



March 2016, Volume 15, Issue 3

In this issue...

Our feature story this month is a special tribute to Dr Ward Cates by Professor Salim Abdool Karim

On page 2 we congratulate Professor Quarraisha Abdool Karim on receiving the 2016 L'Oréal-UNESCO for Women in Science award for Africa and the Arab States region.

World TB day is highlighted on page 3, as well as the UNAIDS Scientific Expert Panel Meeting that was held in Boston. We also feature a study that was published in Science showing that an iPad maths app can help children improve their academic performance



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

www.caprisa.org.za

🖪 caprisaofficial

🋫 @CAPRISAofficial

A tribute to Dr Ward Cates a great friend and revered scientist

t is with deep sadness that I learnt of the passing of Dr Ward Cates, a world-class scientist, public health practitioner & champion for reproductive rights.

We have lost a very dear friend and the world has lost both an outstanding scientist and a great humanist. Quarraisha and I have known Ward for more than 25 years – as we mourn his passing we reflect warmly on our many wonderful interactions with him – including the 2011 CAPRISA Scientific Advisory Board meeting where Ward received the CAPRISA Award.

Willard ("Ward") Cates, Jr., MD, MPH, was President Emeritus and Distinguished Scientist at FHI 360. Before joining FHI 20 years ago, Ward was at CDC for two decades, where he was in the Family Planning Evaluation Division for half that time and directed the STD/HIV Prevention efforts for the other half. At FHI 360, he oversaw its HIV prevention research and was head of the NIH HIV Prevention Trials Network (HPTN) for 11 years. He also served on the Microbicides Trial Network Executive Committee (MTN) since its inception, with me during the first term.

The first time I met Ward was at a meeting in New Orleans chaired by King Holmes when we were both serving on the committee conducting the first review of the NIH's Office of AIDS Research, which was led by Bill Paul at the time. I was still a young researcher feeling out-of-place and overwhelmed by all the prominent AIDS researchers in the room - but Ward came across and put his reassuring arm around my shoulders and put me at ease. Such was his grace, empathy and generosity.

It was the start of our great friendship. And it led to many other great friendships with Joan Cates, his wife, and the team at FHI, especially Kathy Hinson, Paul Feldblum, Amanda Troxler and Linda McNeil



Dr Ward Cates at the 2011 CAPRISA Scientific Advisory Board meeting held at the Oyster Box in Durban

who have all been to South Africa for extended periods to help us with our research.

Ward always had time for others – when I asked if it would be okay to visit him when he was ill, he took the day to spend time with me, including showing me the baseball grounds from the FHI offices, arranging for me to meet with the FHI team and talking about upcoming challenges in HIV research.

Ward once told me that attending the CAPRISA 004 unblinding meeting was one of the great highlights of his career. While Ward is no more, we will continue to treasure our fondest memories of him.

Our thoughts are with Joan and his family.

Salim S. Abdool Karim Director: CAPRISA

Prof Quarraisha Abdool Karim receives 2016 L'Oréal-UNESCO for Women in Science Award



Prof Quarraisha Abdool Karim holding the L'Oreal-UNESCO Women in Science Award

ve leading women scientists across five regions and 15 promising young researchers were honoured at the 18th edition of the L'Oréal-UNESCO For Women in Science Ceremony at the Maison de la Mutualité in Paris on 24th March. In the midst of Nobel Laureates, previous recipients of the L'Oreal-UNESCO Laureate Awards, and some of the best and brightest scientific minds globally, Professor Quarraisha Abdool Karim was presented with the 2016 L'Oréal-UNESCO Women in Science award for Africa and the Arab States region. According to the international jury, the award was in recognition for her "remarkable contribution to the prevention and treatment of HIV and associated infections and greatly improving the guality of life of women in Africa."

"The Jury has recognised the tenacity, the creativity and the intelligence of the five eminent women scientists who bring their transformative sciences to change the world. Each scientist has had a unique career path combining exceptional talent, a deep commitment to her profession and remarkable courage in a field still largely dominated by men."

The President of the selection Jury, Nobel Laureate Professor Elizabeth H. Blackburn, is the first woman to hold this position in the history of the awards. She is the 2008 *L'Oréal-UNESCO For Women in Science* Laureate and the 2009 joint winner of the Nobel Prize in Physiology or Medicine. Prof Blackburn congratulated the winners and said "2016's laureates bring an extraordinary vision and immediate solutions to major human health issues...All their careers are exceptional, their discoveries truly new and they epitomise top-level research."

The awards were presented by Irina Bokova, Director General of UNESCO and Jean-Paul Agon, Chairman and CEO of L'Oréal and Chairman of the L'Oréal Foundation who also officially launched the *Manifesto For Women in Science* (<u>http://www.fwis.fr/en/manifesto</u>) to draw attention to the under-representation of women in the sciences.

An advocate for social justice of adolescent girls and young women in Africa, Prof Abdool Karim said she was deeply honoured and privileged to be recognised as a L'Oréal-UNESCO laureate - "I hope that this award inspires young women in Africa and the Middle East to pursue careers in science and technology as the world needs more women in science. Our region needs more scientists addressing the many challenges that face us locally including ways to prevent HIV infection in adolescent girls and young women who continue to bear a disproportionate burden of HIV infection in the region".

Professor Abdool Karim also participated in a presentation at an extraordinary session of the Academy of Science of France on Tuesday 22nd March and participated in a panel discussion on closing gender gaps at UNESCO on Wednesday 23rd March. Read more: <u>http://www.caprisa.org/</u>News/Read/30136



Paris celebrated the 2016 L'Oréal-UNESCO laureates. Banners were displayed at the Paris international airport

World TB Day

The 24 March every year is designated as World Tuberculosis Day, and is designed to stimulate public awareness about the devastating worldwide epidemic of TB, with over one million people dying from the disease, mostly from developing countries.

The World Health Assembly, through the World Health Organisation (WHO) End TB strategy, aims to reduce tuberculosis (TB) deaths by 95% and new cases by 90% between 2015 and 2035. Globally, the morbidity and mortality associated with even drug-sensitive TB was largely contributed to by HIV infection; reaching a peak in 2005 with 1.39 million TB cases and almost 500,000 HIV-associated deaths.

Since the 1990's, TB control in South Africa has been severely impacted by the maturing HIV epidemic as well as rising levels of MDR-TB. The province of KwaZulu -Natal, considered to be the epicentre of the TB and HIV epidemics in South Africa, has a TB incidence rate of 1,094 cases per 100,000 and more than 1.5 million HIV infected individuals with an HIV prevalence of 70% in TB patients.

Between 2008 and 2011, South Africa reported the fourth highest number of multi-drug resistant (MDR)-TB cases in the world globally, with KwaZulu-Natal being an epicenter of the HIV and multi- and extensively drug resistant tuberculosis [M(X)DR-TB] epidemics. A key component of the WHO strategy to prevent TB is the use of ART in HIV infected patients which has been shown to reduce the risk of developing TB by 70–90%. This is of particular significance in low income, HIV prevalent settings, where the incidence of TB declined with longer duration of antiretroviral therapy.

- Drs Nesri Padayatchi and Kogie Naidoo

UNAIDS Scientific Expert Panel Meeting



Front Row (L-R): Peter Godfrey-Faussett, Elaine Abrams, Salim Abdool Karim; Second Row (L-R): Ashley Haase, Pontiano Kaleebo, Deborah Persaud, Beatriz Grinsztejn, Peter Reiss; Third Row (L-R): Bruce Walker, Pedro Cahn, Sandra Lehrman, Praphan Panupak; Back Row (L-R): Francois Barré-Sinoussi, Wafaa El-Sadr, Myron Cohen, Richard Chaisson and Sharon Lewin

The first 2016 meeting of the UNAIDS Scientific Expert Panel was held during CROI on 23rd February at the Ragon Institute. Ragon's Professor Bruce Walker took members on a tour of the Institute before the meeting commenced. Dr Peter Godfrey-Faussett, Senior Science Advisor UNAIDS, and 16 members attended the meeting. A special note of thanks to Nancy Millstrom and Julianna Cogswell at Ragon who coordinated the logistics of the meeting at the venue.

iPad maths app makes kids smarter

study published in the journal Science describes how an intervention of short numerical story problems, delivered through an iPad app, significantly increased children's math achievement across the school year compared to a reading (control) group children whose parents are habitually



(control) group (Figure), especially for children whose paright to a reading Figure: Estimated number of months of math knowledge children gained across the school year (1 equals 9 months or one school year) as a function of average weekly app use.

anxious about math. The study show that brief, high-quality parent-child interactions about math at home help break the intergenerational cycle of low math achievement. This app, called Bedtime Learning Together (BLT), may be of interest to people with young children and can be downloaded for free from the app store.

For further reading see: Berkowitz T et al. Math at home adds up to achievement in school. Science 2015; 350:196-198. <u>http://science.sciencemag.org/content/350/6257/196</u>



Scientific papers published in 2016

Naranbhai V, de Assis Rosa D, Werner L, Moodley R, Hong H, Kharsany A, Mlisana K, Sibeko S, Garrett N, Chopera D, Carr WH, Abdool 11* Karim Q, Hill AV, Abdool Karim SS, Altfeld M, Gray CM, Ndung'u T. Killer-cell Immunoglobulin-like Receptor (KIR) gene profiles modify HIV disease course, not HIV acquisition in South African women. BMC Infect Dis. 2016 Jan 25;16(1):27. doi: 10.1186/s12879-016-1361-1.

Kløverpris HN, Kazer SW, Mjösberg J, Mabuka JM, Wellmann A, Ndhlovu Z, Yadon MC, Nhamoyebonde S, Muenchhoff M, Simoni Y, Andersson
F, Kuhn W, Garrett N, Burgers WA, Kamya P, Pretorius K, Dong K, Moodley A, Newell EW, Kasprowicz V, Abdool Karim SS, Goulder P, Shalek
AK, Walker BD, Ndung'u T, Leslie A. Innate Lymphoid Cells Are Depleted Irreversibly during Acute HIV-1 Infection in the Absence of Viral Sup-

- pression. Immunity 2016; 44(2):391-405. doi: 10.1016/j.immuni.2016.01.006. Epub 2016 Feb 2. Izulla P, **McKinnon LR**, Munyao J, Ireri N, Nagelkerke N, Gakii G, Gelmon L, Nangami M, Kaul R, Kimani J. Repeat Use of Post-exposure Prophylaxis for HIV Among Nairobi-Based Female Sex Workers Following Sexual Exposure. *AIDS Behav 2015 May 13. [Epub ahead of print].*
- DOI 10.1007/s10461-015-1091-1. www.ncbi.nlm.nih.gov/pubmed/25969181 Zevin AS, **McKinnon L**, Burgener A, and Klatt NR. Microbial translocation and microbiome dysbiosis in HIV-associated immune activation. Curr Opin HIV AIDS 2016; 11(2):182–190.

Arnold KB, Burgener A, Birse K, Romas L, Dunphy LJ, Shahabi K, Abou M, Westmacott GR, McCorrister S, Kwatampora J, Nyanga B, Kimani J, Masson L, Liebenberg LJ, Abdool Karim SS, Passmore J-AS, Lauffenburger DA, Kaul R, McKinnon LR. Increased levels of inflammatory

- ¹³ cytokines in the female reproductive tract are associated with altered expression of proteases, mucosal barrier proteins, and an influx of HIV-susceptible target cells. *Mucosal Immunology 2016; 9(1):194-205. doi:10.1038/mi.2015.51 http://www.ncbi.nlm.nih.gov/pubmed/26104913* Gorman J, Soto C, Yang MM, Davenport TM, Guttman M, Bailer RT, Chambers M, Chuang GY, DeKosky BJ, Doria-Rose NA, Druz A, Ernandes MJ, Georgiev IS, Jarosinski MC, Joyce MG1, Lemmin TM, Leung S, Louder MK, McDaniel JR, Narpala S, Pancera M, Stuckey J, Wu X, Yang Y,
- 16 Zhang B, Zhou T, Program NC, Mullikin JC, Baxa U, Georgiou G, McDermott AB, Bonsignori M, Haynes BF, Moore PL, Morris L, Lee KK, Shapiro L, Mascola JR, Kwong PD. Structures of HIV-1 Env V1V2 with broadly neutralizing antibodies reveal commonalities that enable vaccine design. Nature Structural and Molecular Biology 2016; 23(1):81-90. doi: 10.1038/nsmb.3144. Epub 2015 Dec 21.

Joag VR, **McKinnon L**, Liu J, Kidane ST, Yudin MH, Nyanga B, Kimwaki S, Besel KE, Obila JO, Huibner S, Oyugi JO, Arthos J, Anzala O, Kimani J, Ostrowski MA, the Toronto HIV Research Group, Kaul R. Identification of preferential CD4+ T cell targets for HIV infection in the cervix. *Muco-sal Immunology 2016*; *9*(1):1-12. doi:10.1038/mi.2015.28.

Ebrahim, S, Mndende, XK, Kharsany, ABM, Mbulawa, ZZA, Naranbhai, V, Frohlich, J, Werner, L, Samsunder, N, Abdool Karim, Q,
Williamson, AL. High burden of human papillomavirus (HPV) infection among young women in KwaZulu-Natal, South Africa. PLOS One 2016 Jan; 11(1): e0146603. doi: 10.1371/journal.pone.0146603.

*continuation from previous newsletter

Scientific Reviews

Abstracts submitted for review		Manuscript	s submitted for review	Ancillary studies submitted for review	
Total#	Cumulative [^]	Total#	Cumulative [^]	Total#	Cumulative [^]
1	349	2	223	2	68

for month, ^ since committee initiation

Conference & Workshop Reminders

	Deadlines					
Conference	Dates	Abstracts	Registration	Website		
21st International AIDS Conference (AIDS 2016) - Durban, South Africa	18-22 July 2016	4 Feb 2016	18 Feb 2016	http://www.aids2016.org/		
HIV Research for Prevention - Chicago, Illinois	17-20 Oct 2016	11 Apr 2016	1 Jul 2016	http://hivr4p.org/		



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

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