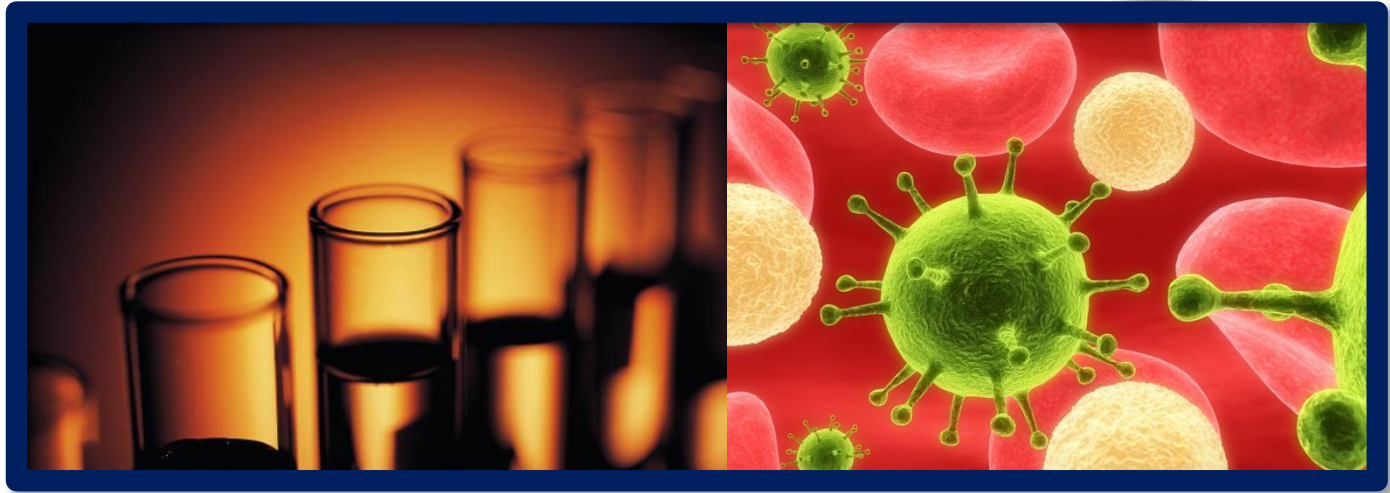
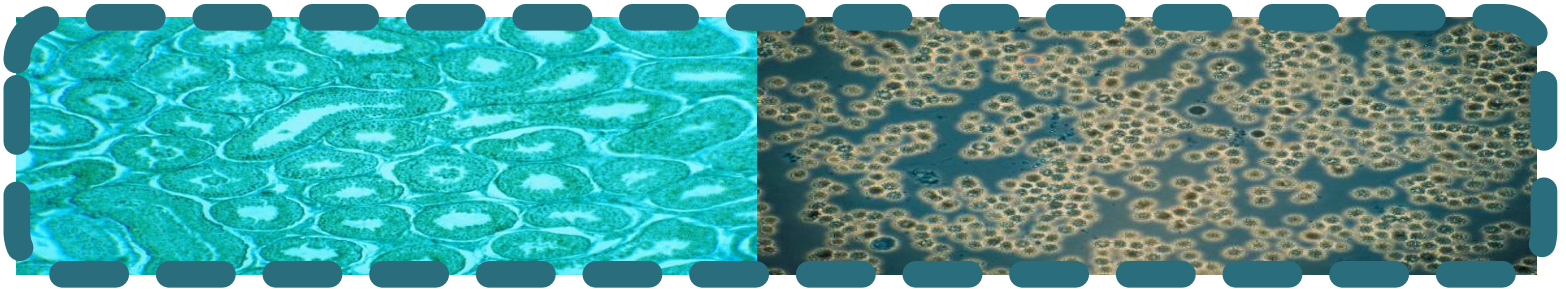


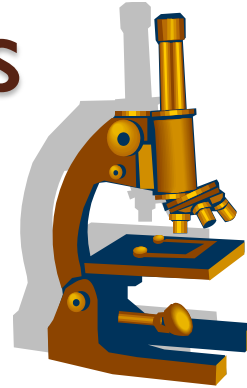
# Microbiologist



Discovering, identifying, creating...

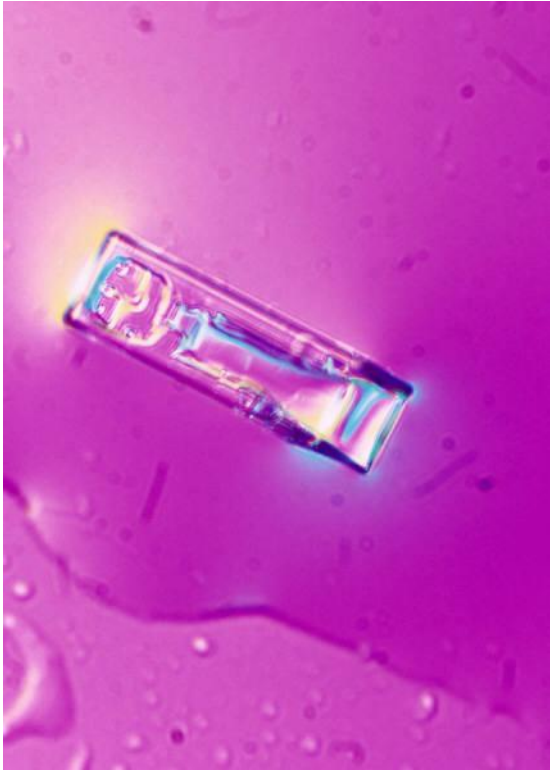


# Table of Contents



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# What is Microbiology?



**Micro** means 'tiny', **bio** means 'life', and **logy** means 'study'.

Microbiology is a study of microscopic organisms such as a single cell living organism, and, surprisingly, a creature that has no cells at all!

It includes **pure biology** such as a study of bacteria, fungi, and virus, and **applied biology** such as medical, pharmacy, and agriculture.

Less than one percent of all possible microorganisms on this planet have been identified!

# Occupation description

Microbiologists usually work in a lab. They usually analyse the samples in the morning. They **research** their project, and **report** to the lab manager.

The responsibilities

- To make a safe working environment
- To do experiment and report to the lab manager

Due to the improvement in the technology these days, the **Industrial Microbiology** has developed a lot.

## Hazards

Microbiologist cannot be sure they are 100% safe because they usually examine and work with viruses. But it can be prevented by wearing safety goggles, gloves, and proper clothes.

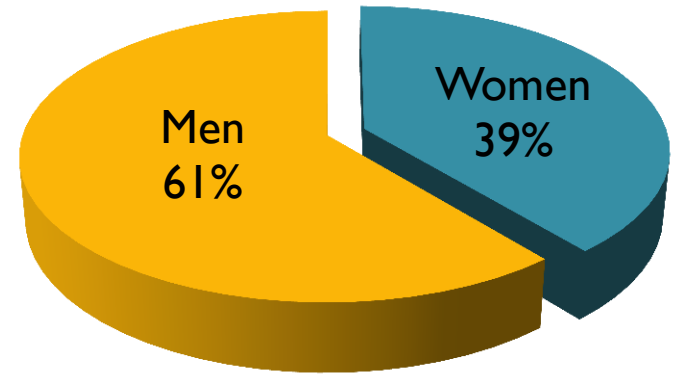


# Occupation description

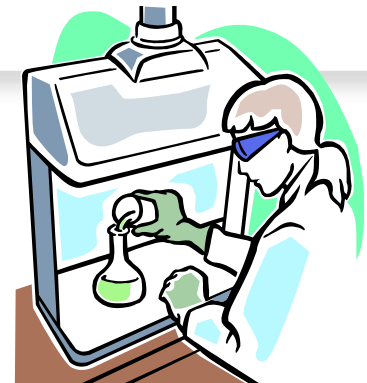


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## Percentage of Men and Women



Scientists wear safety goggles, safety gloves, and white uniforms.





# List of Local Companies

**Mark Anthony  
Group Inc.**

465 Fraserview  
Pl Annacis Island, BC

**(604) 519-5370**

**Acme Analytical  
Laboratories (Vancouver)  
Ltd.**

1020 Cordova Street, East  
Vancouver BC

604 253 3158

**Life Labs**

408 Hastings St  
E, Vancouver, BC

**604-738-7301**

**CML Healthcare**

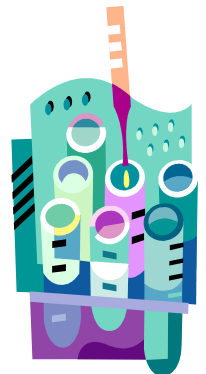
2728 Hastings St E,  
Vancouver, BC

**604-254-1687**

**Providence Health  
Care**

1081 Burrard St, Vancouver, BC

**604-806-8006**



# Personal Qualifications Necessary

- **Physical qualities**
- Ability to work long hours
- Good hand skills
- **Personality traits**
- Working co-operatively with other people
- Interests in science research
- dedicated and organized



# Post Secondary Preparation

General education requirements

Lab technician – Bachelor's degree

Lab manager – Master's degree

Research Director – Ph.D

Universities for Microbiology

- McGill University
  - UBC
- University of Victoria
- Toronto University
- Ottawa University



McGill University





# Post Secondary Preparation

## McGill University - Bachelor's degree course



Courses – Microbiology,  
Immunology,  
Biochemistry and other  
Science courses

Entry requirements

### Science

- Grade 12 Mathematics (pre-calculus)
- At least two of Grade 12 Biology, Chemistry or Physics
- Grade 12 English or French

Length : 3-4 years

Cost

Tuition - \$5,858 per year

Mandatory fees - \$1,559 per year

# Unionization and Practising Regulations

## Canadian Society of Microbiologists

Goal - to advance microbiology in all aspects and to exchange the ideas between microbiologists

24% of Microbiologists are part of a union.

To apply to the occupation

- Fill out the forms
- Interests in Microbiology
- (Optional) Studying Microbiology

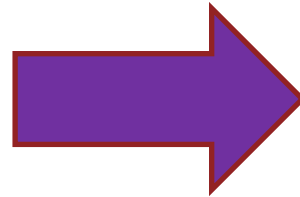
### Memberships

- Honorary
- Emeritus
- Ordinary
- Student
- Sustaining Members

# Advancement Opportunities

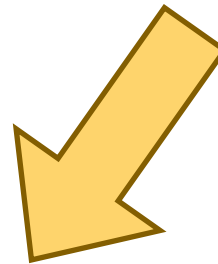
Lab Technician

Providing technical support to research teams, preparing samples and analyzing them under the microscope



Lab Manager

Supervising activities in the lab, scheduling experiments and the use of equipment



Research Director

Leading a research team that explores unanswered questions about Microbiology.



# Salary and Benefits

Average Annual earnings of

One entering the occupation:  
\$25,000 to \$45,000

Experienced workers:  
\$65,000 to \$100,000

Depends on one's education, experience, and the location.

# Salary and Benefits



- Most microbiologists can work on their jobs for life (**job security**)
- Make a vaccination for serious disease
- Lot of **flexibility** as an academic Microbiologist (study on own research, set own schedule)
- No specific routine (mix of lab work, paperwork, client interaction, and some fieldwork)

# How to get started

Interests/hobbies in Biology or Chemistry may help students learning Microbiology.



Since Microbiology is a academic and professional studies in Science, volunteer in **Science** area would help students apply for universities.

AP courses in Science and national competitions for science would give extra advantages to students.



Generally, good grade in Science, B or more is required for most science department in universities.



# Conclusion



## The main

### Advantages of the job

- Discover and identify new microorganisms!
- Mostly perfect job security for life!
- Work with great technology.

### Disadvantages of the job

- Long working hours
- Lots of paper works
- Depressed feeling about the unexpected result of an experiment

- For this job, I have
- Interests in Science
  - good grade in Science
  - organized personality
  - good hand skills

### The new things I learned through this project...

- The courses for Microbiology in universities
- The labs in Vancouver
- The advantages of Microbiologist

The likelihood of me entering this job – 50%  
I am searching and finding my career now!

# Conclusion

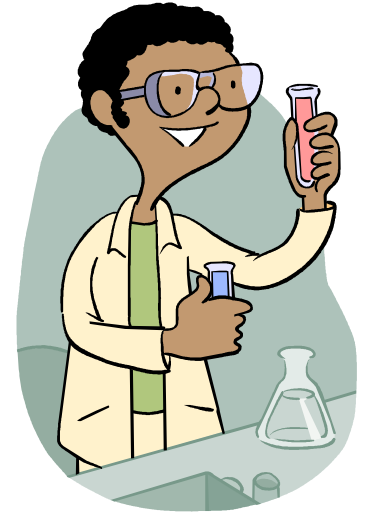
## The things that I

### Like about this job

- Creating the vaccine for disease
- Great job security
- Great feeling of successful experiment
- Flexibility in one's own experiment

### Don't like about this job

- Long working hours
- Get to stay in the lab all day



**Overall, Microbiologist is an awesome job to study for my life!**

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Thank you!!