



Multi-million rand award to UKZN scientists for cutting-edge HIV research



Dear Colleagues

It is with great pleasure that I share the news of success in achieving a MRC Flagship Grant by a team of researchers from the College. Professors Tulio de Oliveira and Frank Tanser, based at the Africa Centre, and both recently appointed as Full Professors within the Schools of LMMS and NPH respectively, led a team of researchers from across

the College and from other Colleges to develop an interdisciplinary proposal aimed at fighting HIV within the province, and to convert best practice for success into national policy.

The Africa Centre, and academics from within the College, have used their knowledge and understanding gained through research to shape and change policy and implementation, resulting in major successes in the fight against HIV. I have no doubt that the project that they are proposing will produce results, and that these will further improve our ability to counteract the epidemic, and work towards the vision expressed in the National Development Plan to “Ensure that the generation of under-20s is largely free of HIV”.

I hope that this project is the first of many where we actively bring together teams of researchers to address key challenges in a multidisciplinary manner, and which links together individuals and disciplines that may not have previously worked collectively.

Only through such large and bold initiatives are we likely to have the influence and impact necessary to counter the quadruple burden of disease. While we celebrate the success of this team, I must also commend the other groups that emerged as part of our process to generate the Flagship proposals, and to encourage them to continue to work together to build strong activities that can attract competitive funding.

College Management has identified the importance of such team work as a driver for success, and will continue to engage with those teams, and others that develop, to understand how we can best support development of their capacity, and seed the future of their success.

Congratulations to the team, and I wish them every success in achieving the outcomes of the proposed work. I assure them that they will have the ongoing support of the College behind them.

Rob Slotow

Deputy Vice-Chancellor and Head
College of Health Sciences

16.5 MILLION RAND TO CONVERT CUTTING-EDGE HIV RESEARCH IN RURAL SOUTH AFRICA INTO NATIONAL POLICY



Professor Tulio de Oliveira



Professor Frank Tanser

Cape Town, 31 October 2013.

Yesterday, President of the Medical Research Council (MRC), Professor Salim Abdool Karim and Health Minister, Dr Aaron Motsoaledi, awarded a R16.5 million grant to fight HIV drug resistance and transmission in rural KwaZulu-Natal.

This grant was awarded to support the work of two scientists at the Wellcome Trust's Africa Centre for Health and Population Studies, a rural HIV & TB research centre in Hlabisa, South Africa, which is based in the University of KwaZulu-Natal. Professor Tulio de Oliveira and Professor Frank Tanser recently showed that antiretroviral treatment can decrease HIV-1 transmission; however the success of the national treatment programme is threatened by rapid drug resistance.

With the expansion of HIV/TB treatment in South Africa and over 1.8 million patients on antiretrovirals (ARVs), drug resistance is fast becoming a growing problem. Despite significantly rolling out ARVs country-wide, attention to the management of

individual patients with resistance strains has been neglected. Drug resistance testing is considered expensive, time consuming and dependent on high-level technology (such as genetics, biotechnology and bioinformatics). However, the focus is likely to change now.

The two ground-breaking studies by Tanser and de Oliveira were published in the leading scientific journals, *Science* and *Nature* respectively. Tanser's study found that widespread antiretroviral therapy curbed the rate of new HIV infections in Africa. de Oliveira's study indicated that genomic data which can be used for the clinical management of patients with resistance strains and to understand patterns of HIV transmission, can now be produced cost effectively, locally.

This award will allow de Oliveira, a bioinformatician, and Tanser, an epidemiologist specializing in GIS, to work together to produce a unique framework to understand HIV-1 transmission and resistance. In addition, the award will allow them to collaborate closely with six other leading research groups based at UKZN (HEARD, K-RITH, HIV Pathogenesis Programme, Computer Science, Genetics and Infectious Diseases) to develop a framework to prevent HIV transmission and resistance.

'HIV drug resistance is a very serious problem in South Africa, and the recent advances in resistance testing technology and in understanding patterns of transmission will allow us not only to extend the life of patients failing treatment but also to produce policies of national interest that save hundreds of millions of rand in government programs in the next few years,' according to de Oliveira. Tanser added, 'We are delighted to have received this award. It provides us with an unparalleled opportunity to understand patterns of HIV transmission and drug resistance in hyper-endemic southern African populations. The results will contribute directly to establishing the most effective treatment and prevention strategies in such settings.'

Professor Moses Chimbari, Dean of Research at the College of Health Sciences at UKZN argues 'a multi-disciplinary approach is needed to understand these complex problems in order to translate research results into policies of national interest and to ensure that southern Africa's HIV treatment programs are highly effective. In this regard we welcome this award and expect it to contribute substantial scientific insights into ways of halting and reversing the HIV epidemic.'

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The grant, funded by the Medical Research Council (MRC) Flagship Projects is part of the MRC's strategy to sustain vibrant medical research in South Africa.

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