

Cancer of the oesophagus – the tube that links the mouth to the stomach - is the most common cancer in South African black males. Research looks at what causes this disease, how it can be treated, and why some people are more likely to develop it than others.

**Who can help us understand why a normal cell turns into an abnormal cell and causes cancer?**

## **The Medical Biochemist!**

**Meet Iqbal Parker,**  
Head of Medical Biochemistry and  
Director of Research at the Faculty of  
Health Sciences, University of Cape Town  
and Head of the MRC/UCT  
Oesophageal Cancer Research Group  
**BSc Natural Sciences,**  
**BSc Hons (Biochemistry),**  
**PhD (Biochemistry)**

**INFECTIOUS DISEASE  
MOLECULAR MEDICINE**

**...a common  
misconception about the job:**

*“That you can design an experiment to finish on a Friday afternoon or prior to a public holiday!”*

**...the ultimate career satisfaction:**

*“Being at a dead-end and then suddenly realising that there is another option. What looks like a disappointing result can lead to something truly exciting!”*

**... worst nightmare:**

*“Coming up with something that contradicts the findings of one of the major players and engaging in a battle to get it published.”*

### **What does Iqbal do?**

Biochemistry is about trying to understand the chemical processes that happen in living cells that are needed for the cell to survive, reproduce, and do its “job”. For example, the job of red blood cells is to make haemoglobin which carries oxygen around the body. To do all this, a cell needs DNA.

Iqbal’s job is to find new ways to treat and cure medical conditions and diseases by using his knowledge about what happens within the building blocks of cells. Iqbal and his team are finding, for example, that some people are less likely to get cancer because their “detox” genes code for the “best” enzymes to remove toxins caused by smoking and drinking.

### **What do I need to be a medical biochemist?**

**Characteristics:**

Perseverance, commitment, analytical mind, meticulous nature

**Important school subjects:** Mathematics, Biology, Physical Science

**Qualifications:**

BSc – Biochemistry/Natural Sciences/ Biological and Life Sciences/ Biotechnology/ Microbiology/Molecular and Cell Biology/Human Life Sciences/ Bio-organic Chemistry/Chemical, Molecular & Cellular Sciences, or similar

### **Where can I get a job as a medical biochemist?**

Mostly research institutions, including universities and medical research groups such as the Medical Research Council (MRC), biotechnology companies, some multinational pharmaceutical companies

**Related careers:**

Clinical Biochemist, Chemical Pathologist, Medical Scientist



**PUBLIC UNDERSTANDING OF  
BIOTECHNOLOGY**