Searching for tuberculosis ‘super-spreaders’ by sampling breathed air

In Masiphumelele, an informal settlement of tin shacks, squat brick buildings, and narrow lanes south of Cape Town, 23,000 people go to school, run businesses, sleep, and socialize cheek by jowl. As a result, communicable diseases are rife—especially tuberculosis (TB), which infects around 80 percent of residents by the time they reach adulthood.

A new research facility opened here [in March] aims to curb TB by studying how it is transmitted in the local community. The R10 million ($700,000 USD) Aerobiology TB Research Facility will allow microbiologists from the University of Cape Town (UCT) to study Mycobacterium tuberculosis captured from the exhaled air of local TB patients.

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TB patients will enter into a “clean box” about the size of a phone booth and spend some time in there. The air in the box—about 300 liters—will be vacuumed up and run through sterile water, locking any particulate matter including bacteria in a 5-milliliter tube. Scientists will then scour the samples for TB bugs.

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[I]n time, the scientists hope to scale it up into a high-throughput diagnostic tool to help identify so-called “super-spreaders” in the community.
Read full, original post: Lab in South African “Township” to Sample TB from Breathed Air