

Drought and plant diseases are two of the biggest problems we face in feeding the continent, as they can drastically limit the amount of food produced.

Who can help us change and improve living things, such as plants, so they can survive better in droughts and fight diseases?

The Plant Molecular Biologist!

Meet Ndiko Ludidi,
a Plant Molecular Biologist
at the University of Stellenbosch
**BSc (Biochemistry and Microbiology),
BSc Hons (Biochemistry),
MSc (Biochemistry), PhD (Biochemistry)**

... the biggest challenge of the job:

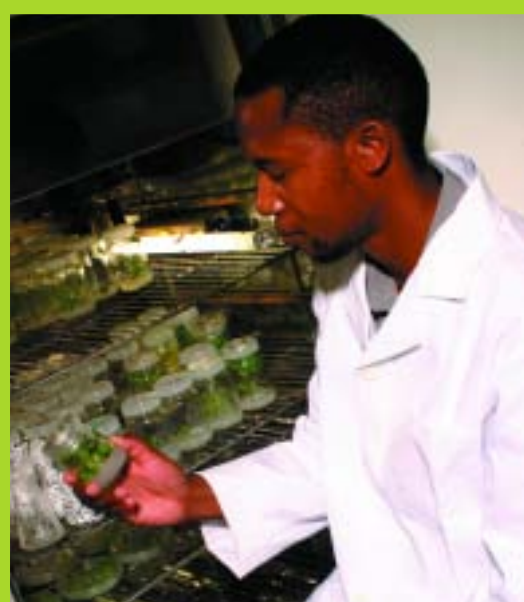
“Not being able to track progress visually. You are working with DNA, RNA and proteins – you do not know whether you have successfully isolated DNA until you get to the results – months later.”

... career satisfaction:

“My work could ultimately benefit a whole lot of people.”

..a common misconception:

“That I am into manipulating all living things!”



What does Ndiko do?

Ndiko studies the DNA of plants, which is the inherited material that is passed on from generation to generation and is found in almost all living things. His specific job is to identify and describe genes (a stretch of DNA) in a plant that carry the code for specific characteristics. He especially looks for genes that can be used to improve crop plants by making them better at coping with drought and making them resistant to fungal/bacterial infections. Changing the genetic recipe of a plant in this way is called genetic engineering. This can often be quite complex because more than one gene is involved in controlling a characteristic.

What do I need to be a plant molecular biologist?

Characteristics:

Patience, accuracy, curiosity

Important school subjects: Biology, Mathematics, Physical Science

Qualifications: N Dip – Biotechnology; BTech – Biotechnology; BSc – Biochemistry/Natural Sciences/Biological and Life Sciences/Biotechnology/Microbiology/Molecular and Cell Biology/Environmental and Biological Sciences/Chemical and Biological Sciences.

Where can I get a job as a plant molecular biologist?

Agricultural research organisations, universities, commercial seed companies, research institutes funded by a specific agricultural industry

Related careers:

Plant Biotechnologist, Plant Geneticist, Biologist, Agronomist, Molecular Geneticist, Plant Pathologist, Agricultural Biotechnologist