Dear Colleagues

AIDS epidemic has been halted and the world is beginning to reverse the spread of HIV as reported by UNAIDS is heartening. Not only new HIV infections have fallen by nearly 20%, AIDS related deaths show similar fall in the recent years. It is also interesting to learn that, according to a recent estimate in India, the number of new annual HIV infections have declined by more than 50% over the past decade. The past experience has given confidence to dream for even zero new HIV infections in the future and that should certainly be possible with all our concerted efforts.

Now that “HIV and TB – the deadly duo” remain unabated as the biggest challenge for healthcare providers and India tops the world with its highest TB burden, it is paramount for us to act quickly and work in unison to reduce the spread of TB and advance our efforts in preventing deaths from TB/HIV.

The beginning of the year 2011 saw a series of symposia (TYBS, CART & HANS) organized by YRG CARE for the researchers, clinicians and nurses which were very well received. On this note, I thank the entire faculty, who had facilitated the events and making them successful. Further, GCLP workshop in June 2011 and International Science Symposium on HIV and Infectious Diseases in January 2012 have been scheduled and detailed information on these events will be available on our website.

In this current issue we have several interesting research highlights and encouraging news from outcomes of clinical trials, and informative review article on pooled PCR. I hope that you will enjoy reading this issue.

Sincerely
Prof. Suniti Solomon, MD, FAMS
Editor-in-Chief

From the Director's Desk

MINIREVIEW: Pooled Nucleic Acid Testing as a Screening Tool for Antiretroviral Treatment Failure

Research Highlights
Clinical Trials News
Top Review Articles
HIV/STD Guidelines New
Funding Opportunities
Upcoming Scientific Events
YRG CARE Academic Programmes
YRG CARE Forthcoming Events
YRG CARE Past Events
YRG CARE Recent Publications

Pooled Nucleic Acid Testing as a Screening Tool for Antiretroviral Treatment Failure

Myres W- Tilghman, MD & Davey Smith, MD, MAS
Department of Medicine, University of California, San Diego, CA, USA
eMail: d13smith@ucsd.edu

Where available, routine HIV viral load testing is recommended to monitor for virologic failure of antiretroviral therapy (ART) [Thompson MA et al., 2010] in order to maximize first-line therapy, minimize the need for more expensive second-line regimens, and prevent the development and transmission of drug-resistant HIV. However, in resource-limited settings (RLS) commercial viral load assays are prohibitively expensive and require sophisticated equipment, specimen transport and storage conditions, and technical expertise that are not feasible in most areas. Therefore, alternative means of monitoring for ART failure, including hematologic, immunologic, and clinical parameters, have been suggested and implemented in many RLS, although they lack sensitivity in predicting virologic failure compared to virologic monitoring [Koenig SP et al., 2006].

To place the cost of virologic monitoring in perspective, it is estimated that, by the end of 2007, around 3 million individuals in low- and middle-income countries were receiving ART, representing 31% of those who met criteria for therapy [UNAIDS, JUNPoHA. 2008]. Based on an estimated cost of US$45 per viral load assay [Bendavid E et al., 2009], the costs of routine viral load monitoring of all patients on ART in developing countries at 3- and 6-month intervals would have been $540 million and $270 million respectively, representing 5.4% and 2.7% of total spending for HIV care in 2007 [UNAIDS, JUNPoHA. 2008]. In India, where approximately 118,052 adults were receiving ART in 2006/2007 [Organisation NAC, UNGASS Country Progress Report 2008], the annual cost of providing viral load testing every 3 months, which is the standard of care in the U.S. and other countries1, plus ART for all patients on therapy would have cost $44,741,708 or 26% of the total spending on HIV/AIDS services during that fiscal year. Costs would have been over twice this figure in 2009/2010, when 320,074 people were estimated to be on treatment [Srikanthiah P et al., 2010].

Pioneering efforts demonstrated that HIV RNA testing on pooled blood plasma specimens could identify individuals with HIV infection prior to seroconversion in large populations. Our group applied these pooled nucleic acid testing (NAT) concepts to the monitoring of patients on ART for virologic failure.

**Contents**

MINIREVIEW: Pooled Nucleic Acid Testing as a Screening Tool for Antiretroviral Treatment Failure
Research Highlights
Clinical Trials News
Top Review Articles
HIV/STD Guidelines New
Funding Opportunities
Upcoming Scientific Events
YRG CARE Academic Programmes
YRG CARE Forthcoming Events
YRG CARE Past Events
YRG CARE Recent Publications

**From the Director’s Desk**

Dear Colleagues

AIDS epidemic has been halted and the world is beginning to reverse the spread of HIV as reported by UNAIDS is heartening. Not only new HIV infections have fallen by nearly 20%, AIDS related deaths show similar fall in the recent years. It is also interesting to learn that, according to a recent estimate in India, the number of new annual HIV infections have declined by more than 50% over the past decade. The past experience has given confidence to dream for even zero new HIV infections in the future and that should certainly be possible with all our concerted efforts.

Now that “HIV and TB – the deadly duo” remain unabated as the biggest challenge for healthcare providers and India tops the world with its highest TB burden, it is paramount for us to act quickly and work in unison to reduce the spread of TB and advance our efforts in preventing deaths from TB/HIV.

The beginning of the year 2011 saw a series of symposia (TYBS, CART & HANS) organized by YRG CARE for the researchers, clinicians and nurses which were very well received. On this note, I thank the entire faculty, who had facilitated the events and making them successful. Further, GCLP workshop in June 2011 and International Science Symposium on HIV and Infectious Diseases in January 2012 have been scheduled and detailed information on these events will be available on our website.

In this current issue we have several interesting research highlights and encouraging news from outcomes of clinical trials, and informative review article on pooled PCR. I hope that you will enjoy reading this issue.

Sincerely

Prof. Suniti Solomon, MD, FAMS
Editor-in-Chief

WORLD TB DAY
24th March, 2011

The theme of World TB Day 2011 was “On the Move against Tuberculosis: Transforming the light towards elimination” - reflected renewed momentum to approach the global problem of tuberculosis with greater intensity and seriousness of purpose.
The hypothesis was that pooled NAT could reduce the number of viral load assays needed to screen a population of patients on ART for virologic failure, and this costs than individual viral load testing, which could make virologic monitoring feasible in RLS.

Briefly, these methods consisted of an equal volume of multiple patient blood plasma samples combined to form one pooled specimen, and a single viral load assay is performed on the pool in lieu of testing each individual sample. Multiple platforms have been tested, including “minipools” of 3 to 20 specimens and more complex platforms such as matrices. If the viral load of a pooled sample is above a certain threshold, the pool can be “deconvoluted” by sequential individual testing using algorithms that incorporate viral load results into the resolution of positive pools. As long as the number of samples with detectable viremia does not exceed a certain level (usually 30-40% of the population), these methods reduce the total number of assays needed to screen for virologic failure and thus cost savings.

Based on statistical simulations [May S et al., 2010], two pooling platforms have been evaluated clinically: 1) minipools of 5 samples and 2) a 10x10 matrix strategy. Both platforms utilize the results of selective individual testing to resolve positive pools, using algorithms that have been incorporated into a free web-based calculator (http://mapc.ucsd.edu). Both methods were used to retrospectively screen 150 patients in San Diego, California who were on first-line ART for at least 6 months [Smith DM et al., 2009], and the 10x10 matrix method was used to retrospectively screen 700 banked blood plasma specimens at a reference laboratory in Tijuana, Mexico [Tilghman MW et al., 2010]. In the U.S. study all testing was performed using the ultrasensitive Amplicor HIV-1 Monitor Assay (Roche) [Smith DM et al., 2009], while in Mexico an equally sensitive non-commercial quantitative reverse transcriptase polymerase chain reaction (qRT-PCR) assay was used [Tilghman MW et al., 2010]. The efficiency and accuracy of each pooling method were compared to individual viral load testing using various thresholds to define virologic failure of an individual sample.

In the U.S. cohort of which 23% of subjects had detectable (>50 HIV RNA copies/mL) viremia (range 5-51,510 HIV RNA copies/mL), pooling methods required between 41% and 70% fewer assays than were required for individual screening of the cohort, depending on the specific platform and threshold values used to define virologic failure, translating to approximately $3,000 to $5,000 in potential savings [Smith DM et al., 2009]. Since the Mexican study was performed at a reference laboratory, no clinical data were available, and some patients who were not on ART were likely included in the analysis. This was reflected by the wide range of viral loads in those patients with detectable viremia (136-2,500,000 copies/mL), although the prevalence of virologic failure was similar to that of the U.S. cohort (22%). Despite this, pooled NAT would have reduced the number of assays needed to screen this cohort by >33%, translating to over $13,000 in potential savings [Tilghman MW et al., 2010]. In both studies, accuracy to detect levels of virologic failure as low as 50 copies/mL was favorable (between 85 and 90% or higher negative predictive values) [Smith DM et al., 2009, Tilghman MW et al., 2010]

In conclusion, pooled NAT has shown great promise in simulations and retrospective studies to increase efficiency of virologic monitoring of patients on ART in RLS using a variety of assays, although prospective evaluations are needed, and efforts to maximize pooling efficiency by excluding patients off of ART or with incomplete adherence to therapy should be employed. By decreasing the costs of virologic monitoring, this important tool may be made available to all patients on ART, thereby maximizing first-line treatment options and minimizing HIV drug resistance.

**RESEARCH HIGHLIGHTS**

**Could “Intracellular immunization” Reduce HIV Transmission?**

Chono from Takara Bio Inc., Shiga, Japan and colleagues have developed an anti-HIV gene therapy method in which a bacterial gene, MazF is transferred into CD4+ T-cells. The MazF protein is an enzyme, E. coli mRNA interferase that destroys gene transcripts thereby preventing protein synthesis. The design of this MazF gene therapy vector ensures that the synthesis of the MazF protein is triggered by HIV infection. When HIV infects treated T-cells, MazF is induced and destroys the infecting HIV-1 mRNA, preventing HIV-1 replication. The inhibition of replication was measured and HIV-1 IIB p24 could not be detected in the culture medium. The study results suggest that the HIV-1-LTR-regulated MazF gene was effectively induced upon HIV-1 IIB infection, which is sufficient enough to destroy the viral mRNA from the infected HIV-1 IIB to completely block viral replication - but not affecting the normal cell growth. The study concludes that HIV-1-LTR-regulated MazF gene could potentially be used as anti-HIV gene therapy. [Chono, et al. Human Gene Therapy, 2011; 22 (1): 35-43. © Mary Ann Liebert Inc., USA]

**Simple Molecular Marker for Detection of Age of HIV Infection**

Kouyos from University Hospital Zurich, Switzerland and colleagues have identified a simple method to establish when the patient acquired HIV infection. The researchers assessed whether the fraction of ambiguous nucleotides obtained from bulk sequencing as for genotypic resistance testing to extract details of the approximate time when the infection was acquired in the individual at risk. The study correlated the age of infection and the fraction of ambiguous nucleotides in partial pol sequences of HIV-1 from drug naïve patients of the Swiss HIV Cohort study. The study has revealed that the fraction of ambiguous nucleotides increased with the age of infection with a rate of 0.2% per year within the first 8 years but thereafter with a decreasing rate. Also the study revealed with the highly representative population that a fraction of ambiguous nucleotides of >0.5% provides strong evidence against a recent infection event <1 year prior to sampling. The pattern was consistent with population-genetic models for realistic parameters. This methodology is expected to throw light on the understanding of the course of the epidemic. [Kouyos, et al Clin Infect Dis., 2011. 52(4):532-9. © The University of Chicago Press, USA]

**ART Reduces HIV Transmission in Sero-discordant Couples**

Reynolds and colleagues have shown that HIV-1 transmission could be reduced among HIV-1 discordant couples after the initiation of ART. In this study, 250
Online social networks continue to increase, and the social networks could be associated with increased knowledge and HIV/STI prevention behaviors among homeless youth. The study concluded that the usage of social networks is associated with increased knowledge and HIV/STI prevention behaviors among homeless youth. The study concluded that the effect of antiretroviral therapy to predict the proportion of new infections with resistance according to whether and when viral load monitoring is done. The prediction has shown that 12.4% of new HIV infections with primary antiretroviral resistance in 2020, if clinical monitoring is used throughout, compared with 5.4 and 6.1% if viral load-guided switching (viral load done every 6 months, with switch determined by a value >500 copies/mL) was introduced in 2010 or 2015, respectively. Also the death rate for those on ART was lowest when viral load monitoring was used. The study concluded that effective use of viral load monitoring in resource-limited settings could substantially reduce potential transmission of primary drug resistance. 

Social Network for Sexual Health Interventions

Young and Rice from the David Geffen School of Medicine, UCLA, USA, evaluated the association between online social networking and sexual health behaviors among homeless youth in Los Angeles. The survey data collected from 201 homeless youth accessing services, including use of internet and online social networks including their topics of conversation online, sexual risk behaviors and their knowledge about HIV and STIs were analyzed. The majority (79%) of study participants used online social networks almost every week and MySpace and Facebook were the predominantly used networks. The young people frequently discussed with their peers about videos, drinking, drugs, sex, love and relationships in these networks. There were two key findings; the use of online social networks for partner seeking is associated with increased risk in sexual risk behaviors. However, use of these social networks is associated with increased knowledge and HIV/STI prevention behaviors among homeless youth. The study concluded that the usage of online social networks continues to increase, the social networks could potentially be exploited as an effective tool for sexual health interventions.

Importance of HIV Viral Load Monitoring Re-emphasized

Phillips from the Imperial College, London, UK and his colleagues have re-emphasized the importance of HIV viral load monitoring for early detection of treatment failures and long-term preservation of current first-line drugs in resource-limited settings. In this study, a stochastic simulation model was developed and analyzed the patterns of transmission of HIV, natural history and the effect of antiretroviral therapy to predict the proportion of new infections with resistance according to whether and when viral load monitoring is done. The prediction has shown that 12.4% of new HIV infections with primary antiretroviral resistance in 2020, if clinical monitoring is used throughout, compared with 5.4 and 6.1% if viral load-guided switching (viral load done every 6 months, with switch determined by a value >500 copies/mL) was introduced in 2010 or 2015, respectively. Also the death rate for those on ART was lowest when viral load monitoring was used. The study concluded that effective use of viral load monitoring in resource-limited settings could substantially reduce potential transmission of primary drug resistance.

Pharmacogenetic Markers to predict ART Outcome

A Swiss HIV Cohort Study by Lubomirov and colleagues has investigated the association of pharmacogenetic markers (genetic markers associated with response to drugs) with time to treatment discontinuation during the first year of ART. The study analyzed 577 treatment-naive individuals initiating TDF or ABC, with EFA, LPV/r, or ATV/r. Genotyping were done for 23 genetic markers in 15 genes associated with toxicity or pharmacokinetics of the study medication. Rates of ART discontinuation between groups with and without genetic risk markers were assessed. About 1/3 (33%) of patients stopped one or more drugs during the first year of ART. For EFA and ATV, patients with genetic risk markers experienced higher discontinuation rates than patients without (71.2% vs 28.1%, and 62.5% vs 14.6%, respectively). The EFA discontinuation hazard ratio was 3.14 (p < 0.008) and the ATV discontinuation hazard ratio was 9.13 (p < 0.0001). The study concluded that genetic variations can help identify which HIV patients are most likely to prematurely stop certain antiretroviral drugs due to adverse events.

C-POL Slashes the Risk of STIs in High-risk Population

An NIH Collaborative HIV/STD Prevention Trial at China has shown that the Community Popular Opinion Leader (C-POL) intervention reduced the risk of acquiring bacterial and viral sexually transmitted infections (STIs) among high-risk population—but not among low-risk population. The study enrolled 3912 migrant market vendors, who were sexually active at an urban site in China. The markets were randomly assigned to the C-POL intervention; 20 markets for intervention arm and another 20 markets for standard-care control arm. Both study arms received HIV/STI risk-reduction counseling, free condom, STI testing and treatment and training for pharmacists in antibiotic treatments. In intervention markets, C-POLS were identified and trained to diffuse messages regarding safer sex, STI treatment and partner discussions of sex. The study revealed that women had significantly lower rates of STI infection in the C-POL intervention (5.7%) compared to controls (8.3%; p=0.043) and the study concluded that the C-POL intervention lowers HIV risk among those at high risk—but not in the low-risk individuals.

TIPSS for Safer Sex

Noar and colleagues from University of Kentucky, Lexington, USA have developed the Tailored Information Program for Safer Sex (TIPSS), a computer technology-based intervention for HIV prevention. This is an individually tailored, theory-based, computer-delivered intervention designed to increase consistent and correct condom use among sexually active African Americans visiting a STD clinic. The intervention is based on the Attitude-Social Influence-Efficacy model and skills training principles. The program assessed individuals by partner type and delivers individually tailored feedback on condom attitudes, social influences, self-efficacy, and condom negotiation. Given the many advantages of computer-based interventions, including low-cost delivery, this novel intervention strategy could offer much promise for the future of HIV prevention in high-risk individuals.

Could SMS Reminders Improve Drug Adherence?

Pop-Eleches from Columbia University, New York, USA and colleagues studied the efficacy of short message service (SMS) reminders on adherence to ART among patients attending a rural clinic in Kenya. In this randomized controlled trial, a total of 431 adult patients initiating ART within 3 months were enrolled and randomly assigned to a control arm or one of the 4 intervention arms. Patients in the intervention arms received SMS reminders on a daily or weekly basis. Drug adherence was measured using the medication event monitoring system. The primary end-point of the study was whether adherence exceeded 90% during each 12-week period of analysis and the 48-week study period. The result has indicated that 53% of patients receiving weekly SMS reminders maintained adherence of at least 90% during the 48 weeks of the study, compared with 40% of participants in the control group (p = 0.03). The study concluded that SMS reminders could be an important tool to achieve optimal treatment outcome in resource-limited settings.

I-TECH India/AroGyaan Distance Learning Clinical Seminar Series – Available Online

Visit: http://arogyaan.na5.acrobat.com/dlcs/
**HIV-like Infection Cleared from Mice**

Pellegrini from the Walter and Eliza Hall Institute, Melbourne, Australia and colleagues showed that a cell signaling hormone, IL-7 reinvigorates the immune response to chronic viral infection, allowing the host to completely clear virus. Mice were infected with lymphocytic choriomeningitis virus (LCMV) clone-13 to develop persistent high-level viremia. Eight days after establishing infection, some of the mice were injected with IL-7 once a day for three weeks and the others received a placebo instead. Those given treatment had cleared most of the infection by 30 days and removed all of it by 60 days. Mechanistically, IL-7 down-regulated a critical repressor of cytokine signaling, SOCS-3, resulting in amplified cytokine production, increased T cell effector function and numbers - finally cleared the viruses. The study concluded that these attributes of IL-7 have profound implications for its use as a therapeutic in the treatment of chronic viral diseases such as HIV. [Pellegrini et al. Cell. 2011; 144: 601-13. © Elsevier Press, USA].

**WHO Endorses New Rapid TB Test!**

Recently World Health Organization (WHO), Geneva endorsed a new and novel rapid test for TB infection. This test was co-developed by FIND, Geneva and has the potential to revolutionize TB care and control in the countries and populations most affected by the disease.

The new rapid test, Xpert® MTB/RIF is a NAAT (nucleic acid amplification test) based test follows 18 months of rigorous assessment of its field effectiveness in the early diagnosis of TB, as well as multi-drug-resistant TB (MDR-TB) and TB complicated by HIV infection, which are more difficult to diagnose. This Cartridge-Based Automated NAAT is a self-contained and fully automated technological platform that integrates sputum processing, DNA extraction and amplification, TB and MDR-TB diagnosis. The closed system ensures that there is no risk of contamination and no requirement for bio-safety facilities. Test results can be obtained in just 90 minutes. Source: www.finddiagnostics.org/media/press/101208.html

**Longer Prophylactic Therapy Cuts HIV Risk for Breastfeeding Infants**

This advanced-stage clinical trial known as HIV Prevention Trials Network (HPTN) Protocol 046 is funded by NIH, USA. More than 1,500 mother-infant pairs were enrolled in this trial from South Africa, Tanzania, Uganda and Zimbabwe. Giving breastfeeding infants of HIV-infected mothers a daily dose of the nevirapine (NVP) for 6 months halved the risk of HIV transmission to the infants at age 6 months compared with giving infants the drug daily for 6 weeks, according to preliminary clinical trial data from the HPTN 046. The longer NVP regimen achieved a 75 % reduction in HIV transmission risk through breast milk for the infants of HIV-infected mothers with higher T-cell counts who had not yet started antiretroviral therapy. These findings show that administering the infants of HIV-infected mothers an antiretroviral drug daily for the full duration of breastfeeding safely minimizes the threat of HIV transmission through breast milk while preserving the health benefits of extended breastfeeding. Source: [http://www.nih.gov/news/health/mar2011/niaid-03.htm](http://www.nih.gov/news/health/mar2011/niaid-03.htm)

**Good Outcome with Triple Therapy for PMCT – Kesho Bora Trial**

WHO, Geneva sponsored study investigating the efficacy and safety of triple ART (AZT+3TC+LPV/r) vs AZT plus single-dose NVP prophylaxis in pregnant women infected with HIV at 5 sites in Burkina Faso, Kenya and South Africa. In this trial 882 women with WHO stage 1, 2, or 3 HIV-1 infection, who had CD4 cell counts of 200-500 cells per μL were enrolled and 824 of them were randomized and gave birth to 805 singleton or first, live-born infants.

The primary endpoints of the trial were HIV-free infant survival at 6 weeks and 12 months, HIV-free survival at 12 months in infants who were ever breastfed, AIDS-free survival in mothers at 18 months and serious adverse events in mothers and babies. The cumulative rate of HIV transmission from mother to infant at 6 weeks and 12 months was 3.3% and 5.4% with triple ART vs 5% and 9.5% with AZT plus single-dose NVP (p=0.029). In infants whose mothers declared they intended to breastfeed, the cumulative rate of HIV transmission at 12 months was 5.6% vs 10.7%, respectively (p=0.02). However, the incidence of serious adverse events in both mothers and infants was similar in both groups. The study concluded that the triple ART prophylaxis for PMCT was safe and reduced the risk of HIV transmission. [The Kesho Bora Study Group. Lancet Infect Dis. 2011;11:171-180].

**New Drug Regimens Cut > 50% HIV Transmission from mother to infant**

The NIH sponsored trial, phase III randomized trial of the safety and efficacy of 3 neonatal ARV regimens for prevention of intrapartum HIV-1 transmission (HPTN 040/PACTG 1043) has shown that adding one or two drugs to the standard ZDV treatment can reduce the chances by more than 50 % that an infant will develop an HIV infection. This trial was conducted at Brazil, South Africa, Argentina, and the United States.

This study evaluated 1,684 infants born to women whose HIV infections were not diagnosed until they were in labor. The infants were randomly assigned to 3 groups: those receiving the standard 6 weeks of therapy with ZDV, those receiving 6 weeks of ZDV + 3 doses of NVP during the first week of life, and those receiving 6 weeks of ZDV + two weeks of 3TC and NVP. Infants were tested for HIV infection by DNA PCR at birth, 10 to 14 days, 4 to 6 weeks, and 3 and 6 months. The study results showed that total intrapartum transmission rate was 3.2%; by study arm: ZDV 4.9%; ZDV + NVP 2.2% (p = 0.045 compared to ZDV arm); ZDV/NVP/3TC 2.5%, (p = 0.045 compared to ZDV arm). The study concluded that the two and three drug regimens are superior to the standard treatment with ZDV. Source: [http://www.nih.gov/news/health/mar2011/nichd-02.htm](http://www.nih.gov/news/health/mar2011/nichd-02.htm).

**PrEP Reduces HIV Transmission by 44%**

Several earlier studies have shown that PrEP using Tenofovir (TDF) plus emtricitabine (FTC) reduces the risk of new infections in non-human primates. The recent trial in humans supported by the NIH and the Bill and Melinda Gates Foundation, revealed that this approach appears safe and effective. In this multi-centric trial, 2470 men who have sex with men (MSM) and 29 transgender women who have sex with men were enrolled.

The trial participants were sexually active and considered to be at high-risk for infection; the average number of sexual partners during the past 3 months was 18, and about 60 % reported receptive anal intercourse. The participants were randomly assigned to receive either oral FTC-TDF co-formulation or placebo, both once-daily. Follow-up continued for a median of 1.2 years, reaching a maximum of 2.8 years. The participants also received monthly HIV testing, risk-reduction counseling, free condom, and treatment for other STIs. Hundred became infected during follow-up visits (36 in the FTC–TDF arm and 64 in the placebo arm), showing a 44% reduction in the incidence of HIV (95% CI, 15 to 61% reduction) among men using PrEP compared with placebo. Source: [http://www.nih.gov/news/health/mar2011/niaid-03.htm](http://www.nih.gov/news/health/mar2011/niaid-03.htm).
63; p=0.005). The study concluded that oral FTC–TDF co-formulation provided protection against the transmission of HIV infection among the high-risk individuals. Source: [http://www.najm.org/doi/full/10.1056/NEJMoai1011205].

**REVIEW ARTICLES**


**ICMR-Guidelines for Management of Cervix Cancer.** 2010. [Free online].


**Funding Opportunities / Fellowships**

If you are not able to access the hyperlinks we can send you hyperlinks through email on request to newsletter@yrgcare.org.

**UK**


Welcome Trust-DBT India Alliance Margdarshi Fellowships. Deadline: 01 May 2011.

American Society of Hematology- 2011 International Visitor Training Program (VTP). Deadline: 02 May, 2011. eMail: pckelley@hematology.org


NIH, USA. Planning Grant for Global Infectious Disease Research Training Program (D71; PAR-10-280). LOI deadline: 21 August 2011; Application deadline: 21 September 2011.


**Upcoming Scientific Events**

**2011 - 12**

**June - December’11**


**January - July’12**


HIV TEST RESULT IN 60 SECONDS!

Recently US-FDA announced the approval of the INSTI™ HIV-1 Antibody Test (bioLytical Laboratories Inc., Richmond, BC, Canada), a new rapid test for the detection of antibodies to HIV-1 using fingerstick blood or plasma specimens. This new test provides results in as little as 60 seconds, in contrast to the six previously approved rapid HIV tests, which typically deliver results in about 10 - 20 minutes. It is highly sensitive (99.8% in fingerstick whole blood, 99.9% in venipuncture whole blood, 99.9% in plasma) and specific (99.5% in fingerstick whole blood, 100% in venipuncture whole blood, 100% in plasma) for the detection of antibodies to HIV-1. Source: http://www.fda.gov/

VCT Training

YRG CARE organized a two day training course on Pre and Post-HIV Test Counselling (HTC), an NABL requirement, on 17th & 18th February, 2011.

Visiting Students Gain Experience at YRG CARE

On 10th February 2011, students from the US Honors Program coordinated by the National Institute of Epidemiology, ICMR, Chennai visited YRG CARE facility as part of their learning programme on Indian culture and international health. Their interests were diverse and mostly focussed on issues faced by young women and men within the Indian society; arranged marriages, sexual health, public health services for youth, etc. During the visit, the students availed a complete tour of the facilities of YRG CARE, including the laboratory, and clinical services provided to persons living with HIV.

INTERNATIONAL SCIENCE SYMPOSIUM ON HIV & INFECTIOUS DISEASES

The 4th National and 1st International Science Symposium on HIV and infectious Diseases – HIV SCIENCE 2012 will be organized in January 2012 (dates to be announced soon) by YRG CARE in Chennai. The annual HIV symposium will bring together various leading national and international faculties / experts / scientists to provide updates on HIV/AIDS and infectious diseases. The symposium is for researchers, microbiologists, HIV clinicians, venereologists and other healthcare professionals. Postgraduate students from medical, para-medical, science colleges/universities/research institutions are also eligible to participate. For more details please visit www.yrgcare.org or write to HIVSymposium@yrgcare.org.

GCLP Workshop

YRG CARE is organizing a GCLP Workshop from 24th - 26th (Friday-Sunday), June 2011 at TICEL Bio-park, Taramani, Chennai. Good clinical laboratory practices (GCLP) outline the basic principles and procedures to be followed by medical laboratories involved in patient care and/or clinical research so as to provide reproducible, auditable and reliable laboratory results. This workshop is designed to offer comprehensive guidance for microbiologists, pathologists, biochemists, QA/QC personnel and others, who are implementing GCLP in their laboratories and preparing the lab for NABL (ISO 15189:2007) accreditation. Several experts from national and international institutes will deliver lectures and the methodology of the workshop will include interactive sessions, group exercises and case studies. For more details on the workshop, visit the website at www.yrgcare.org or write to GCLP@yrgcare.org.

PhD Degree Course

Applications for PhD degree course in Medical Microbiology (Affiliated to the University of Madras) at YRG CARE are invited from candidates who have completed their M.Sc degree in Medical Microbiology /Applied Microbiology / Molecular Biology / Biotechnology / Biochemistry. Applicants should have passed the national entrance tests for independent fellowships under CSIR /ICMR/ DBT. For more details, please write to lab@yrgcare.org.

VCT Training - NABL Requirement

YRG CARE will conduct a two day training course on Pre and Post-HIV Test Counselling (dates to be announced). The training course is based on the National AIDS Control Organization (NACO) guidelines to ensure uniformity in counselling and testing services across the country. It is also a requirement from the National Accreditation Board of Laboratories (NABL) to have laboratory staff trained and certified for providing Voluntary Counselling and Testing (VCT) services. For more details on the training, please write to us at VCTtraining@yrgcare.org.
SODEXO, a world leader in food and facilities management services organize a cricket tournament, SODEXO Inter-Client Cricket Trophy 2010-11 in January 2011 – February 2011. Twenty four clients of SODEXO participated in this tournament and that included Flextronics, Saint Gobain, Wintek, Comstar, Nokia, Ucal, Mobis, SODEXO FS, MMM Hospital, Swing Stetter, TCS SNR, Nokia Sez, Rohm & Hass, Foxconn, Lifeline Rigid Hospital, Perlos, Sun TV, Ford, SODEXO FM, Sundaram Brake Linings, Delphi TVS, YRG CARE Eco Kitchen, HMIL and Great Lakes Institute. Sun TV won the winner of the tournament and YRG CARE ECO Kitchen staff made history by becoming the runners-up in the tournament in this ‘first-of-its-kind-initiative’. The prizes were sponsored by the Country Director of SODEXO and Prof. Solomon was the chief guest in the prize distribution ceremony.

HIV/AIDS Nursing Symposium 2011

YRG CARE conducted “HANS 2011” in association with the MA Chidambaram College of Nursing on 10th January 2011 at the VHS campus, Taramani. Various HIV treatment and management issues pertinent to the role of nurses and midwives were presented and discussed. Along with speakers from YRG CARE, eminent national and international speakers, namely Ms. Sumathi Robert (MACCON, India), Ms. Ambika Ravindran (MACCON, India), Dr. Krutika Kuppalli (Emory University, USA), Dr. Suneeta Sahayam (WCC, India) and Dr. VD Ramanathan (TRC, India) also graced the meeting.

Prof. Solomon Elected as Fellow of NAMS

Prof. Solomon has been elected as fellow of the prestigious National Academy of Medical Sciences (India), a unique institution, which fosters and utilizes academic excellence as its resource to meet medical and social goals. Prof. Solomon received her fellowship at the recent convocation and annual meeting (NAMSCON 2010) on 30th October 2010 at the Government Medical College, Patiala, Punjab.
TYBS 2011 – Bioethics Symposium

YRG CARE organized “TYBS 2011”, a bioethics symposium on 6th and 7th January, 2011 at Robert Koch Auditorium, Tuberculosis Research Center, Chetpet, Chennai in collaboration with National Institute of Epidemiology, ICMR, Chennai through the National Institutes of Health Project “Centrally Coordinated Bioethics Education for India”. The symposium was inaugurated with the key-note address by Padmashri Prof. N R Madhava Menon, Founder-Director, NLSIU, Bangalore, NUJS, Kolkata, and National Judicial Academy, Bhopal.

The symposium explored the pressing ethical issues in research involving human participants. The program was attended by more than 100 participants from several research institutions and health centres. The national and international experts in the field of bioethics facilitated the event and the key speakers were Dr. Nandini Kumar, Former Deputy Director-General of ICMR, Dr. V. Kumaraswami (Retd, Director-in-Charge, Tuberculosis Research Centre, India), Dr. Vasantha Muthuswamy (Former Deputy Director-General of ICMR), Jonathan Jay, JD (National Institute of Health, USA), Dr. Collin O’Neil (National Institute of Health, USA), Prof. Kenneth H. Mayer (Brown University, USA), Prof. Urmila Thatte (Seth GS Medical College, India), Dr. Sanjay Mehendale (National Institute of Epidemiology, India), Dr. Anant Bhan (Bioethics and Global Health, India), Dr. George Thomas (Editor, Indian Journal of Medical Ethics, India), Dr. Sanish Davis (Glenmark Clinical Research, India), Prof. Sivapathasundharam B (Meenakshi Ammal Dental College, India) and Prof. Prathap Tharyan (Christian Medical College, India). The sessions were on clinical trials in India, ethical considerations in research, ethical aspects of research involving community in developing countries, and informed consent.

Staff Retreat

YRG CARE dedicated its new facility recently in partnership with Sodexo. The ECO Kitchen is a social entrepreneurship project of the YRG CARE. Project ECO (Enhancing Community Opportunities) helps those affected by social, economic and other challenges. Through a food retail program, the ECO Kitchen provides these individuals with opportunities to improve their livelihoods. The ECO Kitchen is an 18000 sq. ft. state-of-the-art facility in Injambakkam (near the ECR). The facility has the capacity to produce 30000 meals per mealtime. The Kitchen utilizes innovative, eco-conscious technology, including biomass briquettes, solar panels, a condensation recovery system, an expansive drainage system and a wastewater treatment plant that irrigates our garden. The production is carefully crafted to minimize its impact on the environment. More details about the ECO Kitchen can be found at http://www.ecokitchen.org/eco/index.html

YRG CARE Infectious Diseases Laboratory’s NABL Accreditation (ISO 15189:2007) – Renewed

Photograph: Key-note address by Padmashri Prof. N R Madhava Menon during the inaugural function of the symposium.

Photograph: YRG CARE Staff Retreats were arranged as two batches (1st batch on 12th February and 2nd batch on 19th February 2011) to Esthell – The Village Resort, Egal Rainapuram Village, Thirukazhukundram.


An Interactive Movie on Research Misconduct!

This interactive movie is on integrity in scientific research that can have long-term consequences. In the movie, the simulation addresses responsible conduct of scientific research topics such as avoiding research misconduct, mentorship responsibilities, handling of research data, responsible authorship, and questionable research practices. Available free online at http://ori.hhs.gov/TheLab/TheLab.shtml.

Source: Dept. of Health and Human Services, Office of Research Integrity, Rockville, USA.
HIV Declining in India!

As per recent data from National AIDS Control Organization (NACO), the India HIV estimates 2008-09 highlight an overall reduction in prevalence and incidence of HIV in adult in India. The estimated number of new annual HIV infections has declined by more than 50% over the past decade.

The current estimate utilized improved methodology and updated epidemiological data from the latest rounds of HIV sentinel surveillance and other information on high-risk population for more accurate understanding of the Indian epidemic. The estimates were generated using Estimation Projection Package and Spectrum Package that had been customized using Indian data. This methodology allows international comparison of the HIV estimates.

Although this round of estimates has confirmed the clear decline of overall HIV prevalence, the evidence shows that Injecting Drug Users (IDU) and Men who have Sex with Men (MSM) are more and more vulnerable to HIV with increasing trends in many states.

Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=67983

Invitation for Contributors

We welcome your contribution towards YRG CARE. Donations to YRG CARE are eligible for tax deductions under Section 80G of the Income Tax Act.

The Foundation is registered with the Ministry of Home Affairs to receive Foreign Contributions under the Foreign Contributions Regulation Act (FCRA) vide registration No. 75900630/12 July 1991. Please mail us with the subject head 'Donations' with your contact details.

Ask the Experts

Readers are invited to send their queries on HIV/AIDS to newsletter@yrgcare.org, which will be answered by experts from YRG CARE.

COST-EFFECTIVE HIV DIAGNOSTIC SERVICES

YRG CARE offers certified, quality assured and cost-effective HIV monitoring laboratory tests; CD4+ T-Cell Count by Beckman Coulter FlowCARE assay (Rs.300), HIV-1 Viral Load by ABBOTT RealTime PCR Assay (Rs. 2000) and HIV-1 Drug Resistance Homebrew Genotyping Assay (Rs. 4000 for RT drugs, Rs.6000 for RT and PI drugs).

The laboratory also offers various internationally certified STD testings such as, HIV, HSV-2, syphilis, trichomoniasis, chlamydiassis, and gonorrhoea.

Contact : sakthivel@yrgcare.org

CONTACT US

Y.R. Gaitonde Centre for AIDS Research and Education (YRG CARE), Voluntary Health Services Hospital Campus, Rajiv Gandhi Salai, Taramani, Chennai 600113, India.

Phone: +91 44 2254 2929 ; Fax: +91 44 2254 2939
eMail: newsletter@yrgcare.org; Website: www.yrgcare.org

Should you wish to send us your comments/ suggestions/ email subscription regarding this newsletter, please write to us.

Editorial Policy and Disclaimer. The objective of this newsletter is to impart current scientific news to the readers and the newsletter is circulated free of cost. The editorial process is independent and any individual or organization that provides financial support to YRG CARE does not participate in the editorial process and decisions. Description or reference to a product or publication does not imply endorsement by YRG CARE.

Every effort is made to ensure the timeliness and accuracy of information presented in this newsletter. The authors, editors and publisher will not in any way be held responsible for the timeliness of information, errors, omissions and inaccuracies in this publication. Users are advised to recheck the information with original resource materials before applying to patient care or other purposes.

PRINTED MATERIAL

To

-----------------------------------------------------------------------------

If undelivered, please return to:

YRG CARE, YHS
Taramani, Chennai-600113, India

April 2011 The HIV/AIDS Newsletter