

Worldwide, violent criminals continue to leave a trail of victims behind them. But they also leave a trail of biological evidence behind in the form of blood, saliva, hair, skin... Today we know that an individual's unique DNA is found in all human tissue. How can we put this knowledge to work in solving crimes?

Who can help us put the criminals behind bars and set the innocent free?

The Biological Forensic Analyst!

Meet Arnold Greyling, a Control Forensic Analyst at the South African Forensic Science Laboratories of the South African Police Services (SAPS) in Pretoria **BSc (Human Physiology and Biochemistry), BSc Hons (Biochemistry)** and numerous applied training courses from international forensics bodies

... a misconception:

"That, because we work for the SAPS, we work for the prosecution. We are objective scientists. Sometimes our evidence helps to find people guilty and sometimes it helps to prove their innocence!"

... the challenge of the job:

"You need to be able to rise above the routine and realise that every case has impacted on someone's life."



What does Arnold do?

Just like fingerprints, DNA can link a person to a crime scene, because every human has unique DNA. Detectives take samples from the scene and supply it to the forensic analyst at the laboratory to identify the type of material, for instance the type of body fluid that was found. The analyst determines whether the DNA profile of the crime scene sample can be matched to the DNA profile of a reference sample. The analyst gives his results in terms of statistical probability, for example, there is a 90% chance that the DNA profile found at the crime scene is the same DNA as the profile in the sample provided.

Forensic analysts are routinely called to court to interpret the scientific findings as objectively (neutrally) as possible. It is also Arnold's job to decide which new, state-of-the-art technology and equipment could be used to improve the laboratory's ability to produce reliable results.

What do I need to become a biological forensic analyst?

Characteristics: High moral values and work ethics – you will testify in court and write affidavits; confidence; sound time-management skills

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

Qualifications: B Tech (Biotechnology); BSc with subjects such as Biochemistry, Human Genetics, Human Physiology, Microbiology. Intakes preferred without Masters degree or PhD. In-house training is compulsory and individuals will work under mentorship before forensic case work is taken on independently.

Who employs biological forensic analysts?

South African Police Services, some small, independent contractors

Related careers and fields:

Biochemist, Molecular Biologist, Human Geneticist