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## **MALE CIRCUMCISION, GENE THERAPY, AND POWERFUL NEW HIV TREATMENTS HEADLINE DAY THREE OF IAS CONFERENCE IN SYDNEY**

**Sydney, 24 July 2007** – Research on novel prevention and treatment strategies, and the cutting-edge use of gene therapy to treat HIV disease was presented at today's plenary session at the 4<sup>th</sup> IAS Conference on HIV Pathogenesis, Treatment and Prevention in Sydney, Australia. Other session topics included female-initiated prevention technologies, provider-initiated HIV testing and the prevention of mother-to-child transmission. A special session explored the future of global financing of HIV prevention, care and treatment.

"While resources for AIDS programming have grown substantially over the past five years, far greater commitments are required," said IAS President Dr. Pedro Cahn, International Conference Co-Chair and Director of Fundación Huesped in Argentina. "To achieve and sustain universal access to HIV prevention, treatment and care, all donors and governments in resource-limited countries must rise to the challenge of strengthening health systems throughout the world."

Regarding the availability of new treatment strategies, 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 said: "It's an extremely exciting time in terms of drug development. We have better drugs in existing classes, as well as whole new classes of drugs. Patients and their clinicians now have a much wider choice of drug combinations than ever before."

### ***Male Circumcision: From Research to Practice***

Over 45 observational studies, three clinical trials and several biological studies all provide compelling evidence that male circumcision reduces HIV transmission from women to men by about 60 percent, according to the lead speaker on Tuesday's plenary panel, Professor Robert Bailey. Bailey is Professor of Epidemiology at the School of Public Health at the University of Illinois at Chicago and Research Associate at the Field Museum in Chicago. Since 1995, he has devoted most of his research activities to the issue of male circumcision as a possible HIV prevention strategy. He has conducted circumcision-related studies in varying communities in Uganda, Kenya, Malawi, Zambia, as well as in the US.

According to Bailey, male circumcision may be the oldest surgical procedure, dating back to at least 2300 BC in Egypt. Today, about 30% of men in the world are circumcised, and about 67% of men in Africa are circumcised. In his remarks, Bailey described modelling estimates that show that millions of new HIV infections could be averted in sub-Saharan Africa if substantial proportions of men were circumcised. In the highest prevalence areas, the impact of circumcision would be greatest, and the intervention would be highly cost-effective.

### ***Use of Gene Therapy to Develop HIV Treatments***

Gene therapy -- the treatment of disease by inhibiting deleterious genes to block disease processes -- represents a novel, cutting-edge approach to developing treatments for diseases, including HIV, according to Dr. John Rossi. Rossi is Professor and Chair of the Division of Molecular Biology and Dean of the Graduate School of Biological Sciences at City of Hope's Beckman Research Institute.

In his plenary remarks, Rossi described how his lab has identified three small gene inhibitors, based upon ribonucleic acids, or RNA, that inhibit HIV replication. His team is now exploring the use of a virus vector to deliver the genetic material (DNA) for these inhibitory RNAs to patients as a form of HIV treatment. This vector acts in three ways: by targeting the virus itself, a viral protein, and a site on cells that interacts with HIV. Together, this triple combination has proven to be a powerful inhibitory approach for HIV infection. The triple construct vector has gone through substantial pre-clinical testing, and Dr. Rossi and his team are now beginning two different human trials using this system.

### ***Novel Agents and Treatment Strategies***

The landscape of HIV clinical care is undergoing rapid change. Recent clinical research has demonstrated important advances in existing treatments, as well as new classes of antiretroviral drugs that rely upon novel mechanisms of action, according to Dr. Joseph Eron, Professor of Medicine in the Division of Infectious Diseases at the University of North Carolina (UNC) at Chapel Hill School of Medicine. Eron is also the principal investigator for the UNC AIDS Clinical Research Group and Director for the UNC Center for AIDS Research Clinical Core.

In his plenary remarks, Eron discussed data on compounds in advanced clinical development, including integrase inhibitors, CCR-5 inhibitors and non-nucleoside reverse transcriptase inhibitors. Agents in each of these classes have been shown in large clinical trials to provide superior benefit to patients with highly resistant HIV-1 when combined with the best available treatment, compared to the best available treatment combinations alone. Eron emphasized that these agents are most effective when combined with other active agents, and HIV-1 resistant to these new drugs may develop if viral replication is not fully suppressed. The presentation also included a discussion of the strengths and potential challenges of new antiretroviral agents.

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](http://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](http://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](http://www.ashm.org.au)).

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