A career as a **Genomics Medical Laboratory Scientist**

If you have a passion for science and love the idea of being a medical detective then a career as a Medical Laboratory Scientist in Genomics could be the career for you. A Medical Laboratory Scientist in Genomics is a vital member of the healthcare team. They analyse genetic material to help provide a diagnosis that can be used in caring for the patient. The increasing demand for genomic information and testing has led to Medical Laboratory Scientists in Genomics being at the cutting edge of the revolution in healthcare while working in an exciting, dynamic field of medicine.

What is a Medical Laboratory Scientist?

As a vital member of the healthcare team a Medical Laboratory Scientist in Genomics analyses genomic data and interprets the clinical significance of the data for a patient and their family. They use cutting edge laboratory technologies to obtain, assess and report test findings while frequently liaising with clinicians to determine the most appropriate test and to discuss complex or clinically urgent results. Frequently the discovery of novel genomic variants in specific clinical contexts requires the Medical Laboratory Scientist in Genomics to perform literature and database searches and, together with their experience, determine the clinical significance of identified variants.

Medical Laboratory Scientists in Genomics are highly skilled and trained in being able to integrate knowledge of genomics, the testing technology used and its limitations, to interpret complex guidelines and clinical phenotypes to form a professional opinion.

A Medical Laboratory Scientist in Genomics can specialise in a number of areas including:

- Cancer Genomics
- Rare Disease Genomics, or
- Pathogen Genomics

Genetics or Genomics?

Historically, genetic testing could only be performed on one gene at a time, whereas now genomic testing allows testing of all genes in one test. Genomic testing allows analysis of how different genes interact with each other and how this can influence an individual's health.

Where do Medical Laboratory Scientists in Genomics work?

Most Medical Laboratory Scientists in Genomics working in NSW Health Pathology work as part of a multi-disciplinary team of pathologists, technical officers, laboratory assistants and bioinformaticians, in genetic laboratories. Genomic Hospital Scientists are often consulted for advice by other health specialists who have ordered or are considering ordering genetic testing related to:

- Whole exome and genome sequencing
- Cytogenetics testing
- Molecular Genetic testing
- Inherited Cancer Screening
- Tumour profiling
- Preconception carrier testing, and
- Prenatal testing

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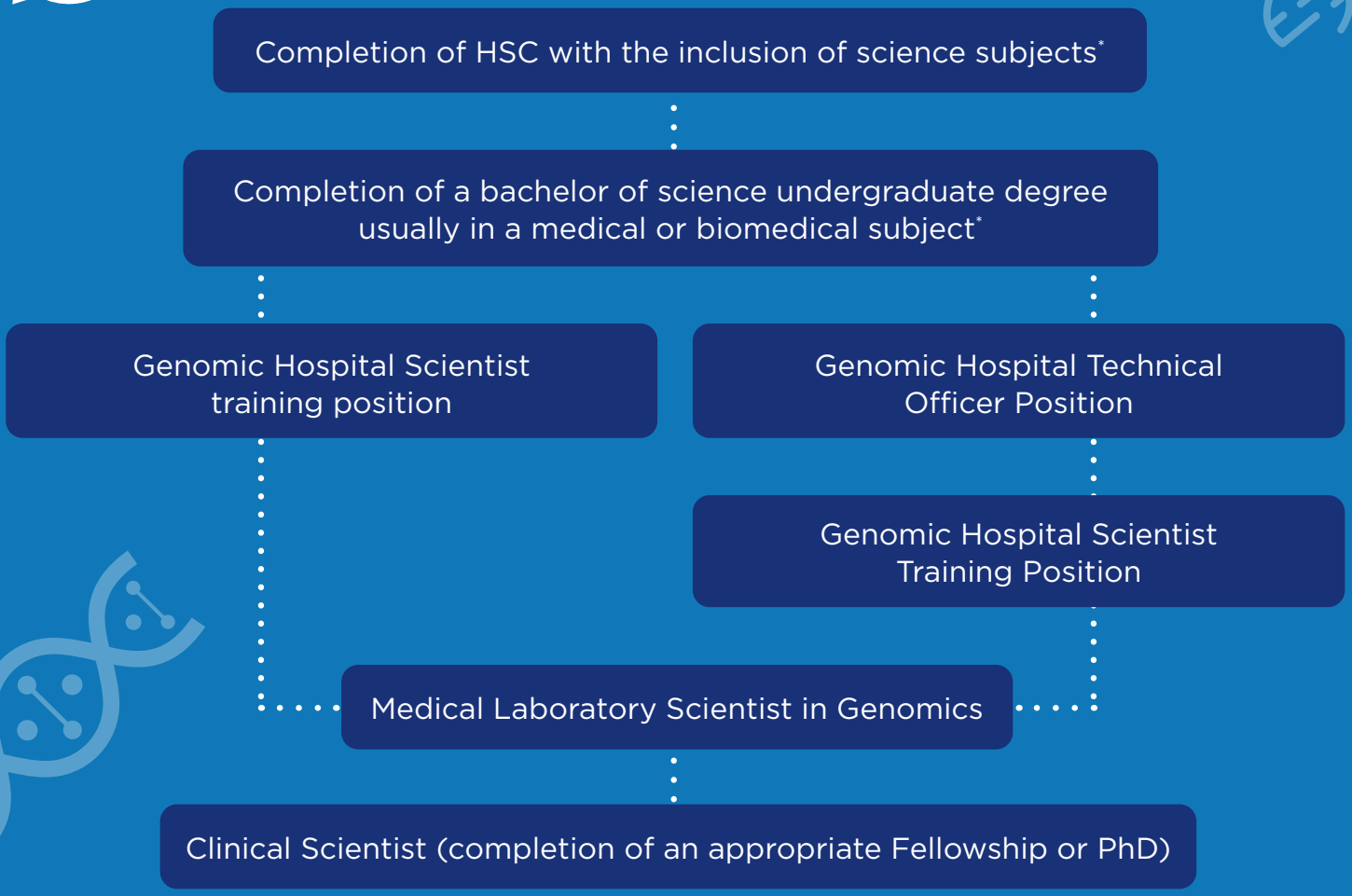
Future for Genomic Hospital Scientists

The types of tests performed, the clinical applications of various tests, and the role of the medical laboratory scientist in genomics are all likely to evolve in the near future. Technological advances are allowing genetic testing to be offered to a growing number of patients and their families. Traditional genetic testing could only be performed on one or a small number of genes at a time whereas, now with genomic testing we can provide analysis for all genes in an exome or genome analysis. Genomic testing can help guide treatment plans for patients to provide best possible outcomes by allowing access to early screening and/or personalised treatment. Working as a Medical Laboratory Scientist in Genomics within NSW Health Pathology will allow you to be at the forefront of the genomic revolution in healthcare.

How do I become a Medical Laboratory Scientist in Genomics?

To work as a Genomic Hospital Scientist in NSW you will need to have:



*For up to date entry requirements please check the individual undergraduate degree entry requirements

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