In this Issue...

Our feature story this month highlights recent research from the Mucosal Immunology team that shows that IL-17 production in the female genital tract may be induced in response to bacterial but not viral STIs.

On page 2 we congratulate Prof Quarraisha Abdool Karim on her induction as a new International associate member of the National Academy of Sciences and congratulate the ASPIRE and Laboratory teams for their recent awards at the Microbicide Trials Network meeting.

We also congratulate CAPRISA’s Director on receiving the SAMRC Platinum Lifetime Achievement award and report on the DST-NRF Centres of Excellence meeting held in Johannesburg on page 3.

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Bacterial STIs induce production of mucosal interleukin-17

Research conducted by the mucosal immunology team at CA-PRISA was recently published in the journal Immunology. Their findings suggest that interleukin-17 (IL-17) production in the female genital tract may be induced in response to bacterial but not viral sexually transmitted infections (STIs).

Although T helper type 17 (Th17) cells have been shown to play an important part in regulating immunity against fungal and bacterial pathogens at other mucosal surfaces, including the gut and the lung, their role in the female genital tract is not well understood. This study aimed to improve our understanding of the role of Th17 cells in the female genital tract in immunity to common pathogens.

The concentrations of 42 cytokines, including IL-17, were measured from cervicovaginal lavages from CAPRISA 002 study participants from Durban, and the frequencies of Th17 cells (CD3+ CD4+ IL-17a+) were measured from cervical cytobrushes and blood from women from Cape Town.

Women were screened for common female genital tract infections and bacterial vaginosis (BV). Women with bacterial STIs, specifically Chlamydia trachomatis and Neisseria gonorrhoeae, had higher genital IL-17 concentrations than women with no STI or BV (Figure 1). In contrast, women with candidal pseudohyphae/spores had lower IL-17 concentrations compared with women without candidal infections, suggesting that candida may actively suppress IL-17 production or women with dampened IL-17 responses may be more susceptible to candidal outgrowth.

Viral STIs (HSV-2 and HIV), BV and Trichomonas vaginalis were not associated with significant changes in genital IL-17 concentrations. Genital IL-17 concentrations correlated strongly with other inflammatory cytokines and growth factors.


Figure 1: Relationships between IL-17 concentrations in cervicovaginal lavages and bacterial, candidal and viral
Professor Quarraisha Abdool Karim was inducted as a new International Associate Member of the National Academy of Medicine at the Academy’s annual meeting held in October in Washington. President Dr Victor J. Dzau (in the photo) said that membership was “on the basis of professional achievement and of demonstrated interest, concern and involvement with problems and critical issues that affect the health of the public”. Professor Abdool Karim is a leading African scientist in HIV prevention for women and led the studies which showed that antiretrovirals prevent sexually transmitted HIV and genital herpes in women.

Plaudits for CAPRISA’s ASPIRE and laboratory teams

CAPRISA’s ASPIRE study team and the CAPRISA Laboratory team were recognized for exceptional performance at the MTN regional meeting, held in Cape Town in October. The ASPIRE team received three awards for the implementation of the ASPIRE study which began in September 2012 and ended in June 2015.

The eThekwini ASPIRE team received a Certificate of Achievement for outstanding performance in the MTN 020, the MTN Regulatory Rigour Award for the efficient turnaround response to regulatory requests from the MTN, and the Community Engagement program team received a Certificate of Excellence in recognition of their collaboration with local NGOs to engage male partners in the ASPIRE study.

Site Principal Investigator of the CAPRISA ASPIRE study, Dr Lulu Nair, said that “the awards were a testament to the dedication and commitment of a skilled and enthusiastic team who ensured that the highest standards were maintained throughout the implementation of the study.”

The CAPRISA Laboratory team was also recognised and received the “Outstanding Laboratory Performance” award for MTN studies. The award was specifically in “recognition of the outstanding quality assurance that the laboratory employed during the conduct of multiple MTN Trials, and also for the exceptional shipment records that we had for this network with an exceptionally low number of errors.”, said Ms Natasha Samsunder, Head of the CAPRISA Laboratory. The recent audit by SANAS and DAIDS attests the exceptionally high level of service in all aspects of the laboratory’s operations. “The award and good audits are a testament of a dedicated and highly professional team”, said Samsunder.
Platinum Award for leading AIDS researcher

Professor Salim Abdool Karim, Director of CAPRISA and respected as one of the foremost AIDS scientists globally, was awarded the South African Medical Research Council’s (SAMRC) Platinum Lifetime Achievement Award for “excellence in research” at the SAMRC’s Merit awards held on 29th October in Cape Town.

The merit awards are regarded as the premier science award for the country. According to the SAMRC, the Platinum Medal is a Lifetime Achievement Award for an outstanding scientist who has contributed substantially to improving health through research and helped build the foundations of health research in the country for future generations. Professor Mike Sathekge, Chairperson of the SAMRC Board, paid tribute to Abdool Karim, saying that the Medical Research Council “recognises and congratulates you as an outstanding South African scientist who has contributed enormously to raising the profile of science in South Africa.” An accomplished scientist who has dedicated over 30 years to social justice, human rights activism and scientific research, Abdool Karim has made several important breakthroughs ranging from treatment for HIV-TB co-infected people to new approaches to prevent HIV infections. Commenting on his current research, which focuses mainly on innovative technologies to prevent HIV, he said, “we won’t stop HIV in young women tomorrow…. but it has to be part of our long-term vision”.

DST-NRF CoE Annual Director’s Forum

Prof Quarraisha Abdool Karim and Dr Carl Montague, CAPRISA’s Chief Operations Officer, attended the DST-NRF Centres of Excellence (CoE) Annual Director’s Forum which took place at University of Johannesburg. One of the main discussion topics was the measurement of the socio-economic impact of CoE’s and ways of increasing science engagement.

Dr Cassius Lubisi, Director-General: The Presidency, who also gave the Keynote Address at the meeting, visited the CoE exhibits that were part of the forum, including the CAPRISA stand. Learners from local schools were also invited to tour the exhibition where they were encouraged to pursue careers in in the areas of science, technology, engineering, and mathematics (STEM).

In 2016 the DST-NRF CoE Annual Director’s Forum will be hosted in Durban by CAPRISA.
Scientific papers published in 2015

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*continuation from previous newsletter

Scientific Reviews

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# for month, ^ since committee initiation

Conference & Workshop Reminders

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<tr>
<td>46th Union World Conference on Lung Health - Cape Town, South Africa</td>
<td>2-6 Dec 2015</td>
<td>24 Apr 2015</td>
<td><a href="http://capetown.worldlunghealth.org/">http://capetown.worldlunghealth.org/</a></td>
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<tr>
<td>Conference on Retroviruses and Opportunistic Infections - Boston, Massachusetts, USA</td>
<td>22-25 Feb 2016</td>
<td>30 Sept 2015</td>
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