RA-OR RESEARCH ASSOCIATE – OPEN RANK

JOB DESCRIPTION - Metabolomics

Overview
POSITION SUMMARY:

We are seeking an enthusiastic and motivated individual who is interested in supporting metabolism-based research projects in the department of Molecular Medicine in a variety of experimental models using liquid-chromatography mass-spectrometry. Under the direction of the Principal Investigator (or designee) you will provide high-quality and professional operational support to our liquid-chromatography mass-spectrometry platform by performing bench level experiments. You will use discretion in prioritizing and organizing workflows. You will be expected to work independently and as part of a team to ensure high-quality data acquisition in a state-of-the-art laboratory.

This is an open-rank posting (there are four levels of Research Associate) - candidates will be hired into the level commensurate with their experience.

Responsibilities
ESSENTIAL FUNCTIONS:

Research Associate I:

- Perform laboratory experiments and may be responsible for a single research project.
- Utilize all software relevant to experiment and equipment used
- Interpret data, form conclusions, and decide on next steps under the direction of the PI or designee
- Maintain accurate records, may modify protocols with the approval of the PI or designee
- Review literature, publications and grants relevant to assigned projects
- Record results according to established lab, sponsor & university protocol
- Assist with performing data analysis and/or mathematical computations
- Maintain a detailed lab notebook according to lab practice
- Present findings at lab/group meetings
- Monitor laboratory supply levels and order as needed.
- Prepare and label buffers, media, solutions, etc and clean laboratory glassware
- Assist with and comply with all safety regulations and infection control standards.
- Train on IACUC, IRB, EHS, Radiation safety protocols
- Comply with all applicable state, federal university, and sponsor policies and agreements
- Provide support with identifying problems and challenges, propose resolutions, implement appropriate solutions
- Provide support with drafting standard operation procedures in compliance to EHS regulation specific for the lab
- Perform other duties as required

ADDITIONAL DUTIES:

- Process and prepare samples for analysis by LCMS by following SOPs
- Perform weekly cleaning and calibration of LCMS instrumentation
- Perform data quality checks
- Attend team meetings. May participate in scientific conferences and contribute to scientific journals

Research Associate II:

Essential functions noted above plus:

- May assist with the training of new lab personnel
- Provide support with drafting standard operation procedures in compliance to EHS regulation specific for the lab
- May assist with drafting manuscripts
- Process and prepare samples for analysis by LCMS by following SOPs
- Perform weekly cleaning and calibration of LCMS instrumentation
- Perform data quality checks
- Attend team meetings. May participate in scientific conferences and contribute to scientific journals
- Consult with literature and scientific colleagues to maintain professional expertise

Research Associate III:

Essential functions noted above plus:

- Perform complex laboratory experiments and may be responsible for one or more independent research projects
- Perform in-depth data analysis and/or mathematical computations
- Compile and analyze data and present it in a format suitable for publication according to PI specifications
- May oversee laboratory supply levels and order as needed; negotiate with suppliers to optimize available resources
- Monitor laboratory equipment service contracts and monitor maintenance on laboratory equipment
- May manage general operations of the laboratory, including lab personnel, procedures, and projects
- May create new protocols and/or modify defined protocols, as necessary, and with the approval of the PI
- Prioritize and perform several tasks or procedures simultaneously with diligence
- Perform duties and experiments with independence
- Provide training of new lab personnel
- May monitor laboratory spending in accordance with budget guidelines provided by PI or designee
- May assist with budget and/or operational aspects of grant and contract funding.
- May assist with the training of new lab personnel
- Provide support with drafting standard operation procedures in compliance to EHS regulation specific for the lab

- May assist with drafting manuscripts
- Process and prepare samples for analysis by LCMS by following SOPs
- Organize laboratory supplies and orders as necessary to maintain laboratory stocks
- Perform weekly cleaning and calibration of LCMS instrumentation.
- Perform data quality checks
- Attend team meetings. May participate in scientific conferences and contribute to scientific journals

Research Associate IV:

Essential functions noted above plus:

- This position will contribute significantly to the management of the research program and will be involved in multiple aspects of the research projects and lab maintenance activities
- Independently design and perform multiple complex laboratory experiments.
- Interpret data, form conclusions, and decide on next steps with a high degree of independence
- Maintain laboratory supply levels and order as needed
- Manage laboratory equipment service contracts and coordinate maintenance on laboratory equipment
- Monitor and enforce all safety regulations and infection control standards
- Identify and write standard operation procedures in compliance to EHS regulation specific for the lab
- Train on IACUC, EHS, Radiation safety protocols
- Manage daily operations of the laboratory, including lab personnel, procedures, and projects
- Identify problems and challenges, propose resolutions, implement appropriate solutions
- Develop and implement new protocols and/or modify defined protocols, as necessary, and with the approval of the PI
- Mentor and train lab personnel on proper lab conduct and techniques
- Manage laboratory spending in accordance with budget guidelines provided by PI or designee
- Assist with budget and/or operational aspects of grant and contract proposals
- Negotiate with vendors to optimize available resources
- Contribute independently to writing sections for manuscripts and grants
- Direct the activities of research support staff
- Perform weekly cleaning and calibration of LCMS instrumentation
- Perform data quality checks
- Attend team meetings. May participate in scientific conferences and contribute to scientific journals

Qualifications
REQUIRED QUALIFICATIONS:

Research Associate I

- Bachelor's degree in biological science/biochemistry/(analytical) chemistry, or a field directly related to the work
- Basic understanding of lab safety and protocols
- Proficient in basic molecular biology and biochemical techniques, including working with micropipettes and buffer making
- Knowledge of Microsoft Office products
- Experience with electronic laboratory notebooks
- Ability to analyze data in a quantitative and objective manner.
- Ability to work in a team environment.

Research Associate II
- Requirements noted for RA I plus:
- 18 months of relevant research experience with a bachelor's degree in biological science/biochemistry/(analytical) chemistry or 0 years with a related master's degree.

Research Associate III
- Requirements noted for RA I plus:
- 3+ years of relevant research experience with a bachelor's degree in biological science/biochemistry/(analytical) chemistry or 1-year relevant research experience with a related master's degree
- Experience with chromatography and/ or mass spectrometry

Research Associate IV
- Requirements noted for RA I plus:
- 5+ years of relevant research experience with a master's degree in biological science/biochemistry/(analytical) chemistry or 3+ years relevant research experience with a related Ph.D. degree.
- Experience analyzing small molecules using chromatography and/or mass spectrometry

PREFERRED QUALIFICATIONS for all levels:
- Interest in advanced data processing and analysis (use of Matlab, R, Python etc).
- Familiarity with statistical models used to analyze large datasets