

Q: What training is involved?

A: The prerequisite to becoming a laboratory geneticist is a qualification as a medical practitioner (including internship). Following your internship you need to train as a specialist in pathology.

The minimum time for specialist training is five years, in a registrar position accredited by the Royal College of Pathologists of Australasia. This means that although you are undergoing further study, you are actually working and earning as a doctor at the same time. Once you have completed all the requirements and examinations and are accepted as a Fellow of the College, you are entitled to use the letters FRCPA after your name.

The College training program in genetics allows the trainee to develop skills and experience in a broad range of genetic based technologies including cytogenetics, molecular genetics and biochemical genetics.

Rapidly changing DNA based technologies will ensure the genetics trainee that they will continue to be exposed to new laboratory techniques throughout their career.

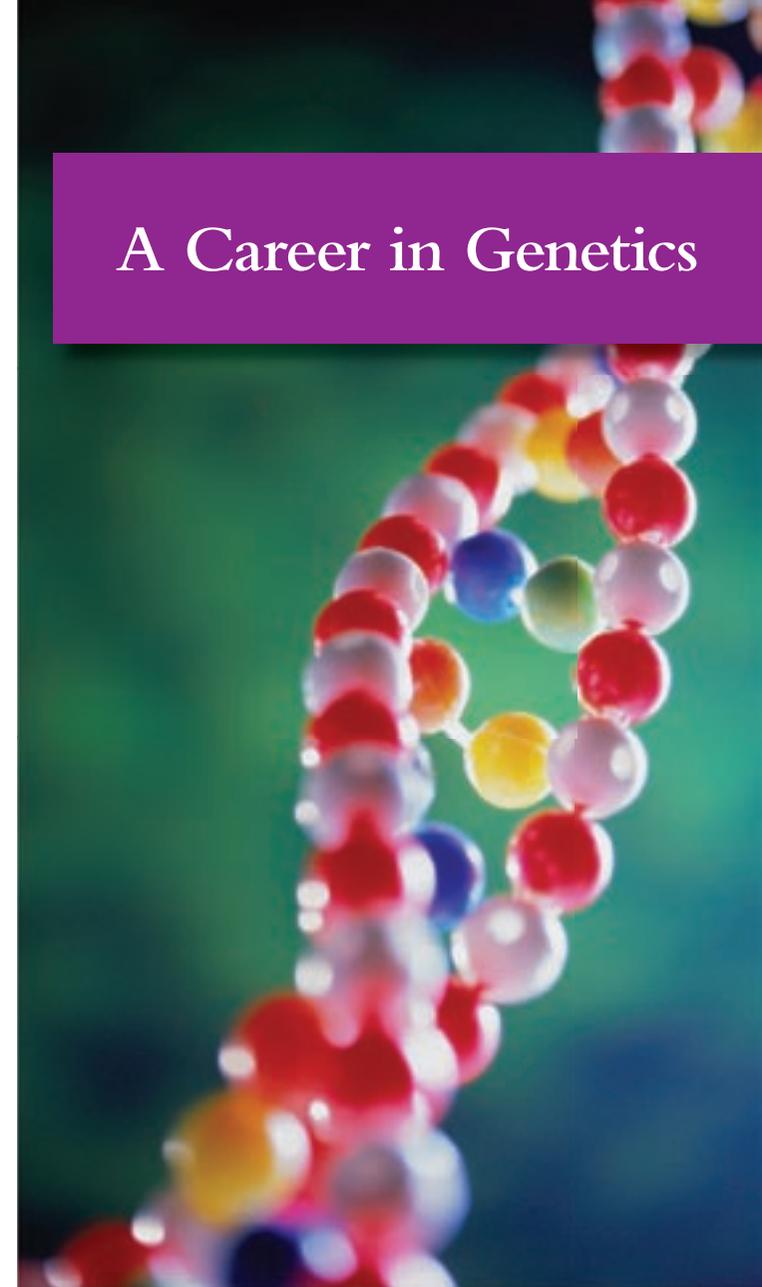
Medicine is Pathology

For more information
on becoming a Genetic Pathologist
go to the College website at
www.rcpa.edu.au

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A Career in Genetics



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

Laboratory Genetics

Q: What does a Laboratory Geneticist do?

A: Laboratory geneticists are trained in *cytogenetics* (the study of the structure of chromosomes), *biochemical genetics* (the study of genetics in terms of the chemical events involved), and *molecular genetics* (the study of the flow and regulation of genetic information between DNA, RNA, and protein molecules).

Much of the work revolves around:

1. Prenatal diagnosis

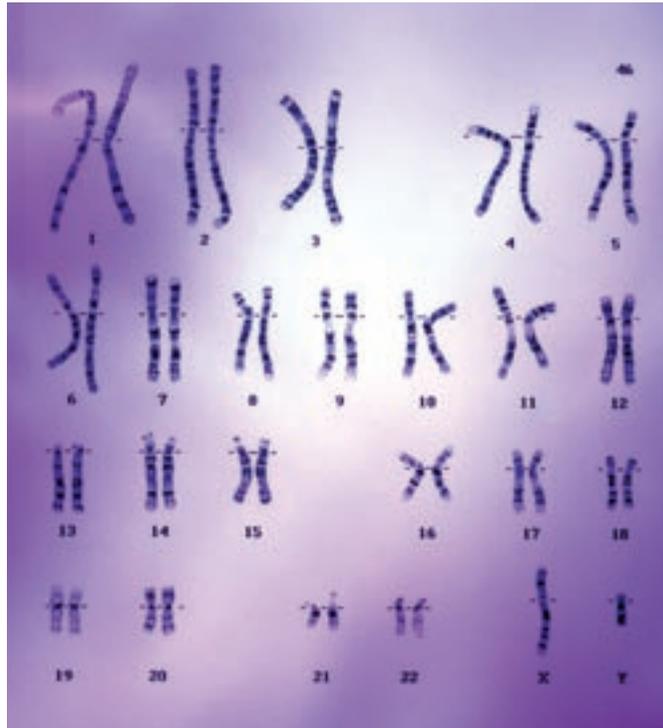
Cells are examined for possible abnormalities in the foetus, usually in families where single gene disorders have been identified by DNA analysis.

2. Carrier testing

Risk assessment for identifying presymptomatic individuals at risk from single gene disorders.

3. Confirmation of diagnosis

Laboratory geneticists are very aware of the impact their research and examinations have on patients. They work closely with a variety of healthcare professionals.



Q: What personal characteristics does a Laboratory Geneticist need?

A: Varying combinations of the following traits:

- the ability to work as part of a team
- interest in keeping up to date with advances in science
- ability to keep up with new knowledge daily
- good oral and written communication skills
- ability to use on-line databases and familiarity with computers
- excellent interpretive skills

Q: What are the attractions of being a Laboratory Geneticist?

A: Laboratory geneticists are members of a team involved in the diagnosis, counselling and management of patients and families with genetic disease. There is also scope for a laboratory geneticist to participate in research.

The simple concept that genetic disorders involve single gene defects is changing, with more complex modes of genetic inheritance being described. As the Human Genome Project reaches its conclusion over the next few years, the number of human genes isolated will require the laboratory geneticist to keep up with new knowledge on a daily basis! Thus, they will also need to have expertise in bioinformatics.

The challenges facing the community and the medical profession in terms of how to deal with new developments in genetics are many. The pathologist in genetics will have the opportunity to contribute to this constantly evolving field which promises an exciting, and as yet unknown future.

