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UCT launches R10 million cutting-edge TB research facility in Masiphumelele

By the age of five, 20% of children in Masiphumelele township, south of Cape Town, are already infected with tuberculosis (TB). When these children enter high school, about half are infected with TB. By the time they become young adults, the infection rate has increased to roughly 80%.

While these percentages relate specifically to research in Masiphumelele schools, there is nothing to suggest that this community is exceptional. Rather, the figures are an indicator that similar TB infection results will likely be recorded in township schools throughout the Western Cape.

Masiphumelele is a community of over 23 000 residents and home to the University of Cape Town’s (UCT) Desmond Tutu HIV Foundation (DTHF) Masiphumelele research site.

Known commonly as the “Masi site”, it is also now home to the new Aerobiology TB Research Facility, officially launched recently, which will focus on the study of the transmission of these TB organisms with a view to finding ways to halt the spread of the disease.

Emeritus Professor Robin Wood, chief executive officer of the DTHF and director of the Desmond Tutu HIV Centre (DTHC), said: “Poor socio-economic conditions are one of the big drivers of TB transmission. Research shows that the triple challenge of poverty, inequality and unemployment is most pronounced in townships in South Africa.”

Researchers at the new facility specialise in capturing the organisms in the air exhaled by patients and putting the data on to matrices which we can be looked at in detail. This allows clinicians and scientists to study each individual organism to try and develop ways in which to control TB in communities such as Masiphumelele.

Part of the research involves measuring the amount of air individuals exchange with each other, for example. Emeritus Professor Wood said he exchanges about 25 litres a day whereas the children and adolescents studied swap approximately 300 litres per day.
In a place like Pollsmoor Prison, Emeritus Professor Wood estimates swapping is between 1 000 and 2 000 litres per day.

UCT Vice-Chancellor Professor Mamokgethi Phakeng believes the facility will strengthen the fight against TB.

“Imagine a future where we can talk about Masi as a place where TB used to be a problem. The people of Masi and Ocean View have helped us in many ways. I want to acknowledge the important role they have played in shaping the way we work here and how this work reaches different individuals and families.”

Commending her colleagues at the DTHF for their attention to community needs, Professor Phakeng said UCT increasingly recognises that the “university lives in the community and the community lives in the university”.

“It’s in moments such as this one that I wish I could call all of South Africa to come and witness what we mean when we say the work that we do responds to the context that we live in.

“We are not just the best on the continent; we work hard to be the best for the continent.”

Professor Linda-Gail Bekker, deputy director at the DTHC and chief operating officer at the DTHF conveyed “support and love” from DTHF and DTHC patron Anglican Archbishop Emeritus Desmond Tutu and his wife Leah Tutu. “He is our role model for the work we do,” she said.

[Watch the launch of the Masiphumelele TB Aerobiology research facility.]
[Download high resolution pictures.]

UCT Vice-Chancellor Professor Mamokgethi Phakeng at the new Aerobiology TB research facility.
Professor Linda-Gail Bekker discusses the history of the DTHF and DTHC's work in Masiphumelele. Photos: Michael Hammond

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