

## In this issue...

Our feature article this month focuses on adherence to antiretroviral therapy in a HIV positive pediatric cohort in a rural area of KwaZulu-Natal, South Africa.

On page 2 we share highlights from the UNAIDS side event of the United Nations General Assembly High-Level Meeting on Ending AIDS held on June 7th 2016.

We congratulate Dr Nesri Padayatchi, Deputy Director of CAPRISA, on her appointment to the Board of The Southern African Clinicians Society on page 3. Also on page 3 we are pleased to announce that the HPTN 081 AMP study is well underway at the CAPRISA Vulindlela Research Clinic.



### CONTACT DETAILS

**CAPRISA**  
Doris Duke Medical  
Research Institute (DDMRI)  
2nd Floor  
University of KwaZulu-Natal  
Private Bag X7, Congella 4013  
South Africa

T: +27-31-260 4555

F: +27-31-260 4566

E-mail: [caprisa@ukzn.ac.za](mailto:caprisa@ukzn.ac.za)

[www.caprisa.org.za](http://www.caprisa.org.za)

 [caprisaofficial](https://www.facebook.com/caprisaofficial)

 [@CAPRISAofficial](https://twitter.com/CAPRISAofficial)

# Measuring adherence in pediatric patients on ART

**D**ata on adherence to antiretroviral therapy (ART) from CAPRISA's HIV positive pediatric cohort were recently published in the journal *AIDS and Behavior*.

This retrospective analysis of routinely collected data from children (n=78) enrolled into the CAPRISA 052 AIDS Treatment Program from June 2008 – September 2013 in a rural area of KwaZulu-Natal, South Africa aimed to assess whether monthly adherence assessment by pill count was a reliable predictor of virological outcomes and to identify reasons for non-adherence.

The study showed that the median monthly adherence to treatment was 87.8% (interquartile range (IQR): 71.0-99.6%) at month six, 88.9% (IQR: 77.1-99.8%) at month 12 and 90.8% (IQR: 79.1-99.2%) at month 24 (Figure 1).

The proportion of children aged 6 months to 13 years (median age of 7.1 years) with an undetectable viral load (< 400 copies/ml) were 84.0% (n=63) at month six, 86.6% (n=58) at month 12, and 84.5% (n=49) at month 24. Multivariate analysis demonstrated that children with an overall adherence by pill count  $\geq$  95%, children with a baseline WHO stage 3 or 4, if the primary caregiver was a family member instead of the biological



*Chanelle Smith, Research Pharmacist led the research on adherence in the CAPRISA paediatric cohort*

parents and if the primary caregiver was the recipient of any financial grant were significantly associated with adequate viral load suppression (< 400 copies/ml).

Generally in clinical practice > 95% of the prescribed ART doses should be taken for patients to have an undetectable viral load < 400 copies/ml. In this study adherence of >95% by pill count was not an ideal indicator of virological suppression in children. Maintaining adherence  $\geq$  95% in children on ART is not only challenging but difficult to measure. Barriers to optimal adherence may be related to caregiver's factors and child/caregiver forgetfulness, taste of medicine, financial constraints in accessing care and side-effects. Viral load assessment remains the gold standard for assessing treatment success in this age group.

### For further reading: see

Smith C, et al. Assessing Adherence to Antiretroviral Therapy in a Rural Paediatric Cohort in KwaZulu-Natal, South Africa. *AIDS and behaviour*. 2016 June 11. [Epub ahead of print] doi 10.1007/s10461-016-1419-5. <http://www.ncbi.nlm.nih.gov/pubmed/27289369>

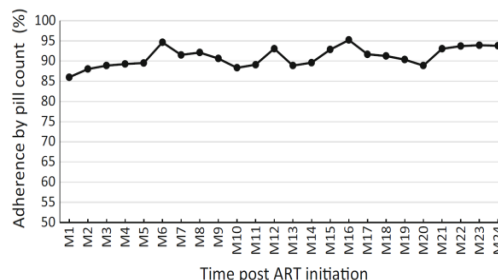


Figure 1: Median adherence over time



# Stopping new infections – a quarter for HIV prevention

## *United Nations High Level Meeting on AIDS*

**O**n 7th June, a high-level side event entitled: “Stopping HIV Infection – Investing a Quarter in Prevention” was held at the United Nations General Assembly High Level Meeting on Ending AIDS at the United Nations Headquarters in New York.

The meeting focused global attention on the importance of a Fast-Track approach to the AIDS response over the next five years. The UNAIDS Fast-Track approach aims to achieve ambitious targets by 2020, including: fewer than 500 000 people newly infected with HIV, fewer than 500 000 people dying from AIDS-related causes and the elimination of HIV-related discrimination.

CAPRISA’s Director, Professor Salim Abdool Karim, who moderated the special session, recounts this momentous occasion:

Quarraisha and I attended the United Nations High Level Meeting on AIDS from 7<sup>th</sup> to 10<sup>th</sup> June, which was called by the United Nations Secretary-General, Ban Ki-Moon.

It is specifically for High Level country delegations to agree on the future global AIDS response. The meeting, held at the UN in New York, agreed on a declaration that will be critically important for defining the future course of the global AIDS response. To this end, the High Level Meeting’s declaration will galvanise the HIV response and mandate certain UN commitments in the response.

UNAIDS, as the Joint United Nations Programme on HIV/AIDS, is playing a key role in



*The United Nations High Level Meeting at the United Nations headquarters in New York*

this process. Among the various contributions that UNAIDS made was a focused Symposium (referred to in UN parlance as an official Side Meeting). The purpose of this meeting is to inform delegates on the scientific basis for the UNAIDS goal of the “End of AIDS” as a public health threat by 2030. As I learnt, the Side Meetings are where much of the discussions and debates occur to create a consensus for the politicians to vote on at the High Level Meeting itself.

Quarraisha and I spoke in the UNAIDS Side Meeting – see photos on the right of the Session Room and the panel. It was a fascinating meeting and overall, it went very well. I participated in other panels as well and attended several more – every one of them was good. In one panel, we had a real live African Princess with a royal green dress and tiara!

The highlight for me was the Opening Plenary – what an occasion! One had a sense of history being made! Thankfully, Quarraisha and I had named reserved seats in the VIP section of the packed to capacity General Assembly – with the best seats in the house, we simply absorbed the breathtaking occasion.

*Continued on page 3.....*



*Profs Salim and Quarraisha Abdool Karim at the UN Opening Plenary held at the UN in New York*





.....continued from page 2  
**UN High level Meeting**



*From L-R: Prof Salim Abdool Karim (Moderator); Dr Anthony Fauci, Head NIAID, NIH; Dr Diane Havlir Head HIV/AIDS Division San Francisco General Hospital; Dr Michele Sidibe Executive Director UNAIDS & Prof Quarraisha Abdool Karim*

Michel Sidibe was brilliant in his address to the plenary – he touched on the key issues powerfully and eloquently. He left no-one unsure of what the world’s marching orders needed to be. The talks by Joyce Mujuru (HIV +ve sex worker from Zimbabwe) and Nelson Mandela’s grandson (whose father and mother died of AIDS) followed with moving words.

Once the individual countries started the comments, I felt the push back – Iceland complained about sex work being included in the declaration, others about MSM, etc But mostly, the comments were positive, with the US delegation making some strong points in support of the declaration.

I came away in no doubt that we have each contributed in our own little way to something truly historic and momentous!

**Professor Salim S. Abdool Karim, Director CAPRISA**

**MDR TB expert appointed to Board**



**D**r Nesri Padayatchi, Deputy Director of CAPRISA and one of South Africa’s leading TB researchers on clinical aspects of drug resistance and HIV-TB co-infection, has been appointed to the Board of the Southern African HIV Clinicians Society. Lauren Jankelowitz CEO of the Society made the announcement following a nomination process. “The Society’s Board of Directors plays a vital role in making critical decisions and guiding our organisation in order for us to achieve our strategic objectives”, she said.

**AMP HPTN study launched in Vulindlela**

**T**he CAPRISA Vulindlela Clinical research site enrolled their first participant for the HPTN 081 AMP (Antibody Mediated Prevention) study on Friday 10th June. The screening of eligible participants is well underway to reach the target of 103 participants over the next two years.

This is the first study to see if VRC01, the broadly neutralizing antibody used in this study, can prevent HIV infection in people. In laboratory tests, VRC01 was able to block HIV infection in about 90% of the different samples of HIV it was tested against. Participants will be given an infusion of the antibodies every 8 weeks explained Dr Halima Dawood, Study Investigator of Record.



*CAPRISA Vulindlela Research Clinic.*



## Scientific papers published in 2016

- 25 Desjardins CA, Cohen KA, Munsamy V, Abeel T, Maharaj K, Walker BJ, Shea TP, Almeida DV, Manson AL, Salazar A, **Padayatchi N, O'Donnell MR, Mlisana KP**, Wortman J, Birren BW, Grosset J, Earl AM, Pym AS. Genomic and functional analyses of *Mycobacterium tuberculosis* strains implicate *ald* in D-cycloserine resistance. *Nature Genetics* 2016; 48(5):544-551.
- 26 **Coovadia H, Moodley D**. Using PMTCT to raise overall health and development. *The Lancet HIV* 2016; 3(5): e192–e193
- 27 **Shey MS, Maharaj N, Archary D, Ngcapu S, Garrett N, Abdool Karim SS, Jo-Ann S. Passmore J-AS**. Modulation of Female Genital Tract-Derived Dendritic Cell Migration and Activation in Response to Inflammatory Cytokines and Toll-Like Receptor Agonists. *PLoS One* 2016; 11(5): e0155668. doi:10.1371/journal.pone.0155668
- 28 **McKinnon LR, Abdool Karim Q**. Factors driving the HIV epidemic in southern Africa. *Current HIV/AIDS Reports* 2016; 13(3):158-169.
- 29\* Reddy K, Ooms M, Letko M, **Garrett NJ**, Simon V, Ndung'u T. Functional characterization of Vif proteins from HIV-1 infected patients with different APOBEC3G haplotypes. *AIDS* 2016; 30(11):1723-1729.
- 30 **Smith C, Gengiah TN, Yende-Zuma N, Upfold M, Naidoo K**. Assessing Adherence to Antiretroviral Therapy in a Rural Paediatric Cohort in KwaZulu-Natal, South Africa. *AIDS and behavior*. 2016; doi 10.1007/s10461-016-1419-5. [Epub ahead of print]
- 31 **Garrett NJ**; McGrath N; **Mindel A**. Advancing STI Care in Low and Middle Income countries: Has STI Syndromic Management reached its use-by date? *Sexually Transmitted Infection* 2016; doi: 10.1136/sextrans-2016-052581. [Epub ahead of print]
- 32 Madlala P, Singh R, An P, **Werner L, Mlisana K, Abdool Karim SS**, Winkler CA, Ndung'u T. Association of polymorphisms in the regulatory region of the cyclophilin A gene (PPIA) with gene expression and HIV/AIDS disease progression. *JAIDS* 2016 ; doi: 10.1097/QAI.0000000000001028. [Epub ahead of print].

\*continuation from previous newsletter

## Scientific Reviews

Abstracts submitted for review		Manuscripts submitted for review		Ancillary studies submitted for review	
Total#	Cumulative <sup>^</sup>	Total#	Cumulative <sup>^</sup>	Total#	Cumulative <sup>^</sup>
0	354	0	226	1	72

# for month, <sup>^</sup> since committee initiation

## Conference & Workshop Reminders

Conference	Deadlines			Website
	Dates	Abstracts	Registration	
<b>21st International AIDS Conference (AIDS 2016)</b> - Durban, South Africa	18-22 July 2016	4 Feb 2016	18 Feb 2016	<a href="http://www.aids2016.org/">http://www.aids2016.org/</a>
<b>HIV Research for Prevention</b> - Chicago, Illinois, USA	17-20 Oct 2016	11 Apr 2016	1 Jul 2016	<a href="http://hiv4p.org/">http://hiv4p.org/</a>
<b>11th International Workshop on HIV Transmission</b> - Chicago, Illinois, USA	May 15 and 16, 2016	-	-	<a href="http://www.virology-education.com">www.virology-education.com</a>



National Research Foundation

CAPRISA hosts a DST-NRF Centre of Excellence in HIV Prevention



UNAIDS

CAPRISA is the UNAIDS Collaborating Centre for HIV Research and Policy



CAPRISA hosts a MRC HIV-TB Pathogenesis and Treatment Research Unit

Partner institutions:



Board of Control: AC Bawa (Chair) • Q Abdool Karim • SS Abdool Karim • R Bharuthram • D Clark • LP Fried (US) • S Madhi • LE Mazwai  
CT Montague • B Ntuli • N Padayatchi • M Rajab • DP Visser • ZM Yacoub

Scientific Advisory Board: C Hankins (Chair) • F Barré-Sinoussi • SM Dhlomo • HL Gabelnick • P Godfrey-Faussett • FG Handley • R Hoff • Y Pillay • T Quinn

Registration number: 2002/024027/08