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## **ART reduces prevalence of TB in people infected with HIV – UCT study**

### **Antiretroviral Treatment an important part of SA's overall TB control strategy**

When she was faced with making a decision about her future - music or science? - University of Cape Town researcher Dr Venessa Timmerman chose the latter and says she has never looked back. Her research shows that not only does Antiretroviral Treatment (ART) reduce incidents of tuberculosis (TB) in people infected with HIV, but they also reduce mortality in those infected with both diseases.

A micro and cell biologist by training, Dr Timmerman's thesis is titled "The effect of Antiretroviral Treatment on HIV-associated tuberculosis incidence and outcomes in the Free State Province". It evaluates the effectiveness of ART in patients co-infected with HIV and TB in a large province-wide dataset of adults enrolled in the public sector treatment programme in the Free State - from 2004 to 2010.

Dr Timmerman says: "Our data shows that patients aren't being given ART early enough. This finding supports clinical trials that show that ART should be started as early as possible in patients diagnosed with TB."

Using multiple datasets, including the TB dataset, as well as national mortality registers and a range of regression models, her work supports recent policy changes which make ART widely available to all adults with TB and HIV - regardless of how advanced their HIV disease is.

The analyses showed that in people with HIV, ART was associated with reducing the risk of a first TB episode by 36%, and reduced the risk of getting multiple episodes of TB. In co-infected HIV-TB patients ART was associated with roughly halving the risk of death.

"The research findings prompt future research on better management of co-infected HIV-TB patients, their follow-up period, and screening for other opportunistic infections. It strongly supports the effort to integrate primary care services," says Dr Timmerman.

She adds that Government's effort to make ART available to patients with a CD4 count of 350 or lower, or to all TB patients (regardless of their CD4 count) is a step towards better health outcomes for HIV patients. It reduces the risk of opportunistic infections like TB.

“Future research should be targeted at finding the reasons why country-wide public sector ART programmes in South Africa are not as effective as they could be, how they could be strengthened, and at evaluating the effectiveness and cost-effectiveness of new interventions aimed at improving ART delivery,” she says.

Dr Timmerman received her PhD in medicine at the UCT graduation ceremony held on 16 December 2013 at Jameson Hall on Upper Campus. She holds a master’s in reproductive biology from the University of Pretoria and an honours in computer science from UNISA.

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