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