

Classification Level P1 – Working Professional

**Professional Grouping:
RESEARCH**

Professions: *Biostatistical Analyst, Bioinformatics Technologist, Cancer Research Technologist, Genomics Technologist*

NATURE OF WORK:

Jobs matched to this profile develop, modify and implement a variety of laboratory techniques and perform laboratory procedures in a research laboratory setting, and/or develop and apply statistical and/or mathematical theory and methods in a research setting to test hypotheses for investigation and/or to analyze large volumes of data. These jobs utilize technical and scientific knowledge and proficiency gained through required post-secondary qualifications for the referenced professions. This includes additional specific certifications required to perform the full scope of the job as described by the job description, and within professional scope of practice as determined by the relevant college, accrediting body, or professional association.

Illustrative Responsibilities:

Consistent with professional scope of practice performs some or all of the following:

- Exercises independent judgment in decision making related to work in a research laboratory setting.
- Performs work in accordance with established standards of practice, Employer policies, and work-related processes, procedures and guidelines, including patient safety and quality protocols.
- Develops, modifies and implements experimental laboratory techniques; performs laboratory experiments, tests and procedures, records and reports results, and summarizes results for interpretation.
- Assist in the development and/or implementation of new methods, materials, procedures, instruments and techniques, and/or undertakes special projects.
- Tracks samples using information management systems; performs sample, reagent and solution preparation; participates in troubleshooting process, performance and data quality issues.
- Prepares presentations and status reports on scientific processes; collaborates in or makes significant contributions to preparation of research grant applications, scientific research papers and/or conference presentation.
- Participates in the development and revision of existing standard operating procedures and protocols. Maintains formal documentation systems for standard operating procedures and protocols.
- Operates, calibrates and performs routine maintenance on specialized research laboratory equipment; maintains supply inventory.
- Maintains and troubleshoots related computer software applications and systems.
- Participates in employer programs and initiatives such as quality improvement, team conferences, meetings, and the development of new policies, procedures and standards for care/program delivery. Contributes to discussions; reports back on decisions, outcomes and recommendations.
- Utilizes, maintains and participates in the evaluation of work-related systems, tools supplies and equipment in the conduct of research. Gathers, enters, reviews and maintains data in computer systems. Compiles/prepares reports.
- Provides orientation, guidance, and collegial information or demonstration of equipment or work methods and processes to others including peers, new staff, and students. Provides instruction and/or supervision to students; evaluates and provides feedback on student progress. Provides work direction to support staff.

Additional Profession Specific Details:

Biostatistical Analyst:

- Work primarily involves conducting statistical analysis and interpreting cancer control data using a variety of established and newly developed statistical software; interprets statistical analyses and makes recommendations; develops and advises on study design for clinical trials, including randomization procedures and selection of outcome measures in order to achieve study objections.

Bioinformatics Technologist:

- Work primarily involves the design of bioinformatics computer software, protocols and user interfaces. Implements and maintains bioinformatics software for the assembly, analysis and manipulation of large volumes of data. Performs biological sequence searches utilizing public databases. Participates in creating computational sequence analysis methods for database searches and the analysis of resulting data. Implements quality systems procedures for bioinformatics groups and specific large-scale research projects to ensure data processing and software development protocols meet research centre quality standards.

Cancer Research Technologist:

- Work primarily involves performance of cytogenetic procedures including research and experimentation with new instruments, techniques, methods, materials and procedures.

Genomics Technologist:

- Work primarily involves participating in a variety of non-production or high volume experimental production or developmental procedures and other laboratory research activities for genome mapping, sequencing, library construction, gene expression profiling, gene collection, gene annotation, or microarray data generation and analysis, or to assist in the development and/or implementation of new methods, materials,

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procedures, instruments and techniques, and/or to undertake special projects. Provides genomics laboratory research assistance related to specific research projects or programs. Independently designs. Modifies, conducts and tests novel experimental methods, instruments, materials and procedures. Contributes to the development of guidelines, procedures and standards for production platform application of new technologies.