

# Research Assistant

## National Occupational Standard Summary



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## Definition of occupation | **Research Assistant**

The Research Assistant is a trained professional who helps conduct investigative studies and original research on one or more projects simultaneously within a clear framework of accountability under the supervision of a research or lead scientist(s). They may work in a laboratory setting or conduct research externally in support of the work undertaken in a laboratory, e.g., compiling information on past research initiatives. The Research Assistant may perform literature reviews and set up, conduct, and document experiments or other facets of the research process, as well as interpret and communicate results. They may contribute to the development of protocols and operating procedures.

The Research Assistant may also supervise the work of other laboratory staff, including assisting with recruitment, coaching, and performance development. They are often the primary individual responsible for the quality control and regulatory compliance of the work conducted in the laboratory, as well as the physical state of the laboratory and its equipment. In an academic setting, the Research Assistant is often conducting research as a part of a graduate or post-graduate thesis.

This profile excludes work on clinical research studies, which are documented under specific clinical trial role profiles.

### Level of education, training or designations requirements



- Bachelor's degree (B.S./B.A.) in a related scientific discipline with at least two years of experience is the recommended minimum
- Master's degree in a bioscience discipline is often preferred
- Minimum one to two years of experience in a related field

# Research Assistant (All subsectors)

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This role works in the following subsectors:

<b>Applicable To</b>	Bio-Health	Agri-Bio	Bio-Industrial	Bio-Energy
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The level of complexity of the role is:

<b>Span of Complexity Levels</b>	Foundational	Operational	Specialist/ Management	Expert/Executive
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### RESEARCH ASSISTANT COMPETENCY SUMMARY

Competencies	Complexity Level Required			
	1 Foundational	2 Operational	3 Specialist/ Manager	4 Expert/ Executive
<b>Core</b>				
Research Ethics				
<b>Technical</b>				
Designing an R&D Project				
Planning & Implementing R&D Projects				
Recruiting &/or Managing the R&D Team				
Applying Model Laboratory Practices				
Data Generation & Analysis				
Digital Skills for R&D				
Managing Quality in R&D				
Knowledge Transfer				
Professional Writing for R&D				
<b>Industry Regulatory</b>				
Legal/Regulatory Compliance in R&D				
Occupational Health & Safety in R&D				

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Competencies	Complexity Level Required			
	1 Foundational	2 Operational	3 Specialist/ Manager	4 Expert/ Executive
<b>Personal and Professional</b>				
Collaboration				
Continuous Learning				
Critical Thinking/Decision-Making in R&D				
Effective Interpersonal Communication				
Professionalism/Emotional Intelligence				

## Core competencies

### Research Ethics

Exercises integrity and professionalism to ensure all research and development (R&D) is performed in a responsible manner in keeping with the ethical principles of beneficence and nonmaleficence.

## Technical competencies

### Designing in an R&D Project

Defines the parameters and specifications of a research/development project, including the project scope, objective, goals, resource requirements, project timeline, and budget. Also designs the experiments and identifies the testing and validation methodologies that can be employed to create a manageable research/development project. If applicable, they take the application, translation, and scale-up of research discoveries/results into consideration during the design phase.

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#### **Planning & Implementing R&D Projects**

Prepares a project plan that details milestones, resources, schedules, and budget for the planned project outcomes. Also develops a risk management plan, manages activities, provides project updates, and oversees project close-out to ensure project outcomes are delivered on time and in budget.

#### **Recruiting & Managing and R&D Team**

Recruits and manages a qualified workforce to ensure the organization's R&D program and projects are properly staffed and that the team is managed in a way that fosters not only compliance to requirements and protocols, but also high performance, strong morale, and a high retention rate.

#### **Applying Model Laboratory/Experimental Practices**

Applies knowledge, skills, and model laboratory/experimental practices related to the scientific and technical components of laboratory/experimental testing, the use and storage of samples and reagents, the proper handling and disposal of waste products generated during research activities, including bio-waste, and the use, maintenance, and calibration of instruments and equipment to produce optimal research results in a safe, effective, and efficient manner.

#### **Data Generation & Analysis**

Collects, generates, analyzes, and manages research data according to approved standards and model practices in order to ensure data integrity and optimize the value of the data.

#### **Digital Skills for R&D**

Makes effective use of the Internet and computer software to identify existing scientific activity relevant to the area of study, to investigate the depth and breadth of that research, to record and maintain data, to develop and disseminate reports and presentations, etc.

#### **Managing Quality in R&D**

Implements and monitors the standard quality management processes to ensure that all R&D activities are conducted according to required standards and create reproducible results in the tests performed, the data generated, the results reported, and the products and technologies created.



**Knowledge Transfer**

Shares and disseminates technical or scientific knowledge, experience, and ideas from one individual or source to other individuals, groups, or organizations for purposes such as building others' knowledge, training them in a new process, ensuring reproducibility in the event of absence, creating efficiencies, preserving corporate memory, and providing a foundation for scientific collaboration and development.

**Professional Writing in R&D**

Develops and publishes scientific reports and other technical documents to chronicle and advance the body of R&D knowledge. Also creates project reports to ensure that all relevant R&D information is tracked and available to stakeholders as required and to demonstrate compliance with all regulatory requirements.

## Industry regulatory competencies

**Legal/Regulatory Compliance in R&D**

Manages R&D documents, data, tools, resources, waste products, processes, and procedures in accordance with relevant safety, security, environmental, and ethical protocols, including intellectual property protection, in order to ensure legal protection and compliance with regulatory and funding requirements.

**Occupational Health & Safety in R&D**

Actively participates in/manages the health and safety program for R&D staff and their workplace to ensure the health and safety of staff. Also ensures the organization's compliance with legislation and regulations related to safe work practices and procedures, corporate procedures, and facility health, safety, and environmental rules.

## Personal and professional competencies

**Collaboration**

Works effectively with others to foster trust and cooperation in the achievement of R&D goals and project objectives.



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#### **Continuous Learning**

Continuously undertakes introspection in order to understand current knowledge and skills in a changing environment, recognize personal knowledge gaps, undertake independent action to actively seek targeted opportunities in order to acquire new knowledge, and reflect on how new knowledge can be integrated and applied.

#### **Critical Thinking/Decision-Making in R&D**

Analyzes, synthesizes, and evaluates arguments, information, and data. Also exercises sound judgement to solve problems and make decisions that strategically benefit the laboratory/organization's R&D activities and strategy.

#### **Effective Interpersonal Communication**

Communicates in ways that create shared understanding, generate support for the achievement of goals and objectives and facilitate conflict resolution and problem solving.

#### **Professionalism/Emotional Intelligence**

Applies emotional and professional sensitivity to become aware of their own emotions and those of others they interact with in such a way that they can manage personal and professional decorum and maintain productive relationships.

## USE NATIONAL OCCUPATIONAL STANDARDS TO:

- ✓ Build a job description
- ✓ Plan professional development
- ✓ Map career progression and succession planning
- ✓ Benchmark compensation

View the full National Occupational Standards at [biotalent.ca/NOS](https://biotalent.ca/NOS)

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