



Communication and Marketing Department
Isebe loThungelwano neNtengiso
Kommunikasie en Bemerkingsdepartement

Private Bag X3, Rondebosch 7701, South Africa
Welgelegen House, Chapel Road Extension, Rosebank, Cape Town
Tel: +27 (0) 21 650 5427/5428/5674 Fax: +27 (0) 21 650 5628

www.uct.ac.za

3 July 2015

Vitamin D supplementation might reverse seasonal nutritional deficiency, slow down HIV progression – UCT study

Vitamin D supplementation may reverse seasonal nutritional deficiency and slow down HIV progression in Cape Town, South Africa, according to a study by University of Cape Town (UCT) academics that was recently published in the journal, *Proceedings of the National Academy of Sciences (PNAS)*. Because vitamin D is associated with immune system function, deficiencies can affect the outcome of diseases, including HIV.

The results suggest that vitamin D supplementation may prevent winter anaemia and boost white blood cell count, possibly serving as a cost-effective intervention to reduce risk of HIV infection and slow down HIV progression in infected individuals, according to the authors.

To assess the rate of vitamin D deficiency in Cape Town, which exhibits a high rate of HIV infection, a study conducted by academics from UCT and the Universities of Stellenbosch (Stellenbosch) and Pennsylvania State (Penn State), United States, examined various factors affecting vitamin D levels in 100 healthy adults between 18 and 24 years old. The subjects of the study, which was conducted in 2013, were recruited from Khayelitsha and Bellville in Cape Town.

Dr Anna Coussens (UCT), Professor Robert Wilkinson (UCT), Rene Goliath (UCT), Dr Celeste Naude (Stellenbosch), Professor George Chaplin (Penn State) and Professor Nina Jablonski (Penn State) assessed the participants' vitamin D status, skin pigmentation, seasonal UVB exposure, dietary vitamin D intake, genetic variation, smoking status, serum vitamin D

binding protein and the ability of HIV-1 to infect and replicate in blood cells in the lab, during different times of the year and following vitamin D supplementation.

Although dietary vitamin D intake did not vary seasonally, the authors found that UVB exposure was lower in winter, leading to seasonal vitamin D deficiency that could be reversed by vitamin D supplementation, and that UVB exposure was the major determinant of individual vitamin D status. Further, the study's authors found that when blood cells isolated from participants were infected with HIV, viral replication was attenuated in blood from individuals who had received vitamin D supplementation in winter.

The study was published in *PNAS* on 10 June 2015.

END

Issued by: UCT Communication and Marketing Department

Riana Geldenhuys

Head: Media Liaison
Communication and Marketing Department
University of Cape Town
Rondebosch

Tel: (021) 650 4846 Fax: (021) 650 3780
Cell: 082 460 5554
Email: riana.geldenhuys@uct.ac.za
Website: www.uct.ac.za