

Timely and accurate pathology results are critical to the functioning of our entire medical system.

Pathology informs the clinical decisions of medical practitioners across the healthcare spectrum.

Given its critical role, the risks of not adequately supporting a strong national pathology system are:

- The rapid spread of infectious diseases;
- Inappropriate antibiotic use, increasing the emergence of drug resistance;
- Patients receiving incorrect treatment;
- Possible early patient death; and
- Inappropriate public response to pandemics and bioterrorism.

These issues may impact upon the physical, emotional and financial well-being of individual patients, their families and the community at large.

As the peak body representing the profession, the RCPA believes the underlying principles of a world class pathology service are:

- A commitment to patient safety and quality
- A highly trained and sufficiently resourced workforce
- Efficient services that ensure timely and accurate results
- Equity of access and choice of provider
- Timely adoption of appropriate new tests reflecting international best practice
- A commitment to ongoing education, research and teaching

“We have a wide range of pathogens that cause disease, and we have to know about them all.”

Dr Sally Roberts

Pathology disciplines

70% of all diagnoses are made using a pathology test. All chronic conditions require monitoring via pathology testing. Pathologists work across a range of different specialities in addition to microbiology.

These include:

Anatomical pathology, which looks at tissue analysis of disease;

Chemical pathology, which deals with the entire range of disease, and encompasses detecting changes in a number of substances in blood and body fluids (such as electrolytes, enzymes and proteins);

Forensic pathology, which seeks to investigate and define the cause of unexpected death;

Genetics, which looks at chromosomes and DNA from cells to diagnose genetic diseases;

Haematology, which deals with diseases that affect the blood such as anaemia, leukaemia, lymphoma, clotting or bleeding disorders as well as management of blood transfusions;

Immunopathology, which deals with the diagnosis and management of conditions in which the immune system does not function properly;

General pathology, which covers the profession as a whole.

For brochures and videos about each discipline, go to the RCPA website at www.rcpa.edu.au.

This brochure is published by:

The Royal College of Pathologists of Australasia

Durham Hall, 207 Albion Street, Surry Hills NSW 2010

Tel 61 2 8356 5858 Fax 61 2 8356 5828

Email rcpa@rcpa.edu.au Web www.rcpa.edu.au

Medicine is Pathology 

**PATHOLOGISTS ARE INDISPENSABLE
TO QUALITY PATIENT CARE**



The Clinical Microbiologist

 **RCPA**
The Royal College of Pathologists of Australasia

PATHOLOGISTS ARE INDISPENSABLE TO OUR MEDICAL SYSTEM – BUT WHO ARE THEY, AND WHY ARE THEY SO CRUCIAL?

Microbiologists play an important role in quality patient care. They are responsible for diagnosing and treating infectious diseases. They are also called upon to provide input into national vaccination strategies and public health measures.

Microbiologists study micro-organisms (which may be bacterial, viral, fungal or parasitic) that cause infectious diseases; the common cold, influenza, human immunodeficiency virus (HIV), golden staph (MRSA), measles and hepatitis, as well as a raft of others.

Microbiologists have the skills and training to investigate patients with suspected infections. They provide consulting medical practitioners with advice about the best specimen to collect and/or the best tests to perform to determine the cause of the infection. They also see patients with complicated infections directly, and often advise about antibiotics in collaboration with infectious disease physicians.

Microbiologists are not only involved in testing, but also in the development of new tests and new methods to diagnose and treat infections. They play a vital role in advising treating doctors about the correct antibiotic or antiviral agent to use. This is important for individual patients as well as the community, as this advice helps minimise the development of drug resistant organisms.

They also liaise closely with public health authorities regarding notifiable infectious diseases, such as salmonella food poisoning.



Dynamic Changes

Microbiology is a dynamic field, with new micro-organisms being recognised constantly and old ones re-emerging. We now know too that some viruses cause cancer, such as human papillomavirus causing cervical cancer.

Sophisticated diagnostic tools have been developed to guide treatment for HIV and determine patient response.

Vaccines have virtually eradicated many 'public health killers', including smallpox, polio and measles in developed countries, although they remain a major issue for people from developing countries.

Microbiologists also contend with the increasing prevalence of resistant infections, such as multiple drug resistant TB.

Global Issues

Infectious diseases are now very much a global issue. Clinical microbiologists participate in discussions with the World Health Organisation around key issues such as the importation and transmission of infectious diseases as well as the threat of biological warfare.

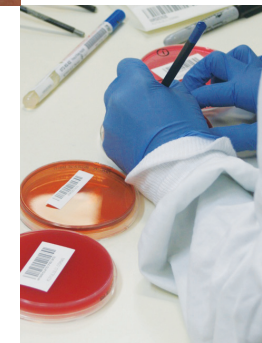
"The challenge is to take what we know about viruses and use diagnostic tools to provide timely treatment and reduce disease. Using molecular and other specialised tests, we detect viruses in a matter of hours so treatment can be started urgently to save lives."

Prof Bill Rawlinson



The Importance of Infection Prevention and Control

The prevention and management of healthcare-associated infections, such as catheter-related blood stream infections,



through initiatives like hand hygiene and surgical site surveillance, are very important as it is recognised that healthcare workers have the potential to transmit infectious diseases.

Microbiologists are at the forefront of introducing programs in healthcare setting to prevent such infection transmission.

