

**EDUCATION / KNOWLEDGE BROKERAGE**

***In the News - SA Technology Aims to Finger Killer TB Victims - Cape Argus 6 September 2007- by Di Caelters***

Cutting edge technology that "fingerprints" cases of the dangerous multi drug resistant tuberculosis is breaking new ground in the Western Cape with high hopes of halting soaring rates and so saving lives. Pioneered by the University of Stellenbosch's department of biomedical sciences, in co-operation with the TB Control Programme, the technology is a first for South Africa and holds enormous promise for combating the disease across the country. The department's Professor Tommie Victor, who is driving the project, said George was selected as the trial site for the technology because of its high TB burden. It is also the area he identified in 2003 as the epicentre of a new "superbug", known as DRF150. Effectively, the technology fingerprints everyone entering the Lawaakamp clinic in George, whether or not they are ill, but also "fingerprints" the actual bug in patients found to be suffering from TB. "So our purpose is twofold; to conduct rapid laboratory testing for MDR-TB so patients can get on to treatment quickly, but also to fingerprint the bacterium for future research to ascertain whether people were infected during their actual clinic visits," Victor said. Breaking the cycle of transmission of drug resistant TB required rapid diagnosis, new drugs, and better knowledge of the disease dynamics. "Anti-TB drugs are a two edged sword because they destroy the bacterium but can also select for resistant bacteria against which those drugs are then ineffective," Victor said, adding that South Africa had been identified as a hotspot for MDR-TB from as early as 2002 by the Global Project on Drug-Resistance Surveillance. In George clinicians estimate that one to two of every 100 people are infected with TB. "Recently, a bleaker picture has emerged with the discovery of extremely drug resistant TB (XDR-TB) strains resistant to the front line TB drugs and also to most of the second-line drugs too," he said. The key, says Victor, lies in rapid diagnosis of new cases, but that doesn't happen with traditional testing, which needs three to six weeks to grow the bacteria, and confirm they are indeed TB, then another two to three weeks to determine to which drugs the bacterium is susceptible. "Such time delays leave a critical window for MDR-TB to be transmitted," he said, adding that the new, fast molecular tests they were using in George would hopefully get patients on treatment quicker, so stemming the spread. The tests are expensive, but provide answers in a few days. Although the pilot site is small, Victor said they had already rolled out operations to some extent, testing sputum samples in problematic cases from clinics in other areas of the Boland, Overberg, Southern Cape and Karoo where they had worked for the past seven years. In South Africa currently, drug resistant TB testing is done only in problematic cases when patients don't respond to treatment, or have been in contact with known drug-resistant cases. Among those high risk patients only, about 20% are diagnosed with drug resistant TB." The long term aim is to prove that our system works, with a view to similar technology being rolled out across the country to address this serious health threat," Victor said.

In Photo: Prof. Tommy Victor

