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PAEDIATRIC TREATMENT, VIRAL EVOLUTION, AND BIOMEDICAL PREVENTION SCIENCE FEATURED AT IAS CONFERENCE

**Late Breaking Scientific Developments Presented on Final Day of Conference
Notable for Call to Expand Research**

Sydney, 25 July 2007 – Plenaries on the closing day of the 4th IAS Conference on HIV Pathogenesis, Treatment and Prevention in Sydney, Australia focused on the need for improved treatment options for children, the promise and challenges associated with biomedical prevention strategies and the obstacles posed by the adaptive capacity of HIV.

“We must do more to protect our future, finding better ways to treat the youngest among us and pursuing integrated prevention strategies grounded in behavior change and biomedical science,” said IAS President Dr. Pedro Cahn, International Conference Co-Chair and Director of Fundación Huesped in Argentina.

Organizers of IAS 2007 opened the conference with a declaration urging that 10 percent of all resources dedicated to HIV programming be used for research. By the close of the conference, more than 1,550 scientists, clinicians, policy makers and community leaders from around the world had signed the Sydney Declaration.

“HIV presents one of the greatest and most complex scientific challenges of our time,” said Prof. David Cooper, IAS 2007 Local Co-chair and Director of the National Centre in HIV Epidemiology and Clinical Research at University of New South Wales. “Confronting this challenge will require sustained political will and increased resources dedicated to AIDS research.”

Paediatric Treatment

Better generic paediatric antiretrovirals that are both potent enough to achieve sustained clinical and virologic improvement and have limited long-term metabolic side effects are urgently needed, according to Dr. Annette Sohn, Assistant Professor in the Division of Pediatric Infectious Diseases at the University of California, San Francisco. Research studying optimal times to initiate and switch treatment, and on baseline and emerging resistance, are gathering important evidence to guide clinical decision-making, according to Sohn. Promoting adherence and providing social support for the family are additional ways to help delay treatment failure and secure a future for children as they grow toward adulthood.

Viral Fitness, Escape Routes and Resistance

HIV-1 has an enormous adaptive capacity, which hampers therapeutic intervention because the virus can become resistant to antiviral drugs used in the clinic, according to Dr. Ben Berkhout, Head of the Laboratory of Experimental Virology at the University of Amsterdam. As Berkhout will explain, the driving force behind this variation is viral evolution. Viral evolution is the concept that

viruses (particularly RNA viruses such as HIV) have short generation times and high mutation rates, which allow the virus to quickly adapt to the environment of the host.

Berkhout will describe the molecular mechanisms involved in viral evolution. He also will report on some remarkable HIV-1 evolution paths. For example, Berkhout's lab has demonstrated for the first time that HIV-1 can not only become resistant to drugs, but can also become dependent on certain antiviral drugs.

Biomedical HIV Prevention

In her plenary remarks, Dr. Nancy Padian will describe current and promising prevention technologies, including: the use of drugs to suppress genital herpes; microbicides; pre-exposure prophylaxis; and cervical barriers. Padian is Director of International Programs at the University of California, San Francisco AIDS Research Institute.

According to Padian, researchers encounter a number of methodological challenges when evaluating these methods, including: the effect of comparison groups; measurement of self-reported behaviours and adherence; and the fact that technological interventions are almost always evaluated as components of more comprehensive intervention packages. She will also address levels of evidence used to assess the effectiveness of prevention interventions and will propose recommendations regarding future research directions.

Late Breaking Scientific Research

In three afternoon sessions, delegates heard late breaking reports on scientific developments in the basic, clinical and biomedical prevention tracks. Abstracts presented in these sessions are available through the online [Programme-at-Glance](http://www.ias2007.org) at www.ias2007.org.

Over 5,000 delegates from 133 countries are participating in IAS 2007. Over 3,100 original abstracts were submitted for consideration and 978 were accepted for oral or poster presentation. For more information about the conference, including details about the programme, visit www.ias2007.org.

About the Organizers:

The **International AIDS Society** (IAS) is the world's leading independent association of HIV professionals, with over 1,000 members from 174 countries (www.iasociety.org). Founded in 1987, the **Australasian Society for HIV Medicine** (ASHM) is one of the first HIV medicine societies in the world (www.ashm.org.au).

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