RESEARCH ASSOCIATE I - GRADE 7

Generic Position Overview

**Family:** Natural and Applied Science

**Cluster:** (NAS7) Research Associate

Note: Employees of Queen's University work in a challenging and diverse environment. Queen's is committed to encouraging the development of new skills and attributes in its workforce. It is critical that staff are able to adapt to a changing work environment and to acquire new skills as these become necessary.

Depending upon the size of the department or unit and its functional activities, incumbents who fall into this category may perform all of the duties listed below or, in the case of large departments or units, may be assigned to designated specialized functions.

**Generic Position Summary:** The incumbent designs, tests, and implements experimental protocols under guidance. He/she conducts procedures and observes and records results. Independent judgement is used to adapt procedures as the need arises. Incumbent may also participate in experiment design and optimization. He/she maintains cultures, prepares samples, and performs other maintenance duties. May work with hazardous materials, animals or equipment. Analyse results and prepare written and/or verbal reports. Computers are utilized in data entry, processing, and presentation. Supervise and coordinate staff. Ensure compliance with safety and ethical guidelines. Liaise and communicate with other staff, labs, or outside agencies. Incumbent may participate in other special projects as described below depending upon nature of the position.

Primary Duties and Responsibilities: Design, develop, test, and implement experimental protocol under the general guidance of the Principal Investigator. Use scientific methods and principals to prepare and conduct procedures, and observe and record results. Incumbent must use judgement and personal initiative to adapt procedures as required to meet the needs of the project and to research on a fairly independent basis. May maintain cultures, prepare samples, and care for experimental animals. May entail working with hazardous materials, animals or equipment.

Prepare results for presentation, usually in form of written report or proposal. May contribute to, co-author, or author scientific papers. Also prepare visual and verbal presentations and participate in lab meetings. Analyse data and interpret results, including use of complex computer programs. Monitor databases for accuracy. May be required to design and write computer programs.

Supervise junior staff and students. Allocate procedures, and provide guidance and consultation with respect to protocols and methods. Coordinate
and integrate activities of team members. Design training programs. Perform other supervisory tasks such as performance reviews and hiring/firing. May assist with budgeting and account administration. General laboratory supervision, including enforcing all regulations and standards to ensure integrity of information, ethical guideline compliance, and safety. Ensure maintenance and security of laboratory space and equipment.

Communicate research results and current information in field. Liaise with other staff, labs, and outside agencies in order to stay aware of developments and foster collaborative research efforts.

May participate in special projects such as design and implementation of new research labs; design and application of experimental prototypes; and coordinating clinical trials, including patient recruitment, performing clinical procedures such as venipunctures, medicine dispensing, etc., and follow-up.

Undertake other duties as delegated in support of the unit or department.

**Required Background:** In most positions, a Masters or PhD degree. Some relevant experience is required, but incumbent will learn many skills on-the-job. Some positions may require more extensive experience or training in a particular area of research, procedure, technique, or piece of equipment. Some positions may require nursing certification. Safety-related training will be provided on-the-job. Consideration will be given to an equivalent combination of education and experience.

**Special Skills:** Typical skills that *may* be required in the performance of job duties include:

Technical proficiency in the use of complex lab equipment and skill in use of precise instruments. Appropriate handling of samples and specimens. Careful and critical observational skills.

Organizational, problem-solving, and analytical skills. Judgement in choosing best protocol or adapting procedures to meet changing needs.

Technical/scientific writing skills, and communication skills in order to facilitate information sharing between lab and outside organizations.

Care in handling and disposing of hazardous materials, operating equipment, and preparing solutions and samples. Ability to handle animals may be required. This includes surgeries, care, and treatment which meets or exceeds ethical guidelines.

Computer skills to aid in the research, analysis and presentation of data. May require ability to write computer programs to meet specific needs of research lab. Familiarity with the Internet will be considered an asset.

Supervisory and leadership skills to provide direction and instruction to junior staff.
Mathematical and statistical analysis skills.

Interpersonal and communication skills (verbal and written) to deal with patients, staff, other labs and departments, and outside agencies. Ability to collate and analyse data and generate a coherent, concise report.

Ability to adapt quickly to changing circumstances and make accommodations on an independent basis, while keeping within the guidelines and goals of the Principal Investigator.

**Decision Making:** Examples of the types of decisions regularly made on the job:

Make decisions regarding experimental approach. Adapt protocols and procedures as required. Assess progress and determine alternative methods. Develop novel experimental approaches to questions.

Allocate work to junior staff and students based on research activity schedule.

Determine which equipment needs to be repaired, replaced, or acquired. Research and make a recommendation regarding supplier or manufacturer.

Decide which data will be analysed based on quality control procedures. Determine best method to present information and draft reports or articles.

Determine whether a particular procedure falls well within ethical guidelines, and whether any other concessions could be made to minimize discomfort to animal (or, in the case of Clinical Trials, human) subjects.

Determine appropriate way to dispose of hazardous wastes within safety guidelines and react in an emergency situation to minimize damage. Determine when a problem or accident is serious enough to warrant consultation with supervisor.

Decide how to answer questions from other labs or outside agencies regarding the research project and findings.

Make recommendations regarding the lab budget and ensure accurate administration of accounts.

**Supervisory Responsibilities:** May be supervisory duties in some positions. May delegate work, hire/fire, and conduct performance appraisals.

_Last update: December, 1999_