications for grants.
- 5% Keeps abreast of trends in field of interest by reading current research literature, abstracting scientific articles of value in the prosecution of research problems, and attending and presenting at scientific meetings, seminars, and research conferences for the purpose of applying knowledge and expertise and adapting scientific techniques to current research and projects.
- 5% Directs the gathering of research materials, supplies, equipment, and experimental apparatus.
- 5% Controls research project expenditures in consultation with supervising faculty. Recommends and implements alternatives when necessary. Establishes and maintains a balance between expenditures of individual project allocations versus the overall annual budget.
- 5% Orients junior staff members and/or students to the project. Advises and assists others with special research projects and problems.

**MINIMUM REQUIREMENTS:**

Doctoral degree with major course work in the field of assignment

**SALARY RANGE**

The pay range of \$55,341 - \$69,000 represents the minimum and maximum compensation for this job. Individual annual salaries/hourly rates will be set within the job's compensation range, and will be determined by considering factors including, but not limited to, market data, education, experience, qualifications, expertise of the individual, and internal equity consideration.

**NOTE: This document describes typical duties and responsibilities and is not intended to limit management from assigning other work as required.**

Joint Commission standards requires that the job descriptions and performance appraisals of staff, without clinical privileges, who participate in the assessment, treatment of care of patients, address the ages of the patients served. Technical staff, including phlebotomists, is included in this definition. Check all that apply:

- Neonate       Pediatric       Adolescent       18-65 years       Over 65 years       Does not Apply