

LABORATORY MEDICINE/MICROBIOLOGY

Definition

Deals with the diagnosis and prevention of infectious diseases.

Microbiologists oversee laboratory testing of microorganisms, including culture, antimicrobial susceptibility test, serology, and molecular techniques. Interprets result of tests and makes recommendations to clinicians about appropriate treatment.

Scope of Practice

A microbiologist is an expert in the isolation and identification of microbial agents that cause infectious disease.

Viruses, bacteria, and fungi, as well as parasites, are identified and, where possible, tested for susceptibility to appropriate antimicrobial agents. Within the various areas of specialisation in medical laboratory science, microbiology is useful for detecting infectious illnesses.

Typically, this specialisation can work in the following areas:

- Bacteriology: it identifies the bacteria through cultures and biochemical tests
- Mycobacteria: this is dedicated, mainly, to the detection of the mycobacteria that cause human tuberculosis. It also looks into nontuberculous mycobacteria
- Mycology: it focuses on the study of the fungi responsible for human illnesses
- Parasitology: it studies parasites (mainly, protozoa, helminths, and arthropods) that cause parasitic disorders in human beings, through the use of microscopical techniques
- Virology: the analysis of viruses that cause illnesses in human beings
- Serology: executes antigen or antibody tests on serum (serological tests) by employing immunological techniques

A Microbiologist can also:

- Provides direct and/or indirect consultations for patients and clinicians on investigation, diagnosis, management, and prevention of infectious diseases, in an ethical, compassionate, and patient-centered manner.
- May provide appropriate consultation and prophylaxis for laboratory staff in the event of laboratory exposure to an infectious agent when clinically appropriate.
- Provides the medical and scientific oversight of the microbiology laboratory in collaboration with other laboratory staff, to ensure that test menus, policies and procedures are medically relevant, up to date, safe and compliant with accreditation standards, clinical best practices and public health guidelines as applicable.
- Can lead an Infection Prevention and Control Program; this role is responsible for establishing and maintaining an effective Infection Control Program for the prevention, detection, investigation and control of infections and outbreaks in acute, chronic, and/or community health care facilities.
- Can provide medical consultation for health care and laboratory staff for the hospital or laboratory Occupational Health and Safety Program, and if required, referral to other medical specialists.

Privileges	A Lab Microbiologist is eligible to work in or to manage and direct the Microbiology section or unit of the clinical laboratory. A Lab Microbiologist is not eligible to lead a medical laboratory alone and must work together with a licensed clinical pathology doctor.
References	DHP Experts
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