

# **SCIENTIST SERIES (SX)**

## **PREAMBLE**

The Scientist Series applies to Laboratory Scientist positions working in a laboratory **or** to Epidemiologist positions functioning in a workplace where scientific research and analysis is conducted using various technologies and data sets.

### **LABORATORY SCIENTISTS**

There are three levels of Laboratory Scientists where the work involves the application of theories, methods and techniques related to the study of disease occurrences involving a scientific discipline, such as but not limited to: microbiology or biochemistry. Laboratory Scientists work in a laboratory environment where scientific research and analysis is conducted.

**OR**

### **EPIDEMIOLOGISTS**

There are two levels of Epidemiologists where the work involves the application of theories, methods and techniques related to the study of disease occurrence such as but not limited to the frequency, distribution, measurement, prevalence, risk, and contributing health factors within human and animal populations and environments. Positions function in a workplace where scientific research and analysis is conducted using various technologies and data sets.

## **EXCLUSIONS**

Excluded from this series are positions primarily involved with the function of researching, analyzing and developing government programs and policies; or where the primary function involves the application of statistical analysis techniques for processing and dissemination of statistical information; or where the primary function focuses on organization and administrative research and analysis. Also excluded are positions described under other classification series.

## **APPLICATION OF THE SERIES**

Further to the inclusion statements in the preamble, the series is applied based on the general intent statement at each level, and is further supported by the factors described at each level.

## **SCIENTIST 1 (SX1)**

This is the junior working level for Laboratory Scientist positions. Positions allocated at this level act as assistants to senior staff. Normally, they have specific responsibilities for the daily operation of a laboratory where they have technical, but not administrative, responsibility for subordinate staff. They may be required to train new staff in conducting complex functions. They assist senior staff in the evaluation of new methods and monitor their introduction into the laboratory routine. They are required to provide primary support to senior staff in conducting special surveys, preparing lecture material, preparing reports or manuscripts, conducting applied research, implementing approved programs, reviewing current literature, and formal lecturing. They are required to have working knowledge of both theoretical and practical applications of their particular discipline; and must have the ability to apply this knowledge in determining and developing innovative procedures and tests.

### **FACTORS**

#### **Skills/Expertise Required**

- University Degree with a major in a related field with several years experience or a sufficient combination of education, training and experience
- Knowledge of related medical or veterinary terminology
- Theoretical and technical knowledge of diagnosis of infections and/or disease pertaining to their area of expertise
- Strong organizational, analytical and research skills to present and interpret factual and scientific information and prepare reports

#### **Originality**

- Applies knowledge of the particular discipline in determining and developing innovative procedures and tests

#### **Supervision Received**

- Receives direct supervision from senior staff

#### **Contacts**

- Contacts are primarily within the Laboratory

## SCIENTIST 2 (SX2)

This is the full working level for Laboratory Scientist positions. Positions allocated to this level have a general responsibility for an assigned section of a laboratory. Positions in this category are responsible for the scientific and technical operation and development of a laboratory section. As such, they plan and organize the activities of the laboratory, supervise the activities of technical staff and retain responsibility for the accuracy and completeness of technical procedures and analytical results. They establish safety standards and perform difficult analytical work. Positions in this class are required to keep abreast of scientific developments and may personally develop or modify new techniques of diagnosis. They are required to have extensive knowledge in both theoretical and practical applications of their discipline, applying this knowledge in identifying, determining, and developing new procedures and tests, and presenting these for approval. They are required to teach, conduct applied research, train technologists and new staff, implement programs and represent the laboratory as required.

OR

This is the full working level for Epidemiologist positions. Positions receive guidance on research and/or projects and may act as project manager. The work requires a high level of initiative and uses primary data sets and secondary data to produce descriptive epidemiological reports with some analysis to identify risks, status and trends. Positions are a resource and support to others in the field including program staff.

### FACTORS

**In addition to the factors described at the Scientist 1 level, the following factors apply to positions at the Scientist 2 level:**

#### Laboratory Scientist

##### Skills/Expertise Required

- Bachelor's Degree in Science, preferably with some post-graduate training with significant related experience in a medical or veterinary laboratory OR Master's Degree in Science, with several years related experience in a medical or veterinary laboratory OR Ph.D. at the recruitment level
- Extensive knowledge in theoretical and practical applications related to their area of expertise

##### Originality

- Develops and/or modifies new techniques of analysis or detection and implements new procedures, programs and projects
- Establishes standards for safe handling of potentially hazardous materials, laboratory equipment, specimens, chemicals and reagents

##### Supervisory and Administrative Responsibility

- Plans workloads, resolves technical problems and provides assistance to staff on difficult tests and procedures

- Supervise the activities of technical staff and retains responsibility for the accuracy and completeness of technical procedures and analytical results
- Prepares program budgets

### **Contacts**

- Consults regularly with health or medical professionals, health organizations related to various programs concerning information such as but not limited to specimen collection, reports, professional interpretations, test standards and methods

## **Epidemiologist**

### **Skills/Expertise Required**

- Masters Degree with a primary focus in epidemiology and/or related sciences and several years of related work experience
- Knowledge and skill in the use of surveillance systems, research and bio-statistics methods
- Ability to effectively communicate scientific and technical information and present clear and concise reports and correspondence
- Knowledge of medical or veterinary terminology and disease pertaining to their area of expertise
- Project management experience

### **Variety**

- Communicates scientific and technical information and prepares and presents lectures
- Defines, develops and conducts scientific research for the program area for which the position is responsible
- Develops and maintains professional and technical standards through the review and evaluation of work methods, scientific journals and peer group debates and recommends remedial action when required

### **Supervisory and/or Administrative Responsibility**

- Monitors the work of epidemiology project teams and the achievement of goals
- Produces reports and other documents

### **Originality**

- Recommends action to address epidemiological and/or scientific trends

### **Contacts**

- Consults regularly with health or medical professionals and health organizations
- Participates on Federal/Provincial/Territorial task groups on behalf of the department

## **SCIENTIST 3 (SX3)**

Laboratory Scientist positions at this level are restricted to senior staff and as such have responsibility for the more complex and/or larger sections of a laboratory in terms of scientific operations. This involves preparing, presenting for approval and conducting scientific initiatives that have major implications in laboratory operations and/or other agencies.

**OR**

This is the senior level for Epidemiologist positions that provide strategic leadership and function as a provincial lead in one or more fields providing expert interpretation of complex data sets and conducts analytical epidemiological research. The work includes but is not limited to complex analysis such as multivariate and causal analysis and hypothesis testing to determine contributing factors and trends. Positions initiate projects and research; develop and implement new scientific methodology and work with a high degree of autonomy.

### **FACTORS**

**In addition to the factors described at the Scientist 2 level, the following factors apply to positions at the Scientist 3 level:**

#### **Laboratory Scientist**

##### **Skills/Expertise Required**

- Ph.D., preferably with post-doctoral experience, and several years related professional and/or administrative experience
- Ability to plan, organize, supervise and evaluate all scientific/technical programs including research and development for a major specialty within operational guidelines
- University appointment sufficient to supervise graduate students
- Superior written and verbal communication skills

##### **Variety**

- Communicates scientific and technical information and prepares and presents lectures to post-graduate and under-graduate students and others
- Defines, develops and conducts scientific research for the program area for which the position is responsible
- Develops and maintains professional and technical standards through the review and evaluation of work methods, scientific journals and peer group debates and initiates remedial action when required
- Within the framework of operational policy, ensures that user needs and resource capability are considered in the design, implementation and evaluation of all programs
- Conducts research projects and obtains independent research grants
- Produces peer reviewed published works

**Originality**

- Recommends courses of action to capitalize on or offset the harmful effects of scientific trends and/or changes
- Prepares and presents scientific programs that have major implications on laboratory operations and/or other agencies

**Supervisory and Administrative Responsibility**

- Prepares Research and Development Unit budgets and controls the ordering of equipment and supplies

**Contacts**

- Prepares scientific papers and presents to international, national and local scientific organizations and others

**Epidemiologist****Skills/Expertise Required**

- PhD with significant work experience at the senior level in epidemiology OR a Medical Degree with a Masters in the field of Public Health with significant experience at the senior level in epidemiology
- Excellent understanding of public health issues in Canada and internationally
- Ability to plan and organize, supervise and evaluate all scientific/technical programs including research and development
- Strong leadership knowledge and skill
- Superior written and verbal communication skills
- Eligible for University appointment sufficient to supervise graduate students

**Variety**

- Produces epidemiological data at the advanced level of methodology and analysis
- Within the framework of operational policy, ensures that user needs and resource capability are considered in the design, implementation and evaluation of all programs
- Influences the strategic direction of the Department
- Provides leadership in and initiates policy and program development
- Produces peer reviewed published works

**Originality**

- Initiates projects/research as it relates to the strategic priorities of the Department
- Develops new analytical methods and/or modifies scientific techniques as needed

**Supervisory and Administrative Responsibility**

- Provides guidance to other epidemiology staff
- Manages budgets

**Contacts**

- Acts as a consultant for government in area(s) of expertise
- Presents to international, national and local scientific organizations and others
- Develops strategic partnerships and alliances to advance government policy