


# SeroSelectTB *newsletter*

May 2025

# *SeroSelectTB project visit to partners in Cape Town*

In this SeroSelectTB newsletter the spotlight is on activities with consortium partners in Cape Town, South Africa.

The Clinical Mycobacteriology and Epidemiology (CLIME) group at Stellenbosch University (SU) organized visits to local healthcare centres and CLIME research units located in the northern suburbs of Cape Town. Activities in the townships of Bloekombos, Wallacedene, Scottsdene and Kraaifontein were documented.

One afternoon was spent with the CLIME researchers at the Biomedical Research Institute, Stellenbosch University (SU) in Tygerberg. Routine laboratory activities included: preparation of blood samples for various analyses, storage of dry saliva samples for the SeroSelectTB study using the MucoSafe device, and the preparation of microscopic slides for detection and analysis of *Mycobacterium tuberculosis* bacilli.

A visit to the SeroSelectTB test production site at Lateral Flow Laboratories (LFL) was organized. The LFL team, led by the CEO Nick Borain, welcomed us to document the manufacturing activities. In parallel, Luke Borain and Carol Holm-Hansen conducted double blind re-testing of biobanked serum samples collected from SeroSelectTB project participants enrolled in the intervention arm in South Africa, Tanzania and Ethiopia. These analyses address assay accuracy, and will provide information required for regularity approval.

# *At healthcare centers in Cape Town's northern suburbs*

Driving through northern suburbs, Cape Town.


Waiting room at Kraaifontein Community Health Center.

We really need digital record of patients and tracking of their treatments.

Clerk Samuel Siziba at TB registry room, Kraaifontein Community Health Center.

It can take some time to find correct patients' records... you see how many we have!

Clerk Cynthia Floris going through TB patients' records, Kraaifontein Community Health Center.

Is the TB burden high in this community?

*Oh yes, very, very much high.*
*Because there's a lot of defaulters and when they come back, they are very, very sick. They walk without [wearing a] mask and yes, they get education, but they don't listen....*

Do you think there is a stigma among patients or against people who were diagnosed with TB, and this could be the reason they are defaulting?

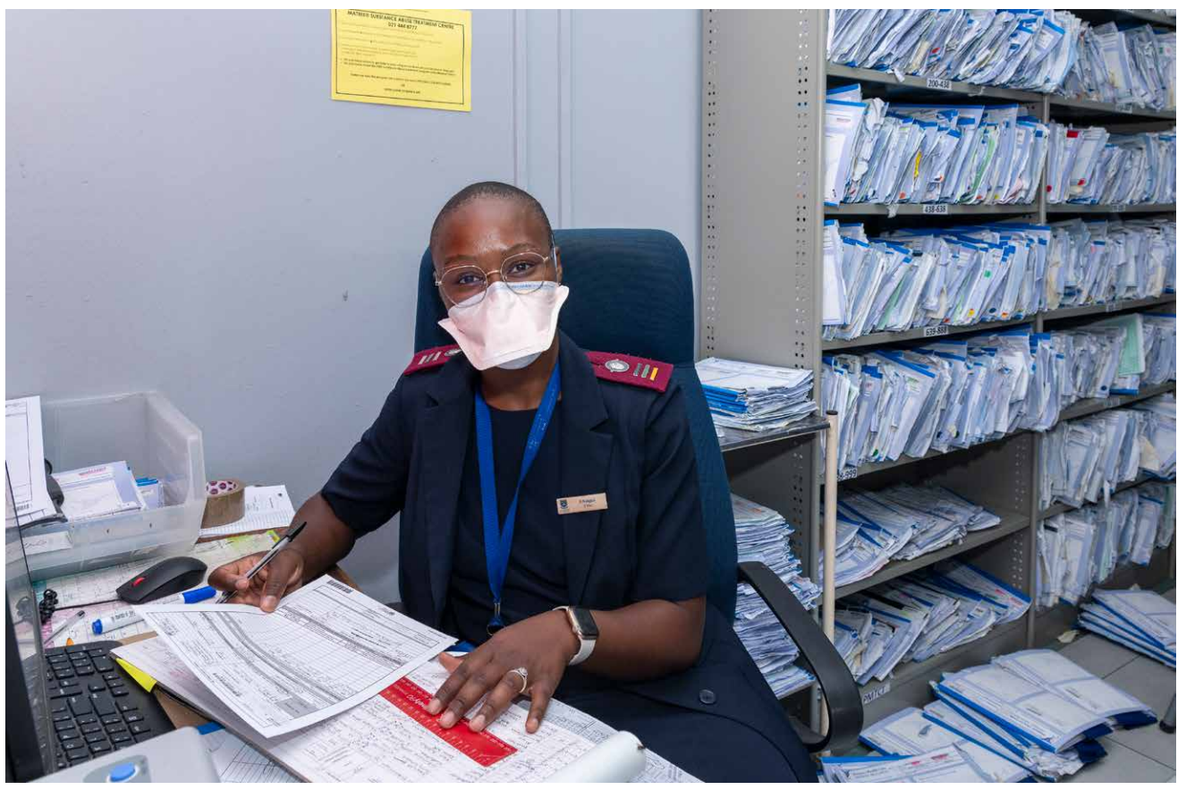
*Yes, I think that can be one of the reasons why people are not disclosing [diagnosis] to their families, especially in our poor communities. They don't want to disclose to their family because the family will kick them out.*


Ms Vuyiswa Nomkoweni Baca (left), student at Kraaifontein Community Health Center (CHC) TB room, and Mrs Elia Jones (right), nurse leading national TB Programme at Kraaifontein CHC.


Patients waiting in front of TB room at Kraaifontein Community Health Center.

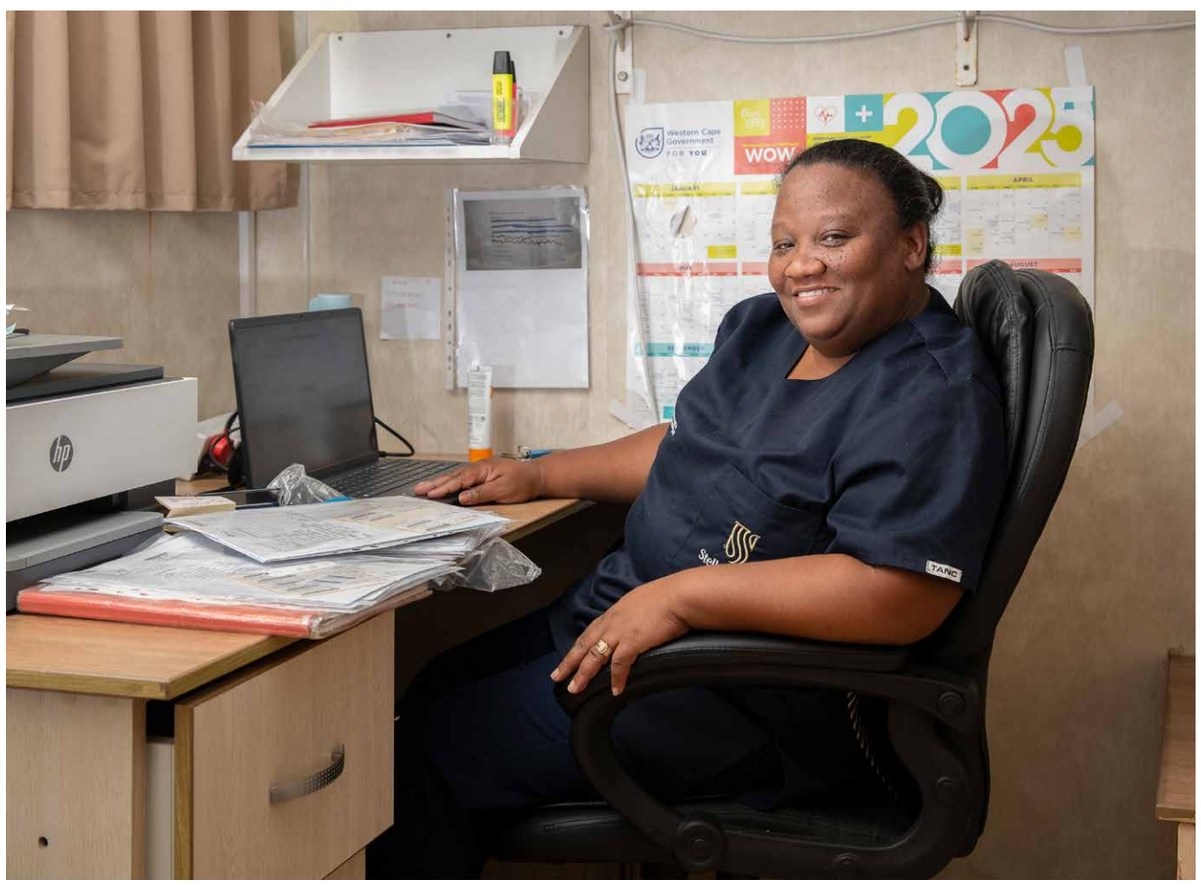

Sr. C. May at TB room at Scottsdene Community Health Clinic (CHC) Day Centre holding national TB register book.

> *"What I've seen in this year that I was here, the clients I saw [year(s) ago] are back now. So that is very concerning, but I know it is because it's a poor community. What happens is there's a lot of people staying in a one-bedroom house. So, the one is on treatment ... and is completing TB treatment, but the people in the house are not taking the treatment."*



Sr. S Ningiza-Duba at Scottsdene CHC Day Centre entering patients' data into an electronic database.

CLIME mobile clinic at Scottsdene CHC: Sister Phumza Siboto (left) and Community Health Worker (CHW) Chumani Hatile (right).

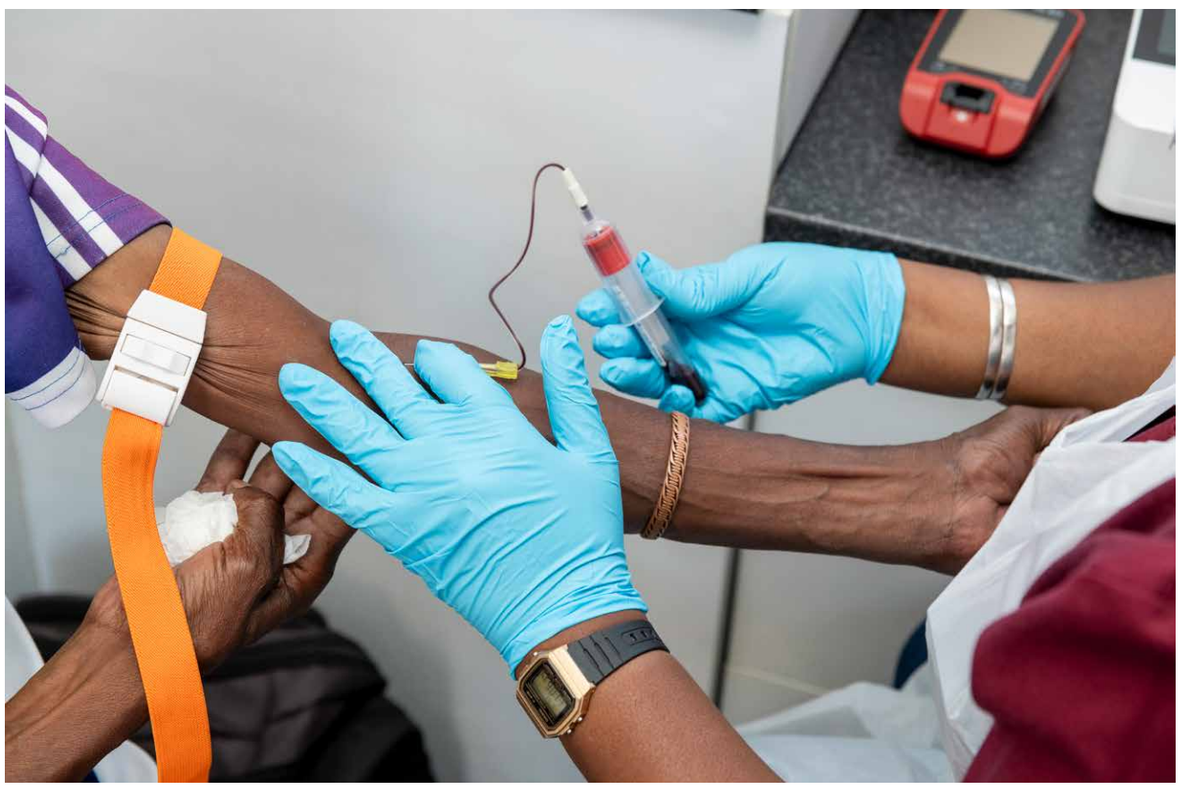


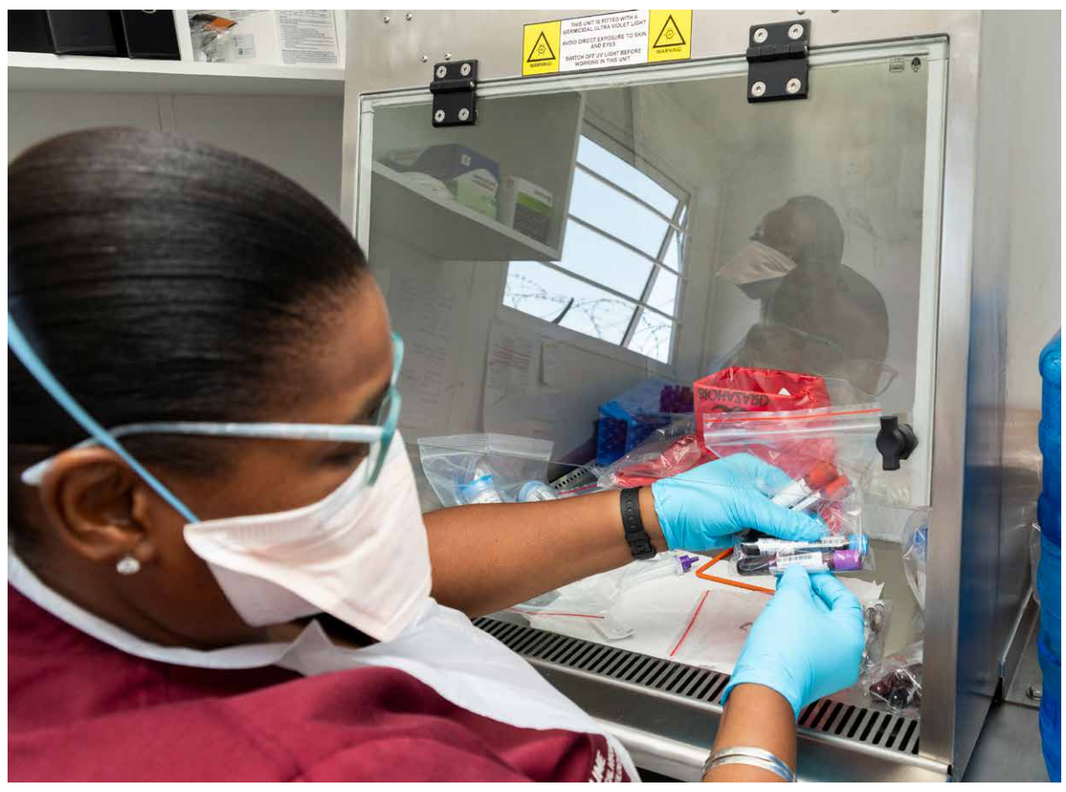
CLIME research nurse Dandelene Sylvester at the mobile clinic at Kraaifontein CHC.

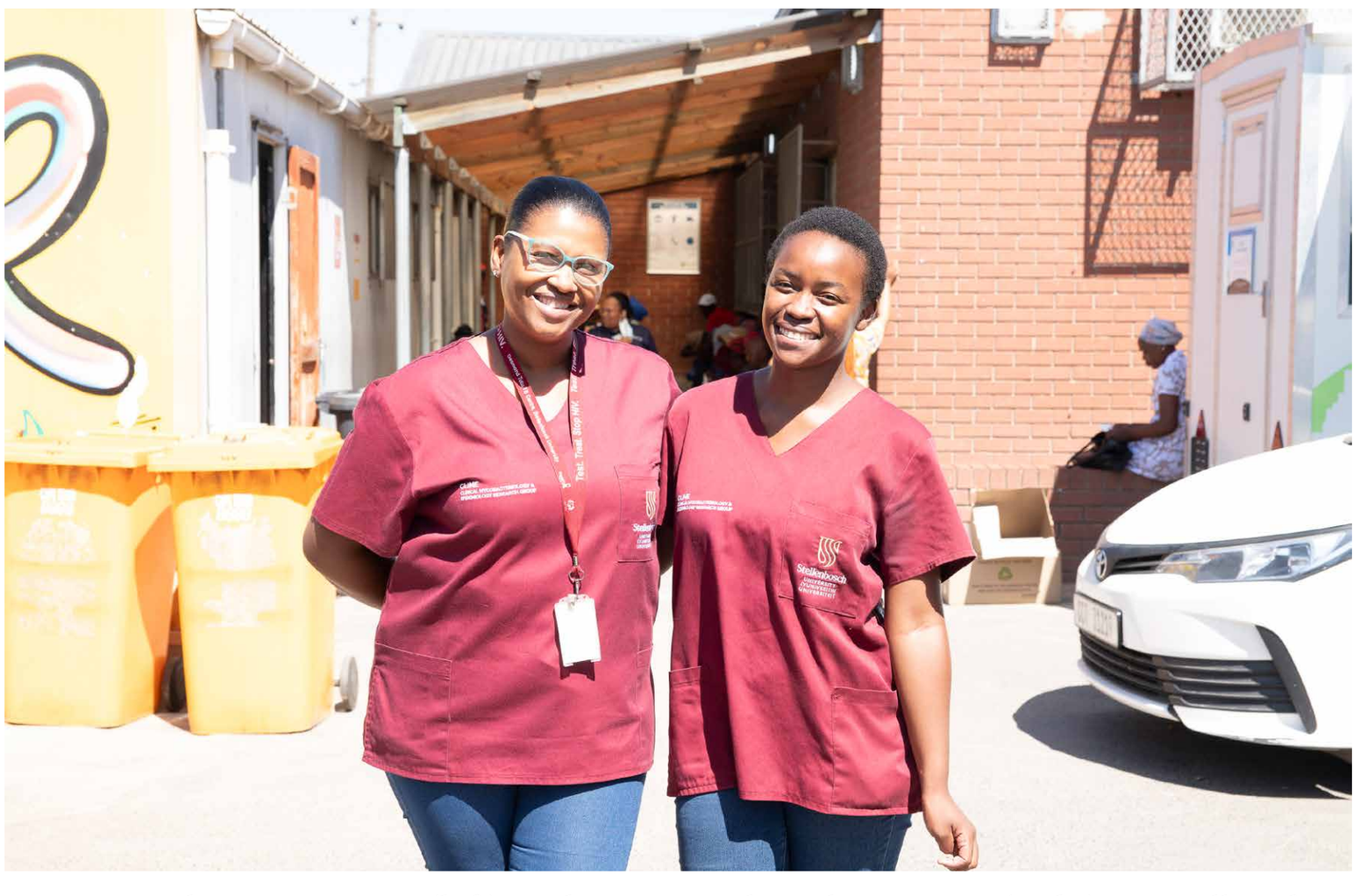
CLIME mobile clinic at Bloekombos CHC: Sister Lusanda Yekani (left) and CHW Nosimphiwe Booi (right).

At the CLIME mobile clinic at Wallacedene Community Health Clinic, with research nurse Nonelwa Msengana and Community Health Worker (CHW) Siphosethu Gonya, and patient who wished to remain anonymous.

We observed patient enrollement and samples collection (e.g. blood, sputum, nasopharyngeal swabs) for diagnostic testing.







Sister Nonelwa Msengana (left) and CHW Siphosethu Gonya (right) at Wallacedene Community Health Clinic.

Looking from the Wallacedene Community Health Clinic towards community shop accross the street, high metalic fense and barbed wires secure the clinic and workers from almost daily fights between local gangs competing for the control over the neighbourhood.

# *At Stellenbosch University*


Professor Grant Theron and PhD student Welile Dube Nwamba at Biomedical Research Institute, Tygerberg, Cape Town.

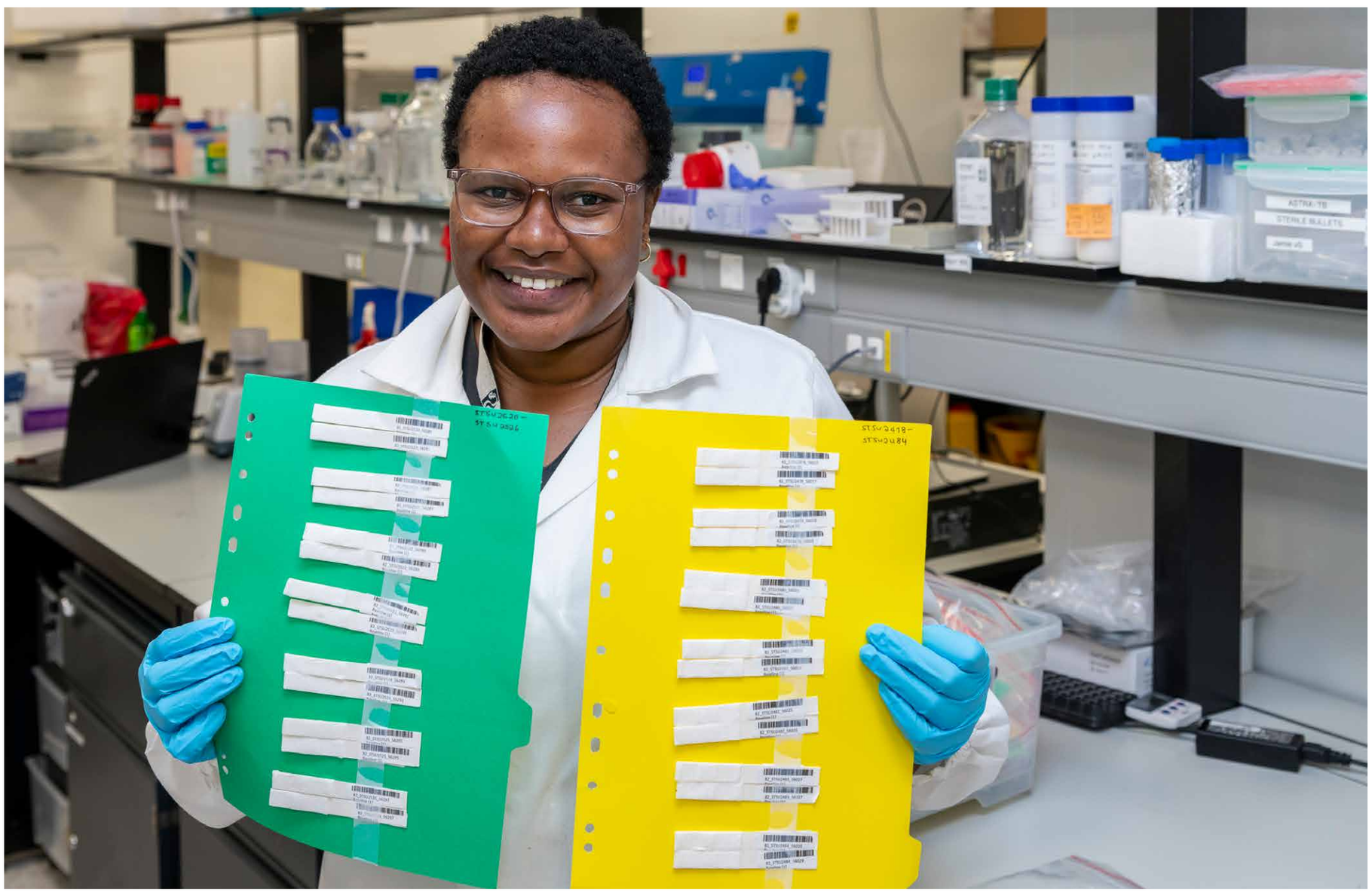

Members of CLIME research group at the Stellenbosch University, Cape Town; from left to right: Welile Nwamba, Anathi Ngxakeni, Labeeqah Harris, Zola Nkwanyana, Bayanda Mdodo and Jamie van Schalkwyk.



*M. tuberculosis* colony, stained by Ziehl Neelsen and seen under the light microscope (magnification 100 times). Bacteria were isolated from liquid culture done on the sputum of a patient with MDR-TB. Image courtesy of Dr Rouxjeane Venter, CLIME, SU.


Labeeqah Harris prepares blood samples at CLIME research lab.


Desiree Mbu and Welile Nwamba at CLIME research lab.



Anathi Ngxakeni holding MucoSafe devices collected from participants enrolled in SeroSelectTB study.

# *At Lateral Flow Laboratories*


Lateral Flow Laboratories employees in charge of manufacturing SeroSelectTB test, from left to right: Ruth Smith, Caren Da Silva, Sheila Sangotsha, Faeza Williams and Fozia Davids.

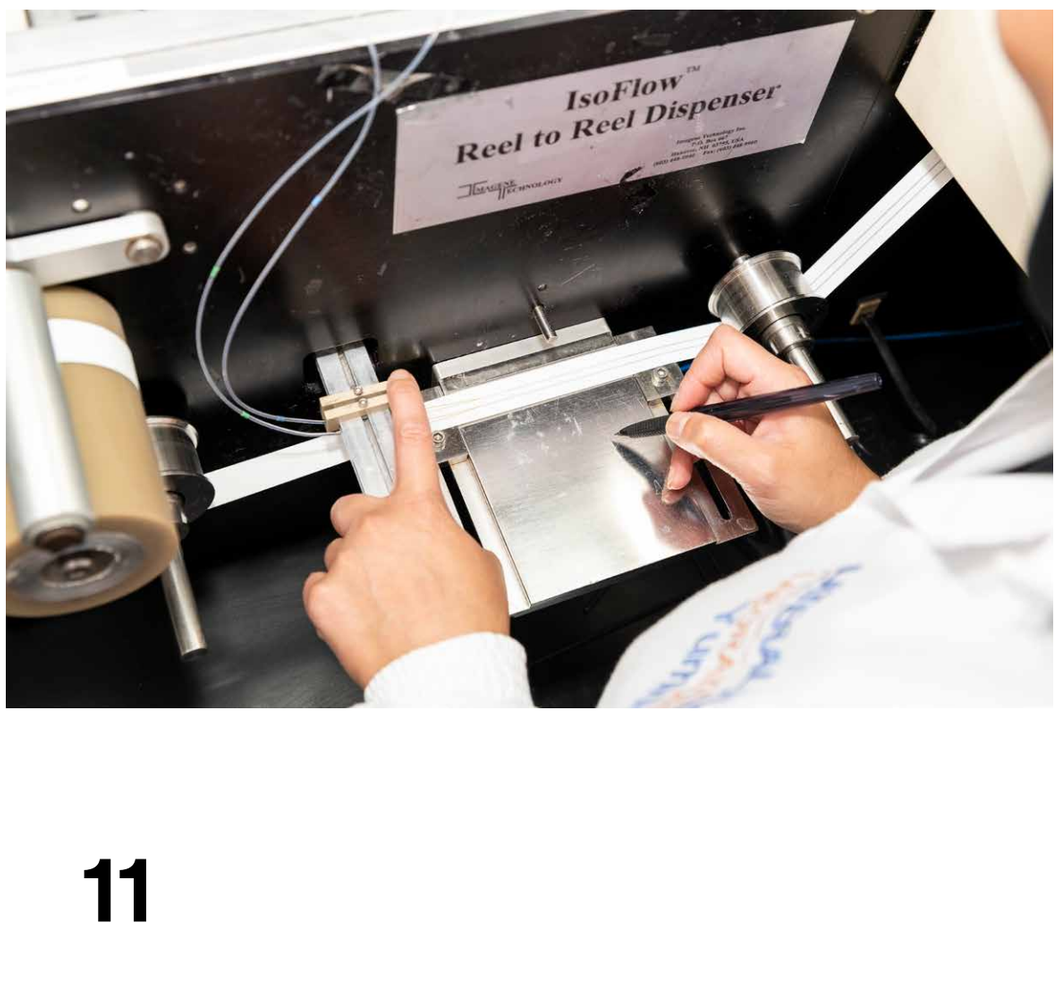
The SeroSelectTB test units are manufactured at Lateral Flow Laboratories (LFL) in Cape Town using propriety methods and cassettes for lateral flow rapid diagnostic tests. Our partner, InVivo BioTech in Germany, supplies LFL with *Mycobacterium tuberculosis* (Mtb) antigens for the test units. Stable cell lines have been established at InVivo BioTech to ensure reproducible expression of Mtb proteins.

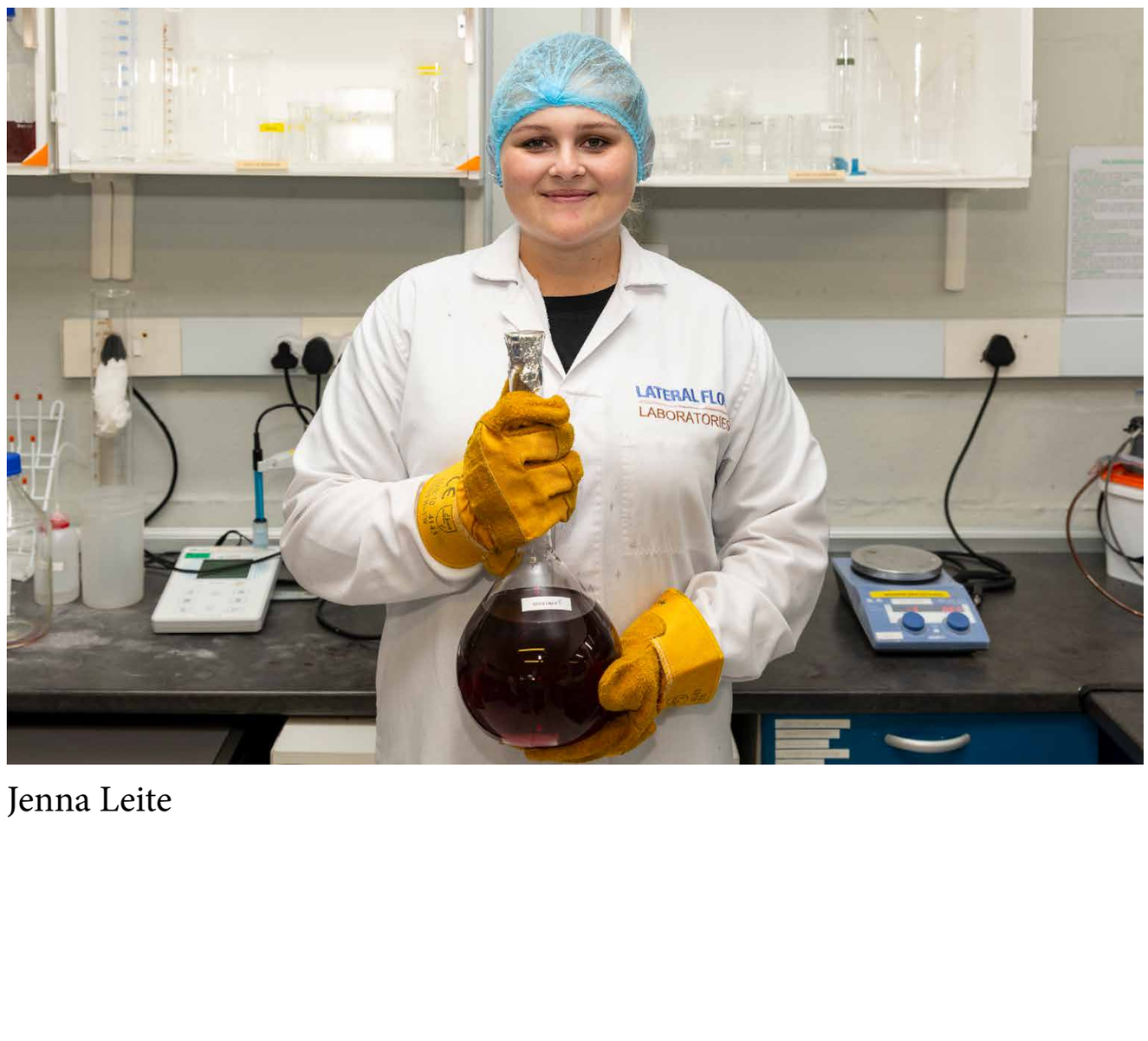
Test production is subjected to established quality control procedures at LFL. Samples collected at the study sites in South Africa, Tanzania, and Ethiopia have been subjected to blinded re-testing. In addition, the samples will be used for future assay modification and optimization.


Nick Borain, managing director of Lateral Flow Laboratories.


Julianne du Plessis, Lateral Flow Laboratories lab manager.

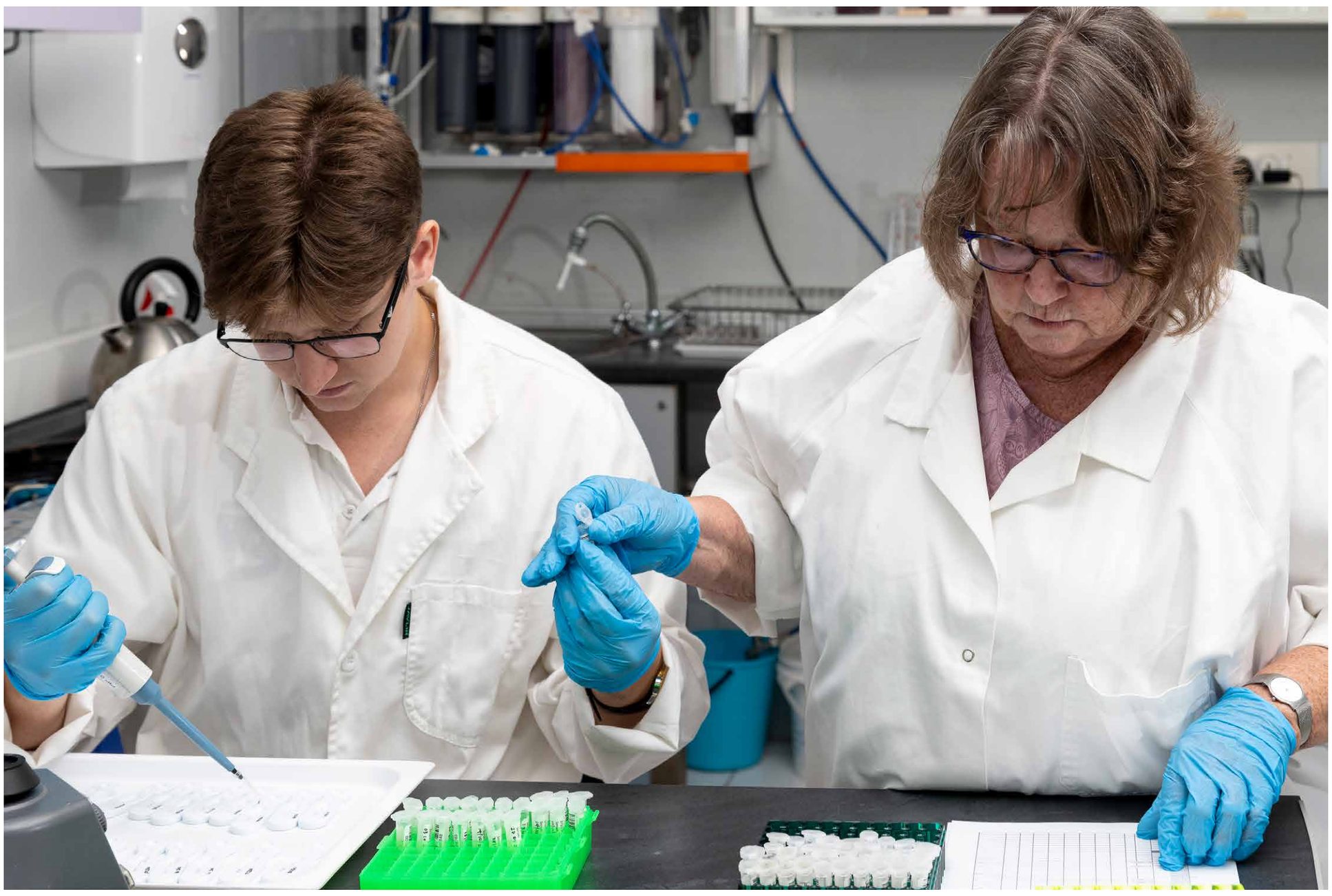

Yumna Price



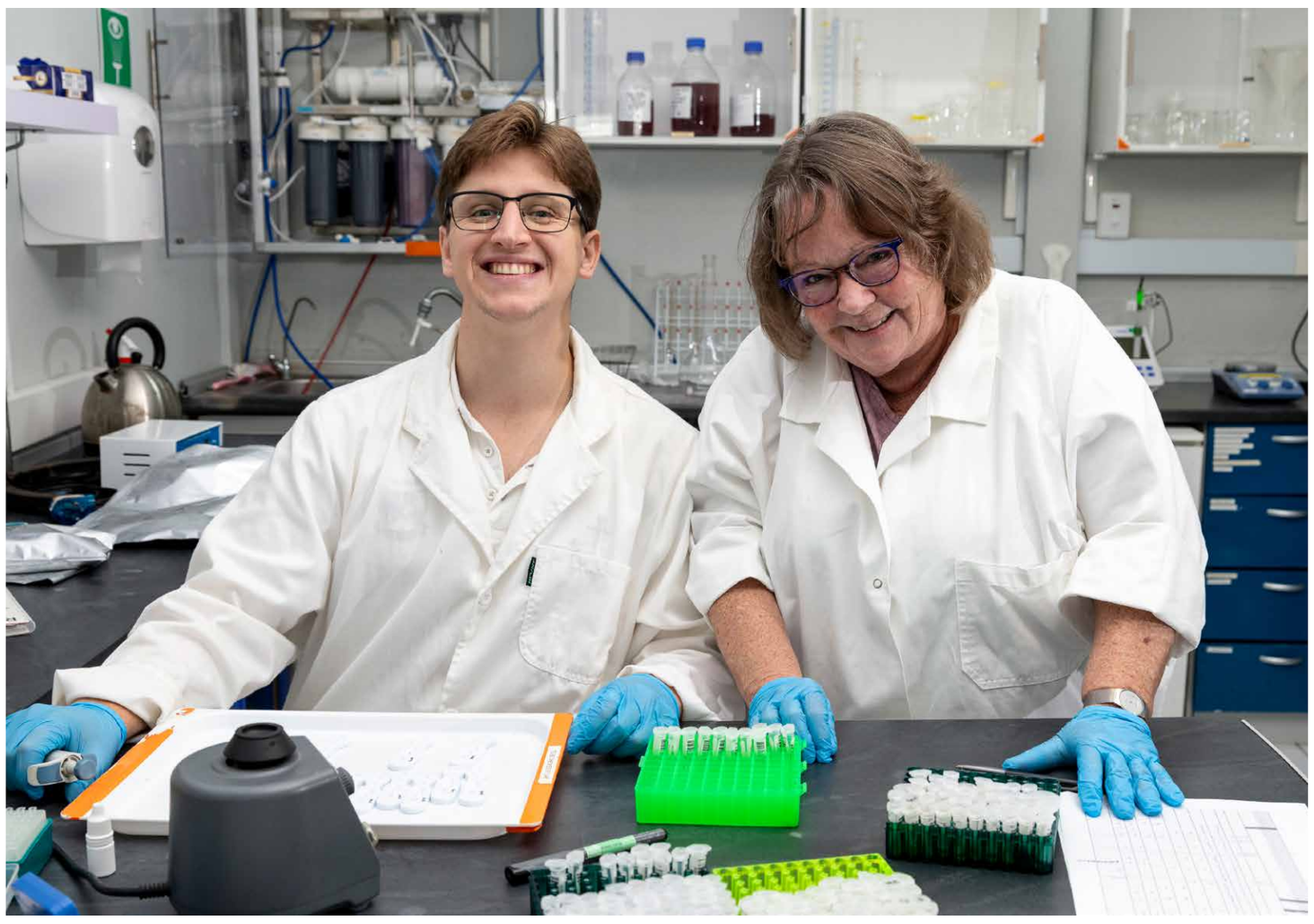

Jenna Leite

# *Double blinded SeroSelectTB test re-evaluation at Lateral Flow Laboratories*



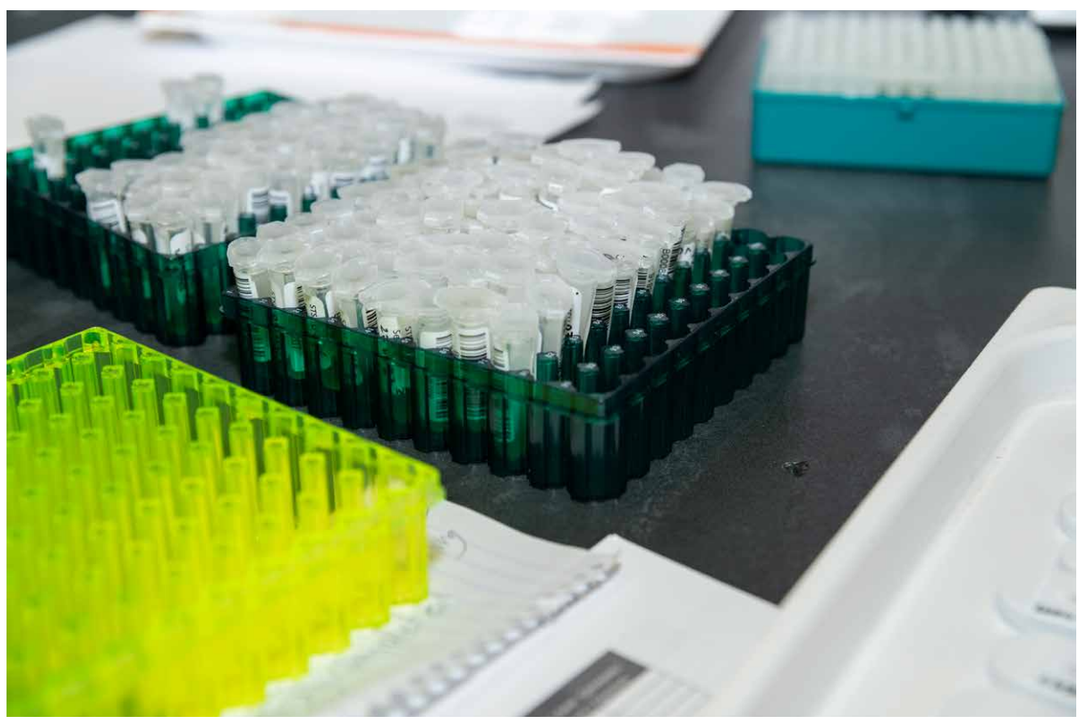
Algoritmically generated samples sets from each partner country included all SeroSelectTB positives, an equal number of of SeroSelectTB negatives, and 100 samples that indicated the need for additional testing. Collectively, 1318 samples from South Africa, Tanzania, and Ethiopia were re-tested in this first round of *in-house* quality assurance investigations at LFL.


All SeroSelectTB cassettes were scanned after testing and digitally archived at LFL.



Luke Borain and Carol Holm-Hansen performing *in-house* blinded re-testing of serum samples obtained from project participants enrolled in South Africa, Tanzania, and Ethiopia.

These results will be compared with results from the field testing for reproducibillity, and document assay accuracy.





Serum samples from SeroSelectTB participants enrolled in the study intervention arm in South Africa, Tanzania and Ethiopia are stored at Lateral Flow Laboratories. The samples will be re-tested in-house and provide assay accuracy information required for regulatory approval.

## *Looking ahead*

» The SeroSelectTB project will end on 31 December 2025.

» Project partners are currently working on data analysis and publications.

» Participant enrollment in Ethiopia will continue through mid-June 2025 to ensure statistically robust data collection.

» The final consortium meeting will be held on 2-4 September 2025, in Moshi, Tanzania.

» We hope that lessons learned during the SeroSelectTB project will be sustained through local and national initiatives!

The lighthouse at the Cape Point, South Africa.

Person behind the lens - Miloje Savić.
Photo courtesy of Carol Holm-Hansen.

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